

Blue Earth County 2025 Hazard Mitigation Plan



Blue Earth County Minnesota

2025 Hazard Mitigation Plan

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Section 1 – Introduction

1.1 Hazard Mitigation Planning in Minnesota

Hazard mitigation planning refers to any sustained action to reduce or eliminate long-term risk to human life and property from natural disasters. The Federal Emergency Management Agency (FEMA) has made reducing hazards one of its primary goals, and a primary mechanism in achieving this goal is both the hazard mitigation planning process and the subsequent implementation of resulting projects, measures, and policies (FEMA, 2023b).

Since 1980, damages from natural disasters in the U.S. have exceeded \$2.72 trillion. 2023 saw a record 28 separate billion-dollar weather and climate disaster events in the United States, breaking the previous record of 22 events set in 2020. Minnesota alone has experienced 59 separate billion-dollar disasters since 1980 (NCEI, 2024). Hazard mitigation planning is an effective process to prepare communities and lessen the impact of loss of life and property from future disasters. Although mitigation efforts will not eliminate all disasters, government at all levels should strive to be as prepared as possible for a disaster for the well-being of its residents.

The Hazard Mitigation Plan (HMP) is a requirement of the Federal Disaster Mitigation Act of 2000. The development of a local government plan is required to maintain eligibility for federal hazard mitigation grant funding programs. To be eligible for future mitigation funds, communities must adopt an HMP.

Researchers at the National Institute of Building Sciences looked at the results of 23 years of federally funded mitigation grants provided by FEMA, the U.S. Economic Development Administration (EDA), and the U.S. Department of Housing and Urban Development (HUD). Their findings revealed that for every \$1 spent on hazard mitigation funding in the nation, \$6 is saved in future disaster costs (Multi-Hazard Mitigation Council, 2019).

Blue Earth County is vulnerable to a variety of natural hazards that threaten the loss of life and property. Hazards such as tornadoes, flooding, wildfires, blizzards, straight-line winds, and droughts can potentially inflict vast economic loss and personal hardship.

This planning document is accompanied by a website that allows for easy stakeholder and community engagement, as well as interactive maps, dashboards, and infographics.

A broad overview of this companion website's features is as follows:

- Homepage (featuring Declared Disasters dashboard, feedback forms, links to Blue Earth County Emergency Management website, etc.)
- County Profile
- Risk Assessment & Natural Hazard Profiles
- Goals & Implementation
- Climate Change

[Blue Earth County HMP Website](#)

1.1.1 Scope

U-Spatial, University of Minnesota, was contracted by Blue Earth County Emergency Management to facilitate an update to the 2020 Blue Earth County HMP. U-Spatial brings extensive geographic data analysis skills and hazard risk assessment expertise to the process. U-Spatial also employed the services of Hundrieser Consulting LLC for county and stakeholder outreach as well as mitigation action development related to this plan.

This HMP evaluates and prioritizes the major natural hazards affecting Blue Earth County as determined by frequency of event, economic impact, deaths, and injuries. Mitigation recommendations are based on input from state and local agencies, the public, and national best practices.

This is a multi-jurisdictional plan that covers Blue Earth County, including the cities of Amboy, Eagle Lake, Good Thunder, Lake Crystal, Madison Lake, Mankato, Mapleton, Minnesota Lake, North Mankato, Pemberton, St. Clair, Skyline, and Vernon Center. The Blue Earth County mitigation activities identified in this plan also incorporate the concerns and needs of townships, school districts, and other participating entities.

Members from each of these jurisdictions actively participated in the planning process by assisting with public outreach, attending planning team meetings, providing local information, identifying mitigation actions, and reviewing the plan document (see Appendix C). The information in these forms was used to help identify mitigation actions for local implementation (see also Section 2.2). Each jurisdiction will adopt the plan by resolution after the plan is approved by FEMA. County and local city resolutions will be added by Blue Earth County after final approval by FEMA (see Appendix B).

Blue Earth County has specified the following goals for this plan update:

- Include more recent data documenting the critical infrastructure and hazards faced by Blue Earth County.
- Reformat and reorganize the plan to reflect definitions of hazards as expressed in the 2024 Minnesota State Hazard Mitigation Plan.
- Reflect current hazard mitigation priorities in Blue Earth County.
- Encourage recipients and sub-recipients of hazard mitigation grants to consider climate change adaptation, resiliency, and equity in their planning efforts.

1.1.2 Hazard Mitigation Definition

Hazard mitigation may be defined as any action taken to eliminate or reduce the long-term risk to human life and property from natural hazards. The benefits of hazard mitigation planning include the following:

- saving lives, protecting the health of the public, and reducing injuries
- preventing or reducing property damage
- reducing economic losses
- minimizing social dislocation and stress
- reducing agricultural losses

- maintaining critical facilities in functioning order
- protecting infrastructure from damage
- protecting mental health
- reducing legal liability of government and public officials

1.2 State Administration of Mitigation Grants

FEMA currently has two mitigation grant programs that the State of Minnesota administers: the Hazard Mitigation Grant Program (HMGP) and the Flood Mitigation Assistance (FMA) program. The HMGP and FMA programs are administered through the Minnesota Department of Public Safety Homeland Security Emergency Management (HSEM) Division. All applicants must have or be covered under an approved hazard mitigation plan. Eligible applicants include state and local governments, certain private non-profit organizations or institutions, and tribal communities.

Section 2 – Public Planning Process

2.1 Planning Team Information

The Blue Earth County HMP planning team is headed by the Blue Earth County emergency manager, who is the primary point of contact. Planning team members include representatives from public and governmental sectors. Table 1 identifies the planning team individuals and organizations that participated in virtual planning team meetings during the plan update process.

Note: Table 1 is not an exhaustive list of stakeholder participation in the Blue Earth County HMP update. Additional participation by jurisdictional and other agency representatives is documented in Table 3 of this section, as well as in Section 3.4, Appendix C, and Appendix G. The meeting summaries in Appendix F provide a comprehensive overview of each session. This includes a complete list of invited planning team stakeholders and information on other significant opportunities for engagement during the plan update.

[Find the planning team members on the Blue Earth County HMP website](#)

Table 1. Hazard Mitigation Planning (HMP) Team

Name	Agency/Organization	Participant Title
Eric Weller	Blue Earth County Emergency Management	Emergency Management Director
Jessica Busch	Blue Earth County	EM Office Coordinator
Jeff Wersal	Blue Earth County Sheriff's Office	Sheriff
Paul Barta	Blue Earth County Sheriff's Office	Captain
Jeremy Brennan	Blue Earth County Sheriff's Office	Chief Deputy
Jessica Anderson	Blue Earth County	Communications Manager
Robert Meyer	Blue Earth County	County Administrator
Joshua Milow	Blue Earth County	Deputy County Administrator
Karri Harvey	Blue Earth County	IT Director
Michael Stalberger	Blue Earth County Dept. of Property and Environmental Resources	Director
Mark Manderfeld	Blue Earth County Dept. of Property and Environmental Resources	Deputy Director
Tim Edwards	Blue Earth County	Facilities Director
Ryan Thilges	Blue Earth County Public Works Dept.	County Engineer / Public Works Director
Stefan Gantert	Blue Earth County Public Works Dept.	Assistant County Engineer
Phil Claussen	Blue Earth County Human Services	Director
Kip Bruender	Blue Earth County	Commissioner
Patty O'Connor	Blue Earth County	Commissioner
Kevin Paap	Blue Earth County	Commissioner
Vance Stuehrenberg	Blue Earth County	Commissioner
Mark Piepho	Blue Earth County	Commissioner

Name	Agency/Organization	Participant Title
Chad Wilde	Blue Earth County Public Works	Assistant Public Works Director
Josh Downey	Blue Earth County Parks Dept.	Supervisor
Craig Austinson	Blue Earth County	Drainage Systems Coordinator
John Considine	Blue Earth County	Zoning Administrator
Ryan Hiniker	Blue Earth County	Drainage Management Coordinator
Ryan Short	Blue Earth County	County Assessor
Noelle Bruender	Blue Earth County Human Services Department	Clerical Specialist III
Dane Lynch	Blue Earth County	Environmental Health Specialist - Wetlands
Besiem Yemiru	Blue Earth County	GIS Coord
Kelley Haeder	Blue Earth County Public Health	Supervisor - Public Health
Chelsea Hunstad	Blue Earth County Public Health	Public Health Nurse
Scott Salisbury	Blue Earth County	Land Use Planner
David Sieberg	Blue Earth County	Mapping and Property Records Specialist
Mike Sevcik	City of Amboy	Mayor
Patty Smith	City of Amboy	Administrator, Clerk-Treasurer
Jennifer Bromeland	City of Eagle Lake	City Administrator
Andrew Hartman	City of Eagle Lake	Public Works Director
John Whittington	City of Eagle Lake	Mayor
Vern Simpson II	City of Eagle Lake Fire Dept.	Fire Chief
Eli Depuydt	City of Good Thunder	Public Works
Sue Petty	City of Good Thunder	Clerk/Treasurer
Angela Grafstrom	City of Lake Crystal	City Administrator
Todd Wiens	City of Lake Crystal	Mayor
David Paul	Lake Crystal Fire Dept.	Chief
Matthew Ganglehoff	City of Lake Crystal Police Dept.	Sergeant
Al Dorn	City of Madison Lake	Mayor
Adam Fennell	City of Madison Lake	Public Works
Liz Wille	City of Madison Lake	City Administrator
Phil Wills	City of Madison Lake	Police Chief
Susan Arntz	City of Mankato	City Manager
Joe Grabianowski	City of Mankato	Public Works Operations Superintendent
Jeff Bengtson	City of Mankato	Assistant Director
Ryan Thormodson	City of Mankato	Senior Facilities Technician
Jeremy Clifton	Mankato Public Safety	Chief/Director
Justin Neumann	Mankato Public Safety	Commander
Sarah Moore	City of Mapleton	City Clerk/Treasurer
Benjamin Honsey	Mapleton Police Department	Chief of Police
Ross Gullickson	City of North Mankato	Chief of Police
Kevin McCann	City of North Mankato	City Administrator

Name	Agency/Organization	Participant Title
James Zwaschka	North Mankato Fire Department	Fire Chief
Kathy Grinnell	City of Pemberton	City Clerk
Samantha Erickson	City of Skyline	City Clerk
Joanne Boettcher	City of Skyline	City Council
Paige Attarian	City of Skyline	Mayor
Stefanie Janike	City of St. Clair	Clerk/Treasurer
Deb McCollum	City of St. Clair	Public Works Employee
Thad Baker	City of St. Clair	Public Works Supervisor
Kara Hansen	City of Vernon Center	City Clerk-Treasurer
Mark Willette	City of Vernon Center	Public Works
Mary Randall	Cambria Township	Clerk
DJ Williams	Rapidan Township	Clerk Treasurer
Gail Jaeger	Mapleton Township	Clerk/Treasurer
Dan Rotchadl	Mankato Township	Chairperson
Kim Krengel	Beauford Township	Clerk
Gloria Mack	Shelby Township	Clerk
Liz Thiesse	Garden City Township	Clerk
Justin Samuelson	South Bend Township	Public Works Manager
Cindy Juberian	South Bend Township	Supervisor
Joe Barnard	Lyra Township	Chairperson
Allen Marble	Decoria Township	Chairperson
Scott Kaminski	Mankato Area Public Schools	Director of Facilities and Safety
Tim Collins	St. Clair School District	Superintendent
Chandler Holland	Minnesota State University, Mankato	Dir. EHS & Risk Management
Michael Peterson	HSEM	Regional Program Coordinator
Joe Reinemann	American Red Cross	Volunteer
Scott Meadows	CenterPoint Energy	Supervisor Field Operations
Anna Thill	Xcel Energy	Community Relations Manager
Brandon Brehmer	River Hills Ag- Pioneer Seed Agency	Seed Seller, Farmer
Andy Wilke	Greater Mankato Growth	Executive Vice President
Dan Hart	Mankato Clinic	Director
Shawn Stoermann	Brown County Emergency Management	Emergency Management Director
Tammy Stewig	Le Sueur County Emergency Management	Emergency Management Director
Benjamin Johnson	Martin County Emergency Management	Emergency Management Director

2.2 Review of Existing Plans, Capabilities & Vulnerabilities

Blue Earth County and its local communities utilized a variety of planning documents to direct plan development. These documents included a Comprehensive/Master Plan, Emergency Operations Plan, Transportation Plan, etc. (see Section 5.1.4 and Appendix D). The planning process also incorporated

the existing natural hazard mitigation elements from previous planning efforts. In addition, the 2024 Minnesota All-Hazard Mitigation Plan was consulted.

In the development of the Blue Earth County HMP, U-Spatial consultants reviewed and incorporated a variety of planning documents that direct community development and influence land use decisions for the county and its jurisdictions. In addition, U-Spatial consultants worked closely with the Blue Earth County emergency management director and other key county staff and local city officials to collect feedback on local mitigation capabilities and vulnerabilities that either support or hinder the ability to mitigate against natural hazards countywide and at the local level.

Building codes offer a way to incorporate geographically relevant and best available building science with policies and programs. The Cities of Eagle Lake, Lake Crystal, Madison Lake, Mankato, North Mankato, and St. Clair have adopted the Minnesota Building Code. The following is a summary of the assessment tools used to gather information on local capabilities and vulnerabilities during the planning process:

Capabilities Assessment (hazard-specific): In this assessment, detailed information was collected from Blue Earth County on current plans and programs in place (i.e., existing programs, plans, or policies) as well as program gaps or deficiencies that currently exist to mitigate against damages caused by each natural hazard addressed in the plan. Section 4 identifies current gaps and deficiencies for mitigation, and Section 5.3 describes the mitigation capabilities that are in place by Blue Earth County to support mitigation.

Local Mitigation Surveys: As part of Blue Earth County's 2025 HMP update, participating jurisdictions, key county personnel, and additional agency stakeholders were asked to fill out a Local Mitigation Survey (LMS) form. Questions in the LMS form addressed the following:

- Hazard Identification, Risk Assessment & Vulnerability Analysis
- Local Mitigation Capabilities Assessment
- Local Mitigation Projects
- Survey Participants

The purpose of the survey was to gather jurisdictionally specific information needed to support the update of the plan and to help inform development of local-level mitigation actions for the next five-year planning cycle (for the full Blue Earth County LMS report, see Appendix C).

2.3 Planning Process Timeline and Steps

To update the 2020 Blue Earth County HMP, U-Spatial consultants worked in coordination with Blue Earth County Emergency Management and members of the planning team. The updated plan includes new data documenting the types of hazards faced by Blue Earth County residents and emergency planning officials as well as new thinking on how to address these hazards.

2.3.1 Blue Earth County Stakeholder Coordination

Two planning team meetings took place via Zoom video conference hosted by U-Spatial. Meeting participants included representatives from Blue Earth County, city and township governments,

neighboring jurisdictions, and other key stakeholders. Appendix F provides documentation of stakeholder outreach and participation in the plan update

Survey forms to acquire mitigation ideas and feedback remain available on the HMP website

To provide the opportunity for public input, Blue Earth County issued two news releases announcing the plan update and inviting public review and feedback on the draft plan. The news release provided information on where to view the plan and submit comments. The Blue Earth County HMP website, hosted by U-Spatial, and the feedback and mitigation action ideas survey will remain available through the five-year planning period to foster public engagement. Table 2 documents the dates of Hazard Mitigation update meetings and public outreach. The public feedback period for the draft plan was open from 10/17/25 to 10/31/25, for a period of 15 days. Appendix G provides documentation of the public outreach for feedback on the draft plan by Blue Earth County and jurisdictions.

Table 2. Blue Earth County hazard mitigation update meetings and public outreach

Event	Date	Appendix
Kickoff Webinar	1/8/25	Appendix F, Planning Team Meetings
News Release #1	7/14/25	Appendix G, Public Outreach & Engagement Documentation
Planning Team Meeting #1	7/9/25	Appendix F, Planning Team Meetings
Planning Team Meeting #2	9/24/25	Appendix F, Planning Team Meetings
News Release #2	10/17/25	Appendix G, Public Outreach & Engagement Documentation

At the close of the public outreach period, the U-Spatial consultants worked with the Blue Earth County Emergency Manager and planning team to incorporate public feedback into the HMP.

For more information on the planning process, see Sections 5 and 6.

2.3.2 Overview of Jurisdictional Participation

Throughout the planning process, Blue Earth County and the U-Spatial team worked to engage representatives from the county and each city in the update of the plan. Key activities for jurisdictions included assisting with public outreach, participating in planning team meetings, providing local-level information, and reviewing and providing feedback to the plan update.

U-Spatial and Blue Earth County actively used the following methods to engage jurisdictions in the HMP plan update process:

- **Zoom Video Conferencing:** Planning team meetings were conducted via Zoom video conferencing hosted by U-Spatial. Virtual meetings proved to be a beneficial addition to the planning process, resulting in a high turnout from jurisdictional representatives and other stakeholders, as well as providing the ability for presenters to collect, respond to, and document feedback from participants through Zoom functions such as surveys, chat, and Q&A.
- **Email Correspondence:** Email was a primary tool used to communicate with representatives from Blue Earth County, municipal governments, and other stakeholders. Emails were used to

distribute news releases for public outreach, to invite participation in meetings and to share meeting summaries, as well as to request local information and final review of the draft plan. Email proved to be an effective tool that resulted in increased jurisdictional participation and collection of locally specific information.

- **Surveys, forms, and polls:** Input tools such as surveys, forms, and tools were used throughout the process to efficiently collect information in a format that could directly be fed into the written hazard mitigation plan. Polls were used to elicit feedback during the planning team meetings. The Local Mitigation Survey (LMS) was used to ensure feedback from every jurisdiction for critical input such as building code use, NFIP adoption, and changes in vulnerabilities; the Blue Earth County emergency manager met with each local community to complete this survey. Feedback forms were posted on the website for easy access during the plan review.
- **Phone Calls:** Phone calls were frequently used to conduct direct outreach or follow-up to jurisdictions to ensure participation or to collect information via one-on-one interviews. Phone calls proved to be an effective tool that resulted in increased jurisdictional participation and collection of quality information. Phone calls were especially useful in engaging very small communities that had limited staff or technological capabilities.

Cities participating in Blue Earth County HMP update varied by population and associated government resources to participate in the planning process (e.g., personnel, time, and technology). Rural communities with smaller populations (under 500) typically had part-time elected officials, limited-to-no city staff, and reduced city hall hours in which to conduct business. Blue Earth County and U-Spatial were sensitive to these local challenges and worked to help these local governments to participate using the methods that worked best to accommodate them, such as phone interviews to complete local mitigation survey forms (see Appendix C).

Table 3 provides an overview of each city's participation in the Blue Earth County HMP update planning process and a reference to supporting documentation.

Table 3. Jurisdictional participation in planning process

Jurisdiction (2024 Est. Population, Esri)	News Release #1	Planning Team Mtg #1	Local Mitigation Survey	Mitigation Action Charts	Planning Team Mtg.#2	News Release #2 & Plan Review
Supporting Documentation	App. G	App. F	App. C	Sec. 5.3 App. H	App. F	App. G
Blue Earth County (70,889)	X	X	X	X	X	X
City of Amboy (510)	X	X	X	X	X	X
City of Eagle Lake (3,381)	X	X	X	X	X	X
City of Good Thunder (511)	X	X	X	X	X	X
City of Lake Crystal (2,534)	X	X	X	X	X	X
City of Madison Lake (1,334)	X	X	X	X	X	X
City of Mankato (45,932)	X	X	X	X	X	X
City of Mapleton (1,699)	X	X	X	X	X	X
City of Minnesota Lake (681)	X		X	X		X
City of North Mankato (14,273)	X	X	X	X	X	X

Jurisdiction (2024 Est. Population, Esri)	News Release #1	Planning Team Mtg #1	Local Mitigation Survey	Mitigation Action Charts	Planning Team Mtg.#2	News Release #2 & Plan Review
Supporting Documentation	App. G	App. F	App. C	Sec. 5.3 App. H	App. F	App. G
City of Pemberton (219)	X	X	X	X	X	X
City of St. Clair (718)	X	X	X	X	X	X
City of Skyline (282)	X		X	X		X
City of Vernon Center (329)	X		X	X	X	X
Neighboring Jurisdictions:						
Nicollet County						
Faribault County						
Waseca County						
Watonwan County					X	
Martin County		X				
Le Sueur County		X			X	
Brown County		X			X	

Section 3 – Risk Assessment and Vulnerability Analysis

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

The risk assessments in this plan are based on widely accepted tools and databases, consultation with hazard mitigation planning expertise at FEMA and HSEM, and technical guidance from the MN DNR State Climatology Office. Geographic Information System (GIS) tools are used throughout to demonstrate geographically based risk and vulnerabilities.

3.1 Natural Hazard Identification

This assessment identifies the characteristics of natural hazard events, the severity of the risk, the likelihood of these events occurring, and the vulnerability of each jurisdiction’s population and assets.

[See a list of all natural hazards covered in the 2025 HMP](#)

The cornerstone of risk assessment is identifying the hazards that affect jurisdictions. Listed below are the natural hazards addressed in the 2024 Minnesota State Hazard Mitigation Plan:

Flooding	Lightning	Drought
Dam/Levee Failure	Winter Storms	Extreme Heat
Wildfires	Landslides (Erosion and	Extreme Cold
Windstorms	Mudslides)	Earthquakes
Tornadoes	Land Subsidence (Sinkholes	Coastal Erosion & Flooding
Hail	and Karst)	

3.1.1 Hazard Prioritization

As part of the plan update process, the planning team reviewed, updated, and prioritized the hazards faced by residents of Blue Earth County, updated the existing mitigation actions published in the 2020 HMP, and proposed new mitigation actions.

The team examined the hazards identified in the 2020 HMP and adjusted them to reflect the definitions of natural hazards used in the 2024 Minnesota State Hazard Mitigation Plan.

While this HMP focuses on natural hazards, planning took place with the understanding that many non-natural hazards could occur due to natural disasters (e.g., disruption in electrical service due to downed powerlines from heavy snow, ice storms, or high wind events).

The prioritization of hazards for the Blue Earth County HMP Update (Table 4) was based upon group review and discussion of the natural hazards that pose risk to the county during the HMP Planning Team Meeting #1. In the review of each hazard, the group was asked to consider if the risk to severe natural hazards had increased or decreased since the last plan, and if this affected their priority level to mitigate against that hazard. Appendix F provides the discussion notes from the meeting.

Table 4. Prioritization of hazards for 2025 Blue Earth County HMP Update

Natural Hazards Addressed in the Last Plan	Current Priority
Flooding	High
Winter Storms	High
Windstorms	High
Tornadoes	High
Landslides	High
Hailstorms	Moderate
Extreme Cold	Moderate
Extreme Heat	Moderate
Drought	Moderate
Land Subsidence	Moderate
Dam Failure	Moderate
Lightning	Low
Wildfire	Low

3.1.2 FEMA- and Minnesota-Declared Disasters and Assistance

Another historical perspective is derived from FEMA-declared disasters. Between 1957 and August 2025, 20 federal disasters and four federal emergencies were declared in Blue Earth County; see details on the [Blue Earth County HMP website](#).

Minnesota Statutes Chapter 12A established a framework for state agencies to help communities recover from disaster. In 2014, Governor Mark Dayton signed legislation establishing the state's Disaster Assistance Contingency Account to assist local communities after a natural disaster when federal aid is not available. Damage required to declare a disaster is half the threshold of the federal/FEMA public assistance (only) program threshold (MN HSEM, 2019). Blue Earth County has been included in three State Disaster Declarations.

The Hazard Mitigation Grant Program (HMGP), the Flood Mitigation Assistance (FMA) program, and the former Building Resilient Infrastructure and Communities (BRIC) program are FEMA-administered hazard mitigation assistance programs that provide funding for eligible mitigation planning and projects that reduce disaster losses and protect life and property from future disaster damages (FEMA, 2021). Table 5 lists the projects in the county funded by a hazard mitigation assistance program.

Table 5. Historical hazard mitigation funding awarded in Blue Earth County

Project Identifier	Sub-Grantee	Project Type	Project Total	Federal Share
DR-4290-0002-R	Blue Earth County	200.6: Acquisition of Private Real Property (Structures and Land) - Landslide	\$379,695	\$284,432
DR-4797-0006	Blue Earth County	91.1: Local Multihazard Mitigation Plan	\$73,589	N/A
DR-1830-0011-P	Blue Earth County	91.1: Local Multihazard Mitigation Plan	\$74,668	\$56,001
DR-4390-0006-R	Blue Earth County	200.3: Acquisition of Public Real Property (Structures and Land) - Riverine	\$300,791	\$215,155
DR-4531-0002-R	St Clair School	206.2: Safe Room (Tornado and Severe Wind Shelter) - Public Structures	\$3,230,645	\$2,881,638
DR-1370-0013-P	Region 9 Regional Development Commission	91.1: Local Multihazard Mitigation Plan	\$91,205	\$68,404
DR-1419-0015-R	Frost-Benco-Wells Electric Co	400.1: Utility Protective Measures (Electric, Gas, etc.)	\$124,106	\$93,079
DR-4131-0012-R	Blue Earth County	200.1: Acquisition of Private Real Property (Structures and Land) - Riverine	\$443,555	\$332,538
DR-1921-0012-R	Blue Earth County	200.1: Acquisition of Private Real Property (Structures and Land) - Riverine	\$67,687	\$50,765
DR-4659-0008-F	Blue Earth County	600.1: Warning Systems (as a Component of a Planned, adopted, and exercised risk reduction plan)	\$53,435	\$40,076
DR-1982-0004-F	Pemberton	600.1: Warning Systems (as a component of a planned, adopted, and exercised risk reduction plan)	\$18,482	\$13,862
DR-4442-0008-R	Benco Electric Cooperative	400.1: Utility Protective Measures (Electric, Gas, etc.)	\$46,134	\$34,601

SOURCE: (FEMA, 2025)

3.2 Community Vulnerability

The degree to which a person is vulnerable to the impacts of a hazard depends on how well they can react before, during, and after a hazardous event. The Centers for Disease Control and Prevention (CDC) Agency for Toxic Substances & Disease Registry (ATSDR) defines social vulnerability as “...the resilience of communities when confronted by external stresses on human health, stresses such as natural or human-caused disasters, or disease outbreaks” (ATSDR, 2020). Exacerbating these stressors are the increasing number of extreme weather events attributed to Minnesota’s changing climate (MPCA, 2018).

The ATSDR created the CDC Social Vulnerability Index (SVI) to help identify vulnerable communities that need support in preparing for hazards or recovering from disaster. The CDC SVI is created at the census tract level using American Community Survey (ACS) five-year data.

The SVI is included in the FEMA National Risk Index (NRI) and presented in the Risk and Vulnerability dashboard on the webpage for each hazard. Additionally, summaries of at-risk populations in each jurisdiction are available on the county profile page. Vulnerable attributes of a population are addressed with each natural hazard.

The Risk and Vulnerability dashboard for each hazard also includes the FEMA Community Resilience Challenges Index (CRCI). The CRCI is a composite index of 22 community resilience indicators, including population and household characteristics, housing, healthcare, economic factors, and connection to community. The index value provides a relative composite value by census tract and is designed for emergency managers to target outreach strategies and understand the resilience challenges community members face (FEMA, 2024a).

[Explore population vulnerability on the Blue Earth County HMP Website](#)

3.3 Climate Change

Minnesota's climate change summary is informed primarily by the Midwest Chapter of the Fifth National Climate Assessment (NCA5) dated November 2023 and with interpretations from the MN DNR State Climatology Office (Wilson et al., 2023).

Rising global temperatures and the resulting increases in atmospheric moisture from evaporation of ocean waters have allowed Minnesota to become warmer, wetter, and more humid during the past several decades. The ten combined warmest and wettest years between 1895 and 2022 all occurred since 1998. Nights have warmed faster than days since 1970, and winter has warmed several times faster than summer. Even with the drought conditions of the early 2020s in Minnesota, heavy precipitation continues to show long-term increases, with damaging rain and snowfall events reported somewhere in the state each year of the decade through 2023. Despite no increase in the highest temperatures of summer, maximum annual heat index values (one measure of how hot it feels) have been rising across the state because of increased humidity during heat waves.

Even though periods of intense growing-season drought have defined the climate of the early 2020s in much of Minnesota, long-term increases in annual precipitation have continued because of heavy and even record-setting precipitation during the cold season. For instance, record-dry conditions during May through mid-August of 2021 led to parts of northwestern and northern Minnesota reaching "Exceptional Drought"—the worst category on the US Drought Monitor. A shift to a stormy pattern during the following winter and spring, however, produced unprecedented precipitation between December in May in the exact same areas, with historic flooding along the Rainy River.

The observed changes in our climate have altered growing seasons, damaged forests, challenged natural resource management, limited recreational opportunities, destroyed infrastructure, and affected the conditions of lakes, rivers, wetlands, and groundwater aquifers that provide water for drinking and agriculture. Climate models project that temperature and precipitation increases will continue in Minnesota through the 21st century, with hotter summers and increased drought severity during dry periods as well.

To help the public understand how the changing climate has affected and is expected to affect the behavior of common weather hazards in Minnesota, the MN DNR State Climatology Office developed graphical summaries of the scientific confidence associated with each hazard's relationship to climate change (Table 6 and Table 7). Climate change in Minnesota has by far the strongest associations with (1) sharp declines in the frequency and severity of extreme cold outbreaks, tied to a persistent warming of winters, and (2) sharp increases in the frequency and intensity of extreme precipitation events. For instance, from 1970 through 2023, Minnesota's winters warmed at a rate of almost one degree F per decade, and approximately three-four times faster than summer. During that same period, the coldest night of the year has warmed almost twice as fast as winter as a whole—up to two degrees F per decade (or 20 degrees F per century).

Despite major losses to cold extremes, the warming climate and increased abundance of atmospheric moisture has led to an uptick in many heavy snowfall metrics across Minnesota, leading to moderately high confidence that the changing climate is increasing heavy snowfall events—even as other winter characteristics decline. The intensity and frequency of tornadoes and severe convective storms are weakly connected at best to recent climate changes, and since the 1950s, despite superior detection and verification capabilities, the number of damaging tornadoes rated at least F-2 or EF-2 in Minnesota has shown no increases. Dramatic changes in the seasonal and geographical ranges of severe convective weather have, on the other hand, already affected Minnesota. In 2021, a damaging tornado crossed the Boundary Waters into Canada, becoming the latest on record so far north in the state. Then, on December 15th, an outbreak of destructive thunderstorm winds and over 20 tornadoes struck the southeastern parts of the state, producing the latest tornadoes on record by 29 days.

The climatic picture is expected to change further beyond the 2020s and especially as Minnesota approaches the middle of the 21st century (Table 7). Dramatic losses in extreme cold and additional increases in heavy and extreme precipitation are expected to remain the state's leading climate change symptoms. Although Minnesota has not yet observed increases in the frequency, severity, or duration of summertime high temperatures or drought (through 2023), climate model projections summarized in NCA5 indicate that heat waves are all but certain to increase by mid-century. A 2018 study conducted by NOAA scientists indicates that by the 2050s, heat waves in Minnesota will be more attributable to climate change than to natural variability (Lopez et al., 2018).

Table 6. Confidence that climate change has already impacted common Minnesota weather/climate hazards

Confidence	Hazard	Recent & Current Observations
Highest	Extreme cold	Rapid decline in severity & frequency
	Extreme rainfall and heavy snowfall	Becoming larger and more frequent
Moderately High	Humid heat waves	Some increase in maximum dew point and Heat Index values since 1980
Moderately Low	Tornadoes, hail, thunderstorm winds	Intensity and frequency unchanged, but seasons expanding aggressively

Confidence	Hazard	Recent & Current Observations
Low	Drought and dry spells	Intense & major episodes in early 2020s but no long-term trend
Lowest	Summer high temperature extremes	Highest temperatures still well within historical ranges, and number of hot days increasing only slightly in isolated locations

SOURCE: (BLUMENFELD, K. MINNESOTA STATE CLIMATOLOGY OFFICE, PERSONAL COMMUNICATION, DECEMBER 21, 2023)

Table 7. Confidence that climate change will impact common Minnesota weather/climate hazards through 2070

Confidence	Hazard	Expectations through 2070
Highest	Extreme cold	Continued rapid decrease in severity and frequency
	Extreme rainfall	Unprecedented events more common
High	Heat waves	Summer high temperatures, maximum dew point and heat index values all projected to increase
Moderately High	Drought	Increased severity likely as summer heat increases; frequency and duration projections unclear
Moderately Low	Heavy snowfall	Greater extremes, but events less frequent as winter rain increases
	Tornadoes, hail, thunderstorm winds	Intensity and frequency unclear but continued seasonal expansion and larger “outbreaks” possible

SOURCE: (BLUMENFELD, K. MINNESOTA STATE CLIMATOLOGY OFFICE, PERSONAL COMMUNICATION, DECEMBER 21, 2023)

3.3.1 Climate Change Impacts and Resilience Planning

The NCA5 states that even if the world decarbonizes rapidly, the Nation will continue to face climate impacts and risks. Adequately and equitably addressing these risks involves longer-term inclusive planning, investments in transformative adaptation, and mitigation approaches that consider equity and justice. In the Midwest, rising temperatures, extreme precipitation, drought, and other climate-related events are impacting agriculture, ecosystems, cultural practices, health, infrastructure, and waterways. Communities, Indigenous Peoples, governments, and businesses are embracing adaptation approaches that include climate-smart agriculture, improved landscape management, innovative green infrastructure financing, and collaborative decision-making.

NCA5 includes these key messages for the Midwest region ([Chapter 24: Midwest](#)):

- Changes in precipitation extremes, timing of snowmelt, and early-spring rainfall are expected to pose greater challenges for crop and animal agriculture, including increased pest and disease transmission, muddier pastures, and further degradation of water quality. Climate-smart agriculture and other adaptation techniques provide a potential path toward environmental and economic sustainability.

- Increasing incidence of flooding and drought is expected to further alter aquatic ecosystems, while terrestrial ecosystems are being reshaped by rising temperatures and decreasing snow and ice cover. In response, communities are adapting their cultural practices and the ways they manage the landscape, preserving and protecting ecosystems and the services they provide.
- Climate change has wide-ranging effects on lives and livelihoods. Mitigation and adaptation strategies, such as expanded use of green infrastructure, heat-health early warning systems, and improved stormwater management systems, when developed in collaboration with affected communities, have the potential to improve individual and community health.
- Increases in temperatures and extreme precipitation events are already challenging aging infrastructure and are expected to impair surface transportation, water navigation, and the electrical grid. Shifts in the timing and intensity of rainfall are expected to disrupt transportation along major rivers and increase chronic flooding. Green infrastructure and public and private investments may mitigate losses, provide relief from heat, and offer other ways to adapt the built environment to a changing climate.
- Climate-related changes to water quantity and quality are increasing the risks to ecosystem health, adequate food production, surface water and groundwater uses, and recreation (high confidence). Projected increases in droughts, floods, and runoff events across the Mississippi River basin and the Great Lakes will adversely impact ecosystems through increased erosion, harmful algal blooms, and expansion of invasive species.

Key messages from the NCA5 are indicated in green throughout this document.

3.3.2 Health Impacts of Climate Change in Minnesota

Climate change already impacts our health, and these impacts are expected to worsen in the years ahead. The risks are especially high for Minnesotans who are less able to cope due to their age, income, housing insecurity, preexisting health conditions, and more.

Heat, air pollution (including wildfire smoke and allergens like pollen), extreme precipitation, floods, droughts, and ecosystem changes are all “climate hazards” that impact our health. Some of these climate hazards have a direct effect, like a heat-related illness from a heatwave, while some have an indirect impact, like exacerbation of asthma from mold growth in a flooded basement.

Heat

Minnesotans will experience a wide range of impacts from the increased frequency and severity of extreme heat events. Higher heat, increased humidity, and longer and more frequent extreme heat events can lead to direct health impacts of dehydration and heatstroke. Untreated heat stroke can lead to death. Heat-related illness directly accounted for 75 deaths in Minnesota from 2000–2022.

Heat can also worsen existing health conditions, such as respiratory and cardiovascular diseases. The people most at risk include those who are more exposed and those who may be more susceptible due to physiological reasons. People more likely to be exposed to heat include outdoor workers in agriculture and construction, student athletes, people who live in cities (due to the heat island effect), people without air conditioning, and unhoused persons.

People at higher risk because of physiological reasons include those with underlying medical conditions, pregnant people, older adults, infants, and young children.

Just as one example of the devastating effects of heat, in the summer of 2011, Minnesota had six days when the heat index was 105 degrees F or higher—and that same summer there were 1,302 emergency department visits and 3 deaths due to heat. What makes these numbers tragic is that heat-related illnesses are preventable.

Air Pollution

In general, we breathe clean air in Minnesota, according to federal standards. But on some days and in some locations, air is unhealthy due to ozone or fine particulate matter. Greenhouse gas emissions can increase air pollution, and rising temperatures can also affect the formation and release of pollutants. Unhealthy air days are expected to become more frequent, and more intense due to climate change.

Climate change is likely to increase three main air contaminants in Minnesota: ozone, particulate matter (including wildfire smoke), and allergens. These air pollutants can cause or exacerbate cardiovascular and respiratory diseases, chronic obstructive pulmonary disease (COPD), allergies, and asthma.

Pollen is intensifying with climate change, and can trigger allergies, asthma attacks, and affect other respiratory conditions. In Minnesota, asthma affects one in 16 children (6.4%) and one in 13 adults (7.4%). People with asthma need to be especially aware of pollen sources and seasons to prevent an allergy-related asthma attack.

There are three pollen seasons in Minnesota: trees, grasses, and weeds. Trees are the first to release pollen, typically starting in early April, grasses usually ramp up pollen release in early June, and weeds typically begin releasing pollen in mid-June and continue until the first hard frost. Research shows that the growing season for ragweed pollen, which is highly allergenic, has increased by 15 to 25 days in and around Minnesota. The lengthening pollen season is strongly related to climate change characteristics, such as lengthening of the frost-free season and later timing of the first fall frost.

Indirect health effects from air pollution can include reduced visibility on a high smog day, reduced productivity at work or school due to allergies or asthma, and reduced productivity and degradation of crops and water sources, which can lead to economic burdens.

Those most at risk include:

- Children, because they have developing lungs, are outside more, and they play vigorously and inhale more air per pound of body weight compared to adults.
- Adults over 60, because their bodies are aging.
- People with chronic respiratory or cardiovascular disease because they are more susceptible to air pollution.
- Individuals living near other sources of air pollution (such as roadways, freeways, and heavy industry), because they are chronically exposed to air pollution.
- People of color, because they are more likely to be exposed to more air pollution and have a disproportionate burden of heart and lung diseases, which may increase susceptibility.

Extreme Precipitation, Floods, Drought

Rain is falling more frequently in extreme, heavy, localized events, leading to some parts of our state experiencing flooding while other areas experience drought.

Increased frequency and severity of heavy rainfalls can lead to flooding, which results in both direct and indirect health impacts like:

- Injury or even death from drowning.
- Illnesses from being exposed to contaminated drinking water or recreational sources.
- Mental health stress from experiencing the trauma of the event or later from being displaced or dealing with damaged homes and business.
- Respiratory ailments from exposure to mold from flooded basements.
- Carbon monoxide poisoning from exposure to carbon monoxide when using secondary power sources, like generators.
- Flooding can also disrupt economic and social networks and put a strain on essential services.

The people most at risk are Minnesotans who are more likely to be exposed to flood waters, like those who live in a flood plain or near water bodies, or people who cannot easily evacuate or recover from flooding destruction, such as people who do not have reliable transportation, people who can't use the stairs when elevators are out of service, people in wheelchairs, people with disabilities, older adults, and lower income people.

Heavy rain events can cause standing water in backyards or basements. Many homeowners have experienced wet basements, which is mentally and financially stressful, and if mold starts to grow that can become a health problem.

Localized flash flooding can also be a problem where our infrastructure is undersized, and people get caught off guard by flooded roads. This is an important public health safety concern as almost half of flash flood fatalities occur in vehicles. It takes as little as six inches of fast-moving water to knock over and carry away an adult, and as little as 12 inches can carry away a small car.

Another public health concern with precipitation changes exacerbated by climate change is waterborne disease outbreaks. Heavy downpours can lead to a host of problems, including increased runoff and sewage overflows, which can cause outbreaks of waterborne diseases such as E. coli and Cryptosporidium. Runoff can carry viruses and other disease-causing agents into wells and recreational waters, contaminating them and causing health problems.

Zoonotic Diseases

Zoonotic diseases or zoonoses are caused by germs like viruses, bacteria, parasites, and fungi that spread between animals and people. Increases in temperatures and changes in rain patterns are changing our ecosystems, which can affect the spread of diseases carried by insects, ticks, rodents, birds, and other animals.

Diseases from ticks include Lyme disease, Anaplasmosis, and Babesiosis. As temperatures increase, disease-transmitting ticks will become active sooner and stay active longer, allowing more time to develop and feed on hosts. Ticks thrive in warm humid environments.

Additionally, there may be a decreased die off over the winter months if temperatures do not get very cold. An increase in winter temperatures can also lead to new tick species moving into and surviving in Minnesota, which can lead to the introduction of new diseases.

People more at risk for diseases carried by insects, ticks, and rodents are people who spend more time outdoors or are more exposed to these pests.

Harmful Algal Blooms

An increase in water temperatures can lead to blue-green algal blooms, which contain toxins that can pose harmful health risks. People or pets who drink or swim in water with dangerous levels of harmful algal bloom (HAB) contamination may experience stomach illness, skin irritation, allergic responses, and damage to the liver and nervous system. In extreme cases, dogs and other animals have died after drinking water containing these toxins.

Harmful algal blooms in Minnesota lakes result from several factors including runoff from fertilizers, discharges from waste treatment plants, warmer waters, and higher temperatures. While HABs can occur naturally, the frequency of outbreaks is increasing in part because human activities create favorable conditions for the blooms.

Zoonotic diseases and HABs can have an indirect health effect when they threaten the livelihoods of people who work in recreation-dependent economies that revolve around camping, fishing, and hunting.

Mental Health

Climate change threatens our mental health through direct exposure to a climate-related disaster (e.g., flooding); through the disruption to a major determinant of health, such as a loss of livelihood or a cultural tradition; and through awareness or uncertainty of climate change as an existential threat. These experiences may overlap and lead to compounded impacts on an individual or even an entire community, such as family farmers burdened with decadal drought who are more likely to commit suicide.

Existing research has associated several mental health conditions with climate change, such as psychological distress, grief reactions, depression, post-traumatic stress disorder, interpersonal conflicts, drug or alcohol abuse, loss of identity, and suicidal ideation.

Vulnerable populations such as children, the elderly, communities of color, and other marginalized communities are most at risk of climate change-related mental health impacts.

3.3.3 Climate Change Adaptation

Climate change adaptation is important for increasing the resilience of communities and the environment. The shocks caused by more extreme weather events and the stressors of longer-term changes to the climate affect all natural systems. For human communities, these impacts challenge the surroundings in which they live, the critically important ecosystem services upon which they depend, public health, local facilities and infrastructure, the safety of their residences, and the viability of their livelihoods. Development trends can further exacerbate both climate impacts and population vulnerability. Communities are only as resilient as the most vulnerable within them.

3.3.4 Climate Change Data and Tools in Minnesota

The University of Minnesota Extension and the University of Minnesota's Water Resources Center coordinate the Minnesota Climate Adaptation Partnership (MCAP), which brings together federal and state agencies, organizations, and individuals statewide with an interest in climate adaptation. MCAP received funding after the 2021 legislative session to develop high-resolution (2.6 mile/4km grid) dynamically downscaled climate projections utilizing the University of Minnesota's Supercomputing Institute. This data is being made publicly accessible via the new [Minnesota CliMAT—Climate Mapping and Analysis Tool](#). This interactive online tool provides highly localized climate projections for Minnesota. MN CliMAT is based on data from the latest generation of global climate models, called [CMIP6](#). With the dynamically downscaled climate projection data, users can visualize even how small cities will likely be impacted in the coming decades (Liess, S. et al., 2023).

More resources are available on the [climate change page](#) of the Blue Earth County website

3.4 Jurisdictional Change in Risk or Vulnerability Assessment

Jurisdictions in Blue Earth County have varying vulnerabilities to and concerns about impacts to their communities. Interviews with jurisdictional representatives in addition to the Local Mitigation Survey resulted in some specific concerns (see Appendix C). Participants were asked to provide feedback on how their community's vulnerability to natural hazards had either increased (due to changes such as development) or decreased (due to local mitigation efforts) over the past five years.

At the local jurisdictional level, several communities did note an increase in development over the last five years as a factor for an increase in vulnerability to severe weather or disaster events.

3.4.1 Jurisdictional Responses

As part of the Local Mitigation Survey form, Blue Earth County Emergency Management and each city jurisdiction were asked to provide a vulnerability assessment that described what structures, systems, populations, or other community assets were susceptible to damage and loss from specific hazard events. This information was used to help tie local vulnerability back to the exposure of people, buildings, infrastructure, and the environment to the natural hazards listed in Table 4 and to assist local governments in development of related local mitigation actions to reduce risk.

The following is a compilation of common responses taken directly from jurisdictional representatives as preserved in Appendix C: Question 2 – Local Vulnerabilities. Responses here are edited only for clarity.

Blue Earth County

Dam Failure: The Rapidan Dam in Blue Earth County experienced a partial failure on June 24, 2024, after the Blue Earth River overtopped the dam due to severe flooding. The failure occurred on the dam's west abutment, causing a new channel to erode around it and resulting in the loss of a house and an Xcel Energy substation. The dam's condition was already rated as "poor" by the National Inventory of Dams. Blue Earth County has determined that the dam

needs to be removed and is in the process of preliminary engineering and environmental documentation for dam removal including river restoration. The CR9 bridge adjacent to the dam has also been removed due to flood damages and a replacement structure is being designed with an estimated construction time frame from 2026-2027.

Flooding: Blue Earth County Public Works/Parks Department is responsible for maintenance of 743 center lane miles of roads and 199 bridges, as well as parks, trails and boat ramps. All of these assets may be vulnerable to high rain events that cause localized flooding.

Flooding/Landslides: Several homes are considered at-risk of failure along the Blue Earth River due to degradation and scour of the riverbank. A total of 6 properties have been submitted to FEMA for home-buyouts or relocation after the severe flooding event in June 2024.

Flash Flooding: Flash flooding occurs in all areas of Blue Earth County. The highest areas of concern include South Bend Township, Decoria Township, Mankato Township, the City of Skyline, and the City of Mankato.

- Flash floods involve a rapid rise in water level, high velocity, and large amounts of debris, which can lead to significant damage that includes scouring of new channels, the tearing out of trees, undermining of buildings, and undermining of infrastructure. The intensity of flash flooding is a function of the intensity 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. Flash flooding in the county can be destructive in steep watersheds and in narrow valleys and ravines.
- In recent years with the intense rainfall events, flash floods and subsequent erosion from ravines and bluffs has been particularly impactful to public and private infrastructure like roads and culverts. **While this is an issue throughout the county, it has been particularly impactful in the areas with steeper slopes like South Bend Township, Mankato Township, Decoria Township, the City of Mankato, and the City of Skyline.** When these areas initially developed, stormwater storage and infrastructure was either not planned or undersized.
- The combination of large rain events and no historic comprehensive stormwater planning with the large rain events, flash floods are causing erosion and sedimentation. Examples of infrastructure impacted by erosion and sedimentation include roads, culverts, water lines, sanitary sewer lines and the flood control system in Mankato.

Windstorms, Tornadoes: A coordinated approach is needed to identify where storm shelters or tornado safe rooms are needed and to evaluate whether new construction or a retrofit of facilities is possible. Finding funding for the implementation of such construction projects is also a barrier.

Land Subsidence: Blue Earth County does experience sinkholes, and local jurisdictions should continue to be aware of and plan for development considerations in karst sensitive areas.

Specifically, the western half of the county, particularly on flat hilltops between or adjacent to river valleys, is prone to sinkhole formation due to the presence of limestone and dolomite bedrock within 50 feet of the surface. A sinkhole was discovered in LeHillier during flood patrols in 2014 near the earthen dike along the Blue Earth River.

(HazMat) Ponderosa Landfill: The Ponderosa Landfill has had a fire (May 2025) and flooding event (June 2024), causing issues with air quality and a release of “contact water” into public waters.

City of Amboy

Flooding: Heavy rainfall does overwhelm our undersized pipes. The EQ basin can fill up at the WWTP and we have to bypass to relieve pressure on the system so residents will not have backup in their homes. By the end of 2025 will have engineers preliminary report for funding infrastructure needs for WWTP and storm sewers.

Severe Storms (Power Outages): BENCO has mostly overhead power lines. Severe storm events can bring down power lines resulting in power outages.

City of Eagle Lake

Flooding: Eagle Lake has experienced flooding due to the increased frequency of flooding events and intensity of extreme precipitation. Drainage infrastructure is not always sufficient to adequately address larger precipitation events. Large tributaries to the city’s drainage infrastructure can overburden open channels, subsurface storm networks, and storage basins. When there are flooding events, it can overwhelm the city’s lift stations and potentially cause backups or overflows due to infiltration and inflow. We recently worked with a consultant to devise a stormwater and community resilience plan and have identified some solutions to help alleviate flooding impacts to residential properties and community assets such as parks and roadways, however, a lack of funding to complete the solutions is a barrier.

Windstorms, Tornadoes: The mobile home park, slab-on-grade housing, and large multi-family housing complexes could be vulnerable during high-wind or tornado events despite having designated storm shelters on site. City Hall does not have an area designated as a storm shelter or safe room for community members and staff in the event of a windstorm or tornado.

Winter Storms, Extreme Cold, and Extreme Heat: Snow and ice events can cause disruptions to services and utilities. Community members are most at risk when there are extended power outages during extreme cold and extreme heat.

City of Good Thunder

Flooding: We have low areas of town where flash flooding has overwhelmed the city’s storm sewer system. There is also a low area near the wastewater stabilization ponds.

Winter Storms: Access to emergency services can be an issue and power outages can occur. The majority of our electric grid is overhead.

City of Lake Crystal

Flooding: Flooding is a minor concern but mostly due to the overload of our sanitary sewer system. It was an issue in 2024 with the extreme rain event. We continue to add stormwater drains to the community as we add projects and have plans to expand another stormwater pond near Jones Park.

Windstorms/Blizzards (Power Outages): Overhead transmission lines are vulnerable to coming down from windstorms and winter storm events. We have generators for some of the city buildings and a power plant, but our power plant cannot generate power for the whole town at once or long term so power outages are a concern. We have a new substation planned for 2027/28 and will use the old one for redundancy, but our power is still affected by the Xcel transmission lines.

City of Madison Lake

Flooding: Flood events overload the city's sanitary collection system. We have a couple of lift stations for our sewer and storm sewer service. Extreme flooding can impact the lift stations and cause damage for our residents. We often must bypass the system during large rainfall events in order to prevent backup flooding into residents' homes.

Severe Storms (Power Outages): Most electrical service in town is from overhead lines, susceptible to heavy ice/snowfalls, high winds, and tornadoes. A generator for the City Office and Public Works shop is necessary to be able to provide services when power is down.

Windstorms, Tornadoes: The city has a large mobile home park and a campground that are susceptible to high winds and tornadic events.

City of Mankato

The City of Mankato faces a range of vulnerabilities associated with natural hazards, aging infrastructure, and the increasing severity of weather events. The city's position at the confluence of the Minnesota and Blue Earth Rivers, along with its extensive ravine system and dense infrastructure, creates complex risks that require proactive mitigation and planning.

- *Flooding:* Low-lying neighborhoods, major roadways (such as Riverfront Drive and Highway 169), and riverfront businesses are at continual risk from high river levels and flash flooding. Repeated events have led to extended road closures, emergency evacuations, and damage to homes and small businesses. Many stormwater and retention ponds throughout the city have flooded during major events, contributing to local street flooding and overwhelming parts of the system. Additionally, concerns have been raised about the potential for floodwall

compromise along the Minnesota and Blue Earth Rivers, which could cause significant downstream impacts to residential neighborhoods and commercial areas.

- *Dam Failure:* The 2024 partial failure of the Rapidan Dam resulted in severe erosion, the destruction of a power substation, and heightened concerns about uncontrolled downstream surges. These surges could affect riverbanks, bridges, and critical infrastructure in Mankato. While mitigation work is underway, dam failure remains a moderate concern for this planning period.
- *Landslides and Slope Failures:* Numerous ravines throughout the city, such as Highland Park, Indian Creek, Viking Drive, and Thompson Ravine Road, have experienced slope instability and erosion—leading to damage of public infrastructure and private property. Heavy rainfall events increase this risk significantly, making landslides a moderate but growing hazard.
- *Windstorms and Tornadoes:* Mobile home parks, slab-on-grade housing, public housing complexes, and campgrounds without storm shelters are particularly vulnerable during high-wind or tornado events. The Land of Memories campground, a popular public space, currently lacks a storm shelter—something the city is actively working to address. Overhead power lines across the city are frequently impacted during windstorms, leading to outages that affect homes, businesses, and public safety services.
- *Winter Storms, Extreme Cold, and Heat:* Snow and ice events cause widespread disruptions to transportation, services, and utilities. Elderly, low-income, and homeless populations are most at risk during cold weather events, particularly during curtailments by Xcel Energy, which can leave residents without power for up to four hours. Extreme heat has also become an increasing concern, straining the electrical grid and increasing the risk of infrastructure failure.
- *Electrical Grid and Power Infrastructure:* Much of the city’s electrical infrastructure is above ground and susceptible to damage during wind or ice events. In addition, the underground electrical grid in the downtown core is already at capacity, creating concerns about reliability and the ability to accommodate future growth or emergency demand.
- *Wastewater and Sanitary Systems:* Heavy rain and high river levels have led to increased flows into the wastewater system, at times requiring bypasses to prevent flooding or backup. These challenges don’t just affect Mankato residents—Mankato provides regional wastewater treatment services to surrounding communities, compounding the risk during extreme events.
- *Stormwater Infrastructure and Retention Ponds:* Many of Mankato’s stormwater holding and retention ponds are vulnerable during heavy rainfall or backflow events. When overtopped, these ponds can contribute to street flooding and property damage, particularly in areas with limited overflow capacity or downstream restrictions.
- *Flood Control Stations:* The City’s flood control stations rely on aging electrical systems, many of which are no longer supported by replacement parts. These stations are critical during high water events and any power failure—especially during flooding—could jeopardize their operation.
- *Critical Infrastructure:* Key infrastructure such as bridges, storm sewers, wastewater lift stations, and aging power equipment remain vulnerable. While long-term replacement projects are planned, interim solutions are necessary to maintain operational capacity during severe weather events and emergencies.

City of Mapleton

Severe Storms (Power Outages): Most electrical service in town is from overhead lines, which are susceptible to heavy ice/snowfalls, high winds, and tornadoes.

City of Minnesota Lake

Flooding: Flood events overload the city's sanitary collection system. The city has a couple of lift stations for our sewer and storm sewer service. Extreme flooding can impact this lift station and cause damage for our residents. We often have to bypass the system in order to prevent backup flooding into residents' homes.

Severe Storms (Power Outages): Most electrical service in town is from overhead lines, susceptible to heavy ice/snowfalls, high winds, and tornadoes. A generator for the City Office and Public Works shop is necessary to be able to provide services when power is down.

City of North Mankato

Flooding: We have two stormwater lift stations in the levee system (Sherman St and Wheeler Ave) that are outdated/obsolete, as well as a third internal lift station that controls the water level in Spring Lake. These stations are 50+ years old and in urgent need of rehabilitation. These three stations are required to keep lower North Mankato free from flooding.

Flooding: The city has a community pool that is susceptible to high ground water levels.

Windstorms, Tornadoes, Heavy Snow or Ice Storms: We have two Xcel Energy power lines that span the Minnesota River in two locations that power lower North Mankato. These lines are prone to failure from severe weather events like windstorms, tornadoes, heavy snow, or ice storms.

Windstorms, Tornadoes: We have two large mobile home parks in North Mankato that are susceptible to high wind or tornadic events.

City of Pemberton

Flooding: We do currently have a backup generator to handle the power needs of our lift station. Without fuel, that generator would not be able to power the two pumps at our lift station.

Windstorms, Tornadoes, Heavy Snow, Ice Storms: Severe storms can take down power lines and result in power outages for the city. We have a generator for our wastewater lift station, but do not have back-up power for the City Hall, Fire Station, or the well pump. Residents are on their own during electrical outages and the water will not pump unless we can obtain a generator for the well pump house.

Windstorms, Tornadoes: The city's warning siren is old and needs to be updated.

City of St. Clair

Flooding: We are the only city on the Le Sueur River and have experienced several flooding events in recent years. We expect this to continue to be a problem due to larger rain events and too many large farms with tiling that drains into the river. We have done mitigation projects on our WWTP and Lift Station, but residential flooding still remains a huge concern. During heavy rain events the city experiences heavy I & I introduced into our sanitary sewer system.

Severe Storms (Power Outages): Windstorms, Tornadoes, Heavy Snow or Ice Storms can leave our city without power. We only have one electric line coming into the city. We have generators for our water plant and sewer plant, but do not have back-up power for City Hall or the Fire Station. Residents are on their own during electrical outages. Most electrical lines are overhead which leads to an increased vulnerability.

Windstorms, Tornadoes: The city has a tornado siren that is old and needs to be updated.

City of Skyline

Flooding: We have undersized tile lines, high water table, basement flooding, street flooding, ravine washouts. In relation to Skyline's localized flooding, particularly homeowner basement flooding, there are a number of issues that contribute to these conditions. Stormwater runoff is increased when impervious surface areas increase. Groundwater levels are also impacted by vegetation - or lack thereof, particularly high evapotranspiring plants like trees.

Severe Storms (Power Outages): The majority of our electrical service is above ground. We do not have backup generator power for city's pump house, water tower, City Hall, or lift stations.

Evacuation: One way in and out of Skyline creates a vulnerability in emergency.

City of Vernon Center

Flooding: The city has no lift stations for the WWTP. We have newer sewer and water mains but not tested for flooding yet. We have had some river erosion by the WWTP.

Severe Storms (Power Outages): Our electrical system is mostly overhead, which can result in power outages due to downed power lines from severe storms.

Minnesota State Mankato

Flooding: The western and southern campus property boundaries converge with environmentally sensitive ravine drainages leading to the Minnesota River. When we experience significant 10-year, 50-year, or 100-year rain events exceeding 4-6" in a few hours we experience overtopping of rainwater, causing degradation to numerous ravines as well as

localized campus flooding into critical infrastructure, including the campus boiler plant, chiller building, and residential life housing.

3.4.2 Future Development

Because Blue Earth County is vulnerable to a variety of natural hazards, the county government—in partnership with the state government—must make a commitment to prepare for the management of these events. Blue Earth County is committed to ensuring that county elected and appointed officials become informed leaders regarding community hazards so that they are better prepared to set and direct policies for emergency management and county response.

As part of the vulnerability assessment conducted for the Blue Earth County HMP update, jurisdictions were asked to describe if there were any factors related to population growth, zoning, or development they felt have increased their community's vulnerability to future severe weather or disaster events. The following is a compilation of common responses taken directly from jurisdictional representatives as preserved in Appendix C: Question 4 – Increase in Vulnerability. Responses here are edited only for clarity.

Blue Earth County

In the last five years, Blue Earth County has had development of 108 new dwellings. This is down from 148 dwellings in the previous five-year period. The development is generally in low-density areas (one house per 40 acres) or infill in existing subdivisions. There are no new vulnerabilities as a result of this development.

City of Amboy

In the last five years, the city has had new development with a new Dollar General. We have also had the South Street extension and Grover Transport expansion (last 2 are just starting and should be completed in 2030). Storm ponds will be included in both areas to help with excessive rainwater. The city does not have an increase in vulnerability as a result of these development projects.

City of Eagle Lake

Eagle Lake has added 163 new housing units and 3 commercial buildings during the time period of 2021-2025. New development creates more runoff, however, the city has an erosion and sediment control ordinance and MS4 standards to help reduce erosion from land disturbance activities.

City of Good Thunder

The City of Good Thunder has not had any new development or increase in vulnerability.

City of Lake Crystal

In the last five years, the city has added 36 new housing units. Much of the new construction of homes are build slab-on-grade (no basements), so in tornado conditions, we will have more

people seeking shelter. The city also annexed about 218 acres of land which will require additional snowplowing in snow conditions. Will need more storm pond retention.

City of Madison Lake

In the last five years, the city has added 76 new housing units, including several patio homes (no basements) and three 6-plex buildings. In tornado warning scenarios we may potentially have many more people seeking shelter.

The new construction happening in our Tomahawk and Three Lakes subdivisions will increase the flow of water to an area that already deals with flooding in large rainfall events. We will need to discuss raising Co Rd 44 when that project happens and upsize culverts to aid in mitigation efforts.

The city will have a new Dollar General Market by the end of 2025. That water should be handled by the surface water management plan and a retention pond.

City of Mankato

Over the last five years the city has experienced an increase in new residential and multifamily developments, particularly slab-on-grade construction without basements. This has increased the number of residents without access to below-grade shelter during tornadoes or high-wind events.

Population growth and the addition of impervious surfaces have contributed to increased stormwater runoff, placing added strain on the city's stormwater infrastructure during periods of heavy rainfall.

Continued development near river corridors and bluff areas has also raised long-term exposure to flood risks, erosion, and slope instability.

In addition, the installation of extensive agricultural field drainage (e.g., tile drainage) in areas outside city limits over the past 10–20 years has significantly increased the volume and speed of water flowing into Mankato from upstream rural areas. This added flow during major precipitation events has further stressed stormwater systems and increased the potential for downstream flooding and erosion.

To help manage and reduce vulnerabilities associated with development, the City of Mankato utilizes a Site Plan Review Committee. This interdepartmental committee evaluates proposed commercial, industrial, and residential developments to ensure alignment with zoning regulations, floodplain management requirements, and infrastructure capacity. The committee makes formal recommendations on items such as building permits, variances, conditional use permits, and subdivision applications to help mitigate development-related risks and promote safe, sustainable growth.

City of Mapleton

The City of Mapleton has added approximately 20 new homes in the last 5 years that our current infrastructure can handle. The new school was added and they added their own retention pond. We have no increase in vulnerability due to these new developments.

City of Minnesota Lake

The City of Minnesota Lake has not had any new development or increase in vulnerability.

City of North Mankato

Within the past five years, the city has issued building permits for many attached townhome dwellings and a few apartments. As these buildings do not have basements, occupants do not have below grade spaces during high wind or tornado events. All new developments in the past 5 years have been professionally designed by civil engineers to address stormwater runoff and detention.

City of Pemberton

The City of Pemberton has not had any new development or increase in vulnerability.

City of St. Clair

The City of St. Clair has not had any new development or increase in vulnerability.

City of Skyline

The City of Skyline has not had any new development (we are landlocked) or increase in vulnerability.

City of Vernon Center

The City of Vernon Center has not had any new development or increase in vulnerability.

In the development of local mitigation actions, all jurisdictions were encouraged to consider hazard mitigation strategies that would reduce risk in relation to future development, such as the update of local comprehensive plans, enforcement of ordinances, and incorporation of infrastructure improvements to reduce local vulnerabilities (see Appendix H).

The Blue Earth County emergency management director will work to keep the jurisdictions covered by the HMP engaged and informed during the plan's cycle. By keeping jurisdictional leaders involved in the monitoring, evaluation, and update of the HMP, they will keep their local governments aware of the hazards that face their communities and how to mitigate those hazards through planning and project implementation.

Section 6 of this plan further outlines the process by which Blue Earth County will address the maintenance of this plan, including monitoring, evaluation, and update of the plan, as well as implementation and continued public involvement.

Section 4 – Hazards

As part of the risk assessment, each natural hazard that poses risk to the county was independently reviewed for its past hazard history, relationship to future trends, and jurisdictional vulnerability to future events. The county also conducted a capabilities assessment to review the plans and programs that are in place or lacking (program gaps or deficiencies) for implementing mitigation efforts, as related to each natural hazard. An assessment was also conducted for local jurisdictions to identify the plans, policies, programs, staff, and funding they have in place to incorporate mitigation into other planning mechanisms (see Section 5.1 and Appendix C).

[Read more about natural hazard prioritization and view interactive information on all hazards](#)

The following hazard profiles address hazards that the Blue Earth County Planning Team deemed moderate to high risk. Hazards determined to be low risk or without substantive mitigation actions are not required to be included.

4.1 Flooding

Flooding is the most significant and costly natural hazard in Minnesota. Thirteen of the 34 federal disaster declarations in Blue Earth County included flooding.

After several years of drought and an exceptionally mild winter, the first half of 2024 was extremely wet with frequent, heavy precipitation causing widespread flooding throughout Minnesota, resulting in a Federal Disaster Declaration affecting 22 counties, including Blue Earth County (FEMA, 2024d).

Blue Earth County has experienced an unusual frequency of extreme rainfall events in the past few decades. The county has been within the qualifying portion of three “mega-rainfall” events, as well as another major event in 2024. Although August 18–20, 2007 produced the most severe damage in southeastern Minnesota, parts of Blue Earth County received over six inches of rain in 24 hours, with some flooding reported, although dry conditions prior to August likely reduced flood impacts greatly (MN DNR Climate Office, 2022). On September 22–23, 2010, another extraordinary rainfall event affected the entire county, with the southern two-thirds hit especially hard. Over 5,000 square miles of southern Minnesota received six inches of rain or more (five times larger than what is required to qualify as a mega-rain), and Amboy, in southern Blue Earth County, received over 10 inches of rain. Flooding affected a variety of landscape types and structures, with basement flooding common throughout the county and many township roads destroyed or closed due to severe flooding. The storms led to record stream and river stages in parts of southern Minnesota (MN DNR State Climatology Office, 2010). Another mega-rain, on July 25–26, 2020, produced 6-8 inches of rain in northeastern parts of the county, but impacts were limited by dry conditions that had dominated the region for the summer (MN DNR, 2020b).

Although not technically a mega-rain, a prolonged extreme rainfall event on June 20–22, 2024, produced three-day totals of 5–8 inches across all of Blue Earth County, following an already very wet 10-week period that had saturated area soils and caused streams to rise. This rainfall event pushed

many streams into significant flooding conditions, with severe flooding along the Blue Earth River leading to heavy damage to the Rapidan Dam, resulting in the destruction of structures and infrastructure in its vicinity (MN DNR, 2024b).

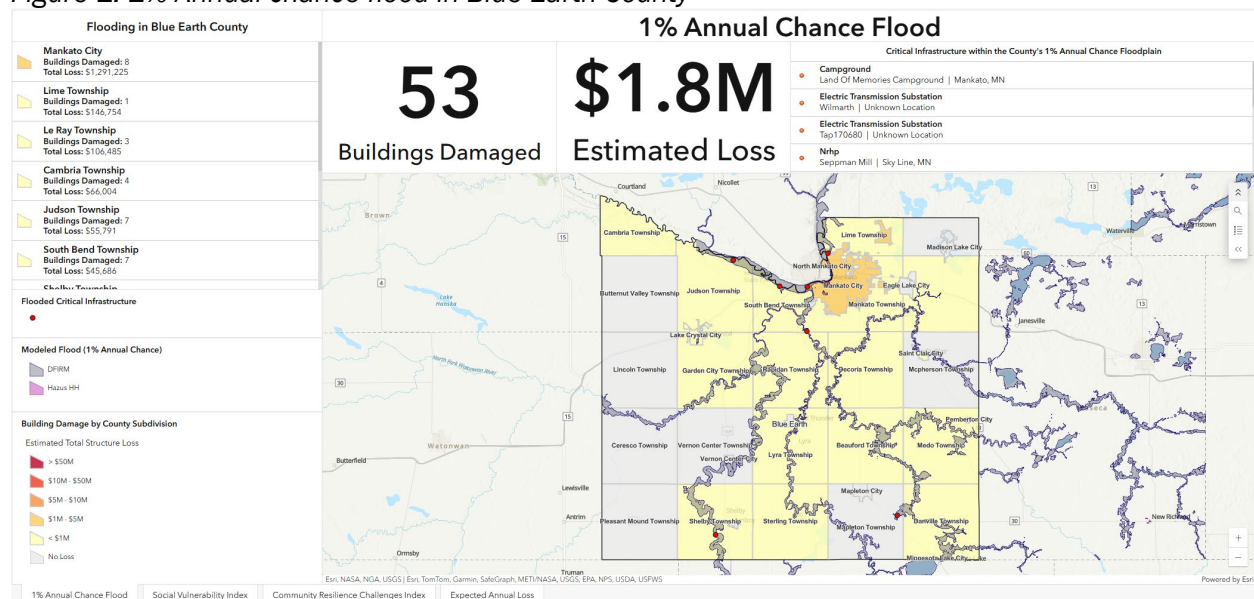
4.1.1 Probability of Occurrence

From 1997 through May 2025, the NCEI Storm Events Database has recorded 39 flood and flash flood events. Blue Earth County has experienced one flash flood event every 1.4 years and one riverine flood event every 1.5 years on average during this period.

[View interactive maps and see information about flooding history, risk, and vulnerability](#)

A potential risk and economic loss analysis for a 1% annual chance flood was conducted using Hazus, a nationally standardized risk modeling methodology. Digital Flood Insurance Rate Map (DFIRM) data was used to define the 1% annual chance flood boundary. A raster layer (10-m resolution) of flood water depths within the 1% annual chance flood boundary was calculated by taking the difference between the elevation of the ground and the surface of the flood water. Static base flood elevation (BFE) data was available for some areas in the flood boundary, but the water surface elevation (WSEL) had to be calculated for the rest of the flooded areas. The method of calculating the WSEL varied by the data available. For this analysis, water surface elevations were calculated by interpolating three different datasets; the regulatory water surface elevation values of cross-section lines (primary data), the elevation values of base flood elevation lines (secondary data), and the elevation at the flood boundary where cross-section and base flood line data was not available. The resulting Hazus 1% annual chance floodplain is shown in the Flood Vulnerability dashboard on the Blue Earth County HMP website (Figure 1), where it is available in an interactive form.

Figure 1. 1% Annual chance flood in Blue Earth County



4.1.2 Vulnerability

Potential economic loss estimates were based on county-specific building data. Blue Earth County provided parcel tax and spatial databases that included building valuations, occupancy class, square footage, year built, and number of stories. The quality of the inventory is the limiting factor to a Hazus flood model loss estimation. Best practices were used to use local data and assumptions were made to populate missing (but required) values.

[View at-risk populations in Blue Earth County](#)

Hazus reports the percent damage of each building in the floodplain, defined by the centroid of each building footprint. After formatting the tax and spatial data, 31,744 points were input to Hazus to represent buildings with a total estimated building plus contents value of \$13.7 billion. Approximately 91% of the buildings (and 69% of the building value) are associated with residential housing.

The estimated loss by occupancy class for the entire county is shown in Table 8.

Table 8. Summary of 1% annual chance flood loss estimation by occupancy class

General Occupancy	County Total Buildings	County Building and Contents Value	Floodplain Total Buildings	Floodplain Building + Contents Value	Buildings with damage	Building + Contents Loss
Residential	31,744	\$9,419,493,732	104	\$16,199,250	38	\$478,406
Commercial	2503	\$2,909,592,488	14	\$2,918,200	14	\$39,507
Other	514	\$1,370,345,798	1	\$8,049,750	1	\$1,260,672
Totals	34,761	\$13,699,432,018	119	\$27,167,200	53	\$1,778,585

SOURCE: (FEMA, 2024c)

The distinction between building attributes within a parcel was not known, so the maximum percent damage to a building in that parcel was used to calculate loss estimates for the entire parcel. The sum of all the losses in each census block were aggregated to visualize the loss (see [flood risk map on the HMP website](#)). Please note: It is possible for a building location to report no loss even if it is in the flood boundary. For example, if the water depth is minimal relative to 1st-floor height, there may be 0% damage.

Hazus Critical Infrastructure & Other Asset Loss Analysis

Critical facilities and infrastructure are vital to the public, and their incapacitation or destruction would have a significant negative impact on the community. These facilities and infrastructure were identified on the [HMP website](#) and verified by Blue Earth County.

Buildings identified as essential facilities for the Hazus flood analysis include hospitals, police and fire stations, and schools (often used as shelters). Essential facilities are vulnerable to structural failure, extensive water damage, and loss of facility functionality during a flood, thereby negatively impacting the communities relying on these facilities' services. Fortunately, none of Blue Earth County's essential facilities included in the Hazus flood analysis are located within the 1% annual chance floodplain.

Extreme precipitation resulting in flooding may overwhelm water infrastructure, disrupt transportation and cause other damage. Particularly where stormwater, sewage and water treatment infrastructure is aging or undersized for more intense rainstorms, extreme rain events may pose both health and ecological risks in addition to costly damage (USGCRP, 2018b).

It is important to identify other critical infrastructure within the 1% annual chance floodplain, given the higher risk of the facility or infrastructure being incapacitated or destroyed during a flood. In Blue Earth County, other critical infrastructure at risk included two electric transmission substations. This flood analysis did not evaluate flooding bridges, roads, or other linear features.

There were several other important assets within the 1% annual chance flood boundary and worth further flood risk review. Buildings considered include places where critical leaders' offices may be, historical resources, hazardous waste storage, and places where populations may be exposed, such as campgrounds or mobile home parks. In Blue Earth County, the assets vulnerable to a 1% annual chance flood include two state-owned facilities; three structures on the National Register of Historical Places; two treatment, storage, or disposal facilities in the City of Mankato; and the Land of Memories Campground. These vulnerabilities should be reviewed in more detail.

Community Vulnerability

Potential economic losses were estimated by Census Minor Civil Division. The City of Mankato would suffer significant estimated losses in the 1% annual chance flood. Lime and Le Ray Townships also have significant estimated losses. All jurisdictions with buildings identified in the 1% annual chance flood zone can also be viewed on the Blue Earth County HMP website.

The status of jurisdictional participation in the National Flood Insurance Program and any repetitive loss properties are detailed in Section 5.1.1. National Flood Insurance Program (NFIP).

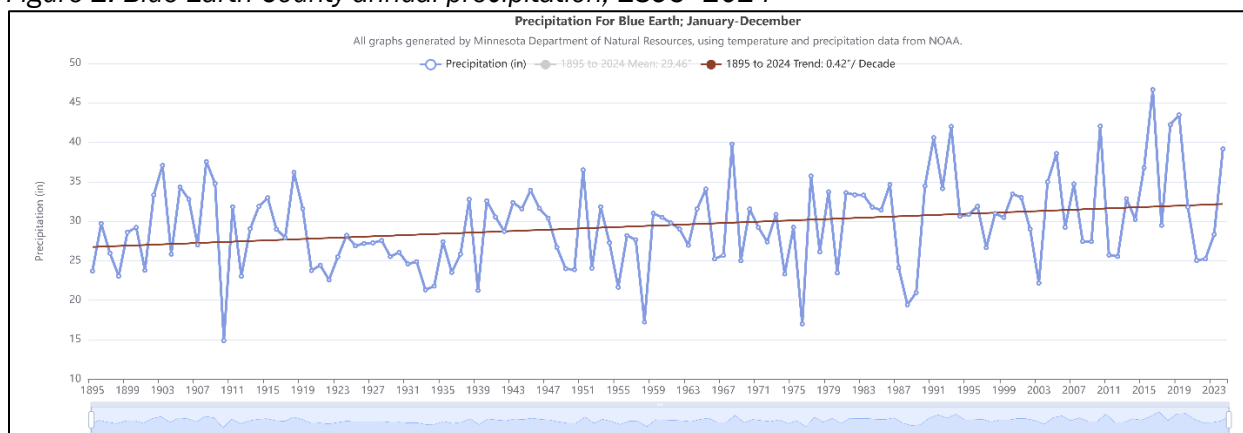
Section 3.4 provides jurisdictional responses to localized vulnerabilities to specific hazards.

4.1.3 Flooding and Climate Change

Extreme rainfall has a strong link to rising global temperatures, and climate projections are virtually unanimous in depicting increasing rainfall extremes through the 21st century in Minnesota, which will likely see more flash-flooding events in the years and decades ahead than had been historically typical. Higher temperatures globally have evaporated more surface and ocean water into the atmosphere, which, in turn, has provided more potential moisture for precipitating weather systems. In Minnesota, the result has been increased precipitation, with annual totals increasing at an average rate of just over a quarter inch per decade statewide since 1895 (see Figure 2).

Key Message #1 in the Water Chapter of the NCA5 states that climate change will continue to cause profound changes in the water cycle.

Figure 2. Blue Earth County annual precipitation, 1895–2024



SOURCE:(MN DNR, 2025B)

Snow cover will decrease and melt earlier and heavier rainfall is leading to increasing flooding (Payton et al., 2023). Additional increases in heavy and extreme precipitation are expected to remain the state's leading climate change symptoms. Heavy rains are now more common in Minnesota and more intense than at any time on record. Long-term observation sites have seen dramatic increases in one-inch rains, three-inch rains, and the size of the heaviest rainfall of the year. Since 2000, Minnesota has seen a significant uptick in devastating, large-area extreme rainstorms as well. Rains that historically would have been in the 98th percentile annually (the largest 2%) have become more common (MN DNR, 2024a).

This precipitation increase is found in all seasons, but spring and summer are becoming wetter at faster rates than fall and winter. Whereas temperature increases have been greatest in the northern parts of the state, precipitation increases have been well distributed geographically, and have somewhat favored southern Minnesota, which has better access to moisture from the Gulf of Mexico and is more frequently near the “low-level jet” airflow (a relatively fast-moving zone of winds in the lower atmosphere) that influences precipitation production

4.1.4 Program Gaps and Deficiencies

Blue Earth County Emergency Management identified existing program gaps and deficiencies that make its residents more vulnerable to flooding. The following gaps and deficiencies should be addressed with new mitigation efforts to reduce that vulnerability:

Road Infrastructure: Flood mitigation for county and township roads (e.g., culvert replacements, road repair) is an ongoing need. The county and many of our townships have limited funding for road infrastructure. Blue Earth County Public Works continues to provide assistance on road infrastructure mitigation projects to reduce the impacts of localized flooding.

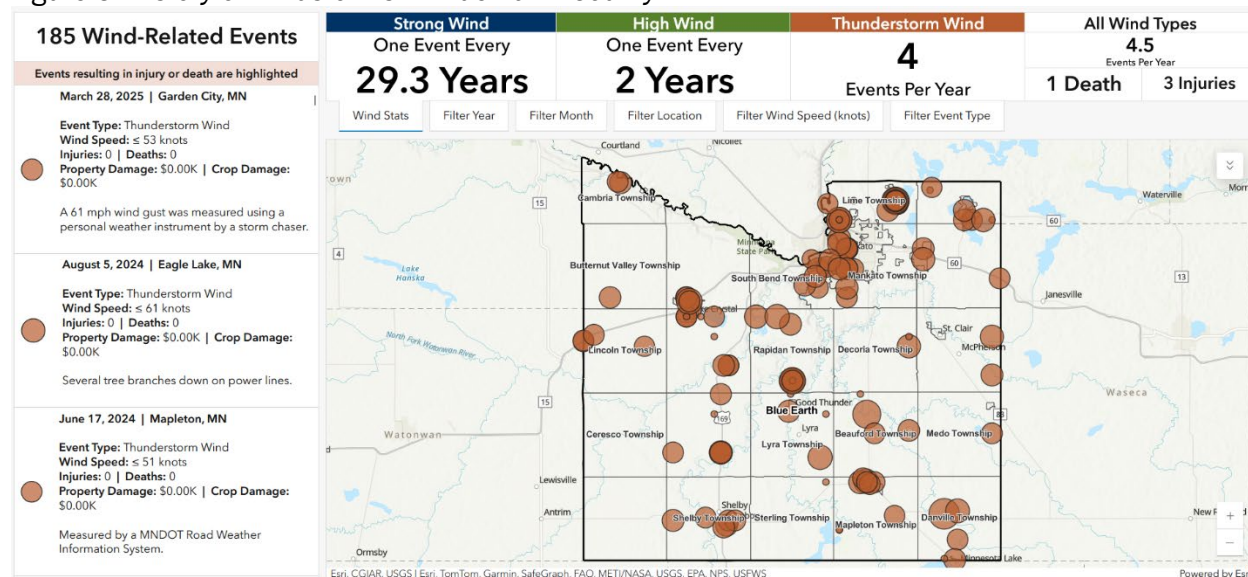
Property Acquisitions: Several homes are considered at-risk of failure along the Blue Earth River due to degradation of the riverbank. A total of 6 properties have been submitted to FEMA for home-buyouts or relocation after the severe flooding event in June 2024. Significant grant funding is necessary to implement this flooding/landslide mitigation project.

4.2 Windstorms

A windstorm is a wind strong enough to cause damage to trees and buildings and typically exceeding 34 mph (Pielke, 2012). Windstorm events encompass a variety of types of damaging wind. The history of windstorms in Blue Earth County is shown in Figure 3; an interactive version of this map can be found on the Blue Earth County HMP website.

[View interactive maps and see information about windstorm history, risk, and vulnerability](#)

Figure 3. History of windstorms in Blue Earth County



4.2.1 Probability of Occurrence

To determine the probability of future wind-related events in Blue Earth County, records of previous wind-related events (strong wind, high wind, and thunderstorm wind) in Blue Earth County were examined since 1996, the period of record all wind events have in common. The relative frequency of all wind-related events from January 1996 to May 2025 is 4.5 per year. These relative frequencies can be used to infer the probability of these events occurring in the future.

4.2.2 Vulnerability

The likelihood of a windstorm event does not vary geographically within the county, but the vulnerability of its residents is not constant. Vulnerability to injury from all kinds of windstorms decreases with adequate warnings, warning time, and sheltering in a reinforced structure. Therefore, residents living in rural areas, living alone or with limited mobility, or living in a manufactured home may be more vulnerable. Also at a higher risk to windstorms are those who work outdoors or do not have permanent housing.

Structural vulnerability depends in part upon the construction of a building and its infrastructure. Residents of mobile homes are more vulnerable to fatality or injury from windstorms because mobile

homes are not able to withstand high winds as well as other structural dwellings, with 50 mph (43.4 knots) being the lower limit of wind speeds capable of damaging mobile homes (AMS, 2004). Steps to mitigate these vulnerabilities have been taken by the state, requiring all mobile home parks to provide an evacuation plan, and parks with at least 10 homes licensed after March 1, 1988 to provide a storm shelter (MDH, 2020). However, mobile home parks often do not provide the required storm shelters (Sepic, 2017). Building codes have also changed to improve the strength of new mobile home construction but there are still many older mobile homes in use that do not meet these new standards.

Section 3.4 provides jurisdictional responses to localized vulnerabilities to specific hazards.

4.2.3 Windstorms and Climate Change

Lack of high-quality long-term data sets makes assessment of changes in wind speeds very difficult (Kunkel et al., 2013). In general, one analysis found no evidence of significant changes in wind speed distribution. Other trends in severe storms, including the number of hurricanes and the intensity and frequency of tornadoes, hail, and damaging thunderstorm winds, are uncertain. Since the impact of more frequent or intense storms can be larger than the impact of average temperature, climate scientists are actively researching the connections between climate change and severe storms (USGCRP, 2018a).

According to the NCA5 Key Message #5 in the Climate Trends chapter, extreme events are becoming more frequent.

4.2.4 Program Gaps and Deficiencies

Blue Earth County Emergency Management identified program gaps and deficiencies that make its residents more vulnerable to summer storms, including windstorms, that should be addressed with new mitigation efforts to reduce vulnerability. These include:

Above-Ground Power Lines: Most power lines throughout Blue Earth County are above ground, exposing them to potential damage from high-wind events. The county and local jurisdictions continue to work with electric utility providers to convert overhead power lines to underground or to implement other measures to reduce risk of power failure.

Public Education: Ongoing public education is needed during tornado season to inform the public on what a tornado watch/warning is and what to do when outdoor warning sirens are activated. Blue Earth County and local jurisdictions also need to continue to encourage residents to be aware of and ready for severe storm events that can lead to long-term power outages.

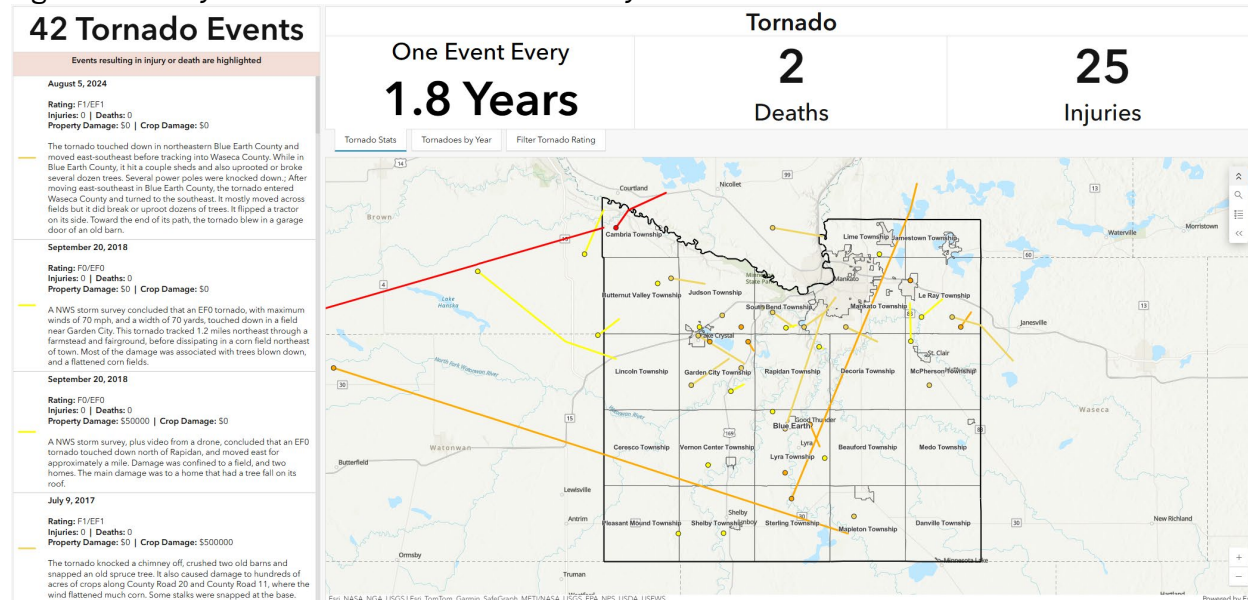
Storm Shelters and Tornado Safe Rooms: There are areas throughout Blue Earth County without viable storm shelters or tornado safe rooms where there are populations vulnerable to high wind and storm events, such as mobile home parks and campgrounds. A coordinated approach is needed to identify where storm shelters or tornado safe rooms are needed and to evaluate whether new construction or a retrofit of facilities is possible. Finding funding for the implementation of such construction projects is also a barrier.

4.3 Tornadoes

With wind speeds reaching up to 300 mph, tornadoes are one of nature's most violent storms (Hogeback, 2020). The history of tornadoes in Blue Earth County is shown in Figure 4; an interactive version of this map can be found on the Blue Earth County HMP website.

[View interactive maps and see information about tornado history, risk, and vulnerability](#)

Figure 4. History of tornadoes in Blue Earth County



4.3.1 Probability of Occurrence

Estimating the probability of future tornadoes in Blue Earth County was done using two methods. The first method summed the total number of tornadoes that either touched down in or traveled through the county. This sum was divided by the number of years tornado data was recorded, resulting in the annual relative frequency of tornado occurrences in the county. Based on records in the NCEI Storm Events Database through May 2025, there has been one tornado every 1.8 years in Blue Earth County. These 42 tornadic events occurred in 25 of the 75 years on record.

Because tornadoes often cross county lines and tornadic frequency may be better understood using events from a larger area, a second method was used to describe the frequency of tornadic events within a 50-mile radius of any location within the county. A grid of 900 square-meter cells was used to cover Minnesota and 50 miles beyond its border. From the center of each cell, the number of tornadoes that intersected a 50-mile radius was counted. Each cell was assigned a total tornado line count, which was then divided by the tornado dataset's period of record, resulting in the annual relative frequency of tornadoes occurring within 50 miles of the respective cell.

For any location in Blue Earth County, there was an annual frequency of 3–6 tornadoes within a 50-mile radius. The historical frequency was higher in the northeast than in the southwest. These relative frequencies can be used to infer the probability of these events occurring in the future.

4.3.2 Vulnerability

The likelihood of a tornado does not vary significantly across geography within Blue Earth County; however, certain populations may be more vulnerable and less resilient to the impacts of a tornado. In general, tornado casualties decrease when people receive adequate warnings with sufficient time to seek shelter in a reinforced structure. Because communication is critical before a tornadic event, certain residents may be more negatively impacted by a tornado, including those living in rural areas, individuals with limited mobility, people who do not live near an outdoor warning siren, or those who do not use social media. Section 3.4 provides jurisdictional responses to localized vulnerabilities to specific hazards.

[*View at-risk populations in Blue Earth County*](#)

People living in mobile homes are particularly vulnerable to tornadoes because they cannot withstand the strong winds produced by a tornado. An analysis by the Associated Press of NOAA storm data found that since 1996, 53% of tornado fatalities in the United States were people who remained within or attempted to flee from mobile homes (Borestein et al., 2023). While Minnesota law requires most mobile home parks to have storm shelters, many do not (Raiche, 2022).

4.3.3 Tornadoes and Climate Change

Minnesota's climate is undergoing distinct changes, but as reported by the MN DNR State Climatology Office, these changes are only weakly connected to increases in tornadoes or severe convective storms. Minnesota, like all parts of the U.S., has seen increases in the weakest class of tornadoes (rated F-0 or EF-0), but these increases are known to be linked to improved spotting, detection, and verification procedures within the National Weather Service.

When examining tornadoes that cause significant structural damage and are rated EF-2 or above, Minnesota has seen no recent trends towards increasing frequencies—whether measured as raw counts, or as days with one or more of these tornadoes (MN DNR, 2019).

The tornado trends in Minnesota match those found nationally. NCA5 states that while the average annual number of tornadoes appears to have remained relatively constant, there is evidence that tornado outbreaks have become more frequent, tornado seasons are extending into later in the fall, and that tornado strength has increased (Marvel et al., 2023). An October 10, 2021 tornado in the Boundary Waters Canoe Area Wilderness became the latest on record so far north in the state. Then, on December 15, 2021, an outbreak of destructive thunderstorm winds and over 20 tornadoes struck the southeastern parts of the state, producing the latest tornadoes on record by 29 days (Blumenfeld, K. Minnesota State Climatology Office, personal communication, December 21, 2023).

According to the NCA5 Key Message #5 in the Climate Trends chapter, extreme events are becoming more frequent.

However, climate scientists are unclear about whether the recent statistical behavior of these severe convective storm events has any relationship with the changing climate. This uncertainty results from the fact that tornadoes and their parent thunderstorms operate on smaller scales and more localized processes than the global climate. There has been some indication that, on a national basis, tornadoes are being clustered into fewer days, suggesting a greater tendency towards outbreaks. Scientific modelling studies indicate that the meteorological conditions supportive of severe thunderstorms should increase in the future, but it is unclear whether the specific conditions required for the formation of tornadoes, and particularly significant tornadoes, will increase (Kossin, 2017). Until more studies are completed, the Minnesota State Climatology Office recommends assuming that tornadoes will remain an important and dangerous part of Minnesota's climate, even if they do not increase in frequency or severity in response to changing climatic conditions.

4.3.4 Program Gaps and Deficiencies

Blue Earth County Emergency Management identified program gaps and deficiencies that make its residents more vulnerable to summer storms, including tornadoes, that should be addressed with new mitigation efforts to reduce vulnerability. These include:

Above-Ground Power Lines: Most power lines throughout Blue Earth County are above ground, exposing them to potential damage from high-wind events. The county and local jurisdictions continue to work with electric utility providers to convert overhead power lines to underground or to implement other measures to reduce risk of power failure.

Public Education: Ongoing public education is needed during tornado season to inform the public on what a tornado watch/warning is and what to do when outdoor warning sirens are activated. Blue Earth County and local jurisdictions also need to continue to encourage residents to be aware of and ready for severe storm events that can lead to long-term power outages.

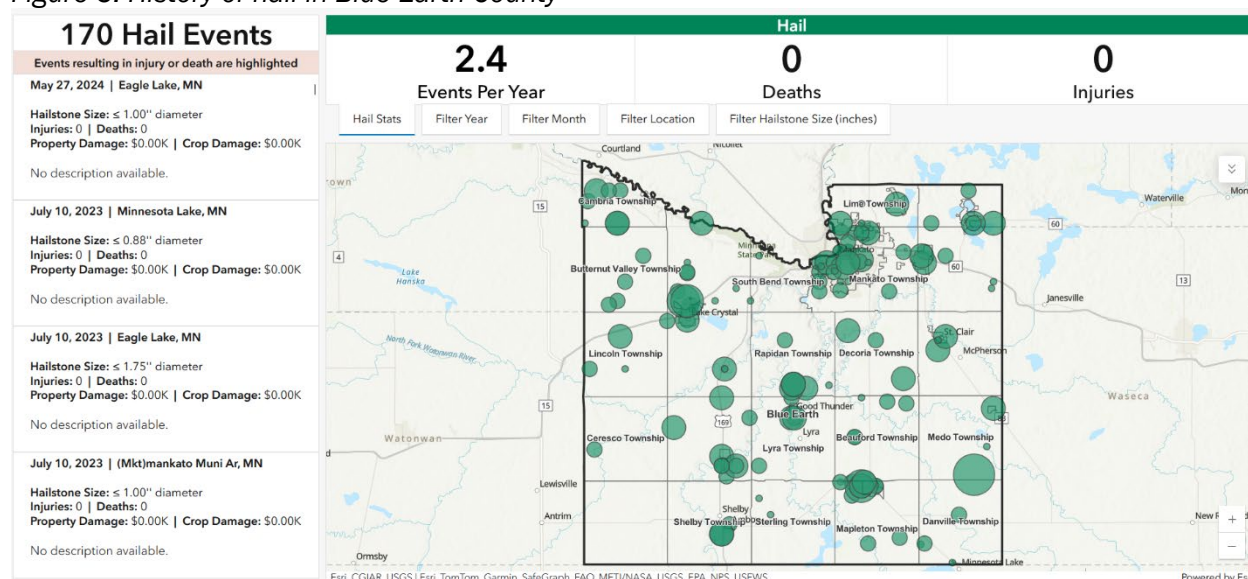
Storm Shelters and Tornado Safe Rooms: There are areas throughout Blue Earth County without viable storm shelters or tornado safe rooms where there are populations vulnerable to high wind and storm events, such as mobile home parks and campgrounds. A coordinated approach is needed to identify where storm shelters or tornado safe rooms are needed and to evaluate whether new construction or a retrofit of facilities is possible. Finding funding for the implementation of such construction projects is also a barrier.

4.4 Hail

Hailstorms occur throughout the year though are most frequent between May and August (NWS, 2020). Although hailstorms rarely cause injury or loss of life, they do cost Minnesota nearly \$16 million in property and crop damage each year (CEMHS, 2023). In 2017, 44% of properties in Minnesota were affected by damaging hail events (Samanta & Wu, 2017). The history of hail in Blue Earth County is shown in Figure 5; an interactive version of this map can be found on the Blue Earth County HMP website.

[View interactive maps and see information about hail history, risk, and vulnerability](#)

Figure 5. History of hail in Blue Earth County



4.4.1 Probability of Occurrence

To determine the probability of future hailstorms in Blue Earth County, records of previous hail events in the county were examined for the period of record. From January 1955 through May 2025, the relative frequency of hail events was 2.4 per year. This relative frequency can be used to infer the probability of hail events occurring in the future. Please note that public reports of hail are often secondary to those of thunderstorm winds or tornadoes because if either damaging winds or tornadoes occur, the damaging wind and/or tornado are more important to the reporter and may result in underreporting of hail events.

4.4.2 Vulnerability

Blue Earth County's agricultural lands and structures are vulnerable to hail damage and its residents to injury and possibly death. Data from the Spatial Hazard Events and Losses Database for the United States (SHELDUS) was examined to identify the county's monetary losses due to hail damage to crops, property, injury, and death. From 1960 through 2022, Blue Earth County reported over \$95 million in hail damages, ranking 2nd among Minnesota counties in total hail damages. Blue Earth County's losses are primarily due to crop damages reported at \$86.7 million, followed by \$8.3 million in property damages. Crop indemnity payments due to hail totaled \$23.8 million for the period of record spanning 1989–2022 (CEMHS, 2023).

Within Blue Earth County, the vulnerability of jurisdictions to hailstorms does not vary geographically. As with all summer storms, those who work outdoors or do not have permanent housing are at greater risk during hailstorms. Section 3.4 provides jurisdictional responses to localized vulnerabilities to specific hazards.

4.4.3 Hail and Climate Change

Trends in severe storms, including the numbers of hail and damaging thunderstorm winds are uncertain. Since the impact of more frequent or intense storms can be larger than the impact of

average temperature, climate scientists are actively researching the connections between climate change and severe storms (Marvel et al., 2023). The NCA reports that in Minnesota's neighboring Great Plains region, hail size, frequency of large hail, and length of hail season are projected to increase through the rest of this century (Knapp et al., 2023). The occurrence of very heavy precipitation has increased in Minnesota in recent decades, and future projections also indicate this will continue (Blumenfeld, K. Minnesota State Climatology Office, personal communication, December 21, 2023).

According to the NCA5 Key Message #5 in the Climate Trends chapter, extreme events are becoming more frequent.

4.4.4 Program Gaps and Deficiencies

Blue Earth County Emergency Management identified program gaps and deficiencies that make its residents more vulnerable to summer storms, including hailstorms, that should be addressed with new mitigation efforts to reduce vulnerability:

Above-Ground Power Lines: Most power lines throughout Blue Earth County are above ground, exposing them to potential damage from high-wind events. The county and local jurisdictions continue to work with electric utility providers to convert overhead power lines to underground or to implement other measures to reduce risk of power failure.

Public Education: Ongoing public education is needed during tornado season to inform the public on what a tornado watch/warning is and what to do when outdoor warning sirens are activated. Blue Earth County and local jurisdictions also need to continue to encourage residents to be aware of and ready for severe storm events that can lead to long-term power outages.

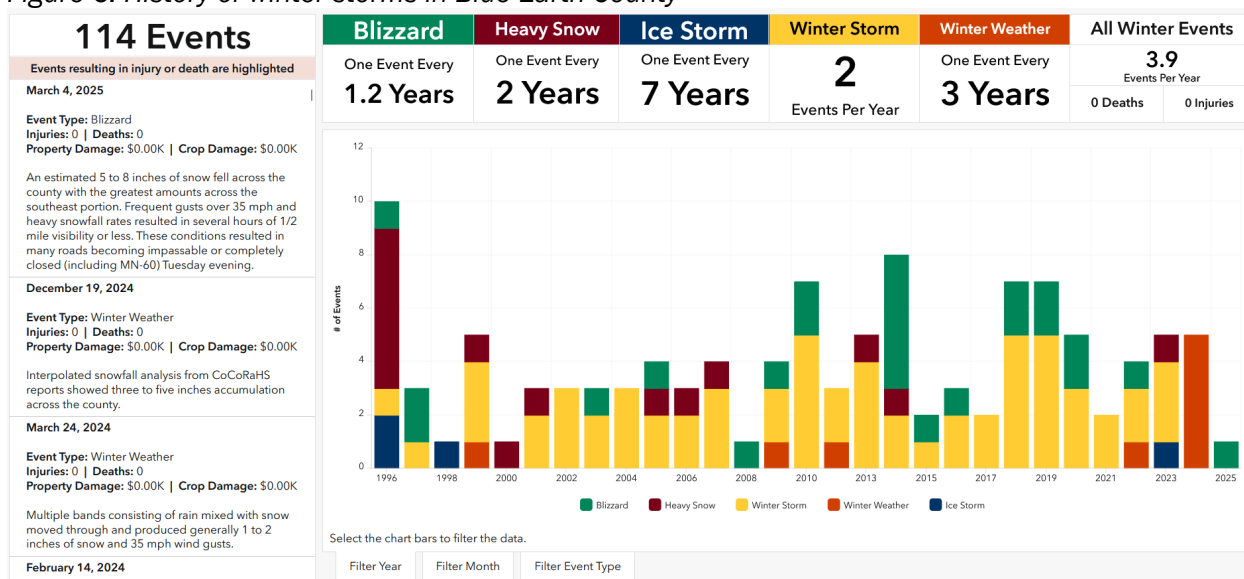
Storm Shelters and Tornado Safe Rooms: There are areas throughout Blue Earth County without viable storm shelters or tornado safe rooms where there are populations vulnerable to high wind and storm events, such as mobile home parks and campgrounds. A coordinated approach is needed to identify where storm shelters or tornado safe rooms are needed and to evaluate whether new construction or a retrofit of facilities is possible. Finding funding for the implementation of such construction projects is also a barrier.

4.5 Winter Storms

Winter storms encompass a number of winter weather events that the National Weather Service (NWS) organizes into the following categories: blizzard, heavy snow, ice storm, winter storm, and winter weather. Winter weather events are common in Minnesota and can be costly. According to the Spatial Hazard Events and Losses Database (SHELDUS), winter weather events in Minnesota have cost more than \$1.02 billion in damages since 1960 (CEMHS, 2023). The history of winter storms in Blue Earth County is shown in Figure 6; an interactive version of this map can be found on the Blue Earth County HMP website.

[View interactive maps and see information about winter storm history, risk, and vulnerability](#)

Figure 6. History of winter storms in Blue Earth County



4.5.1 Probability of Occurrence

To determine the probability of future winter-related storm events in Blue Earth County, records of previous events (blizzards, heavy snows, ice storms, winter storms, and winter weather) were summed and divided by the dataset's period of record, resulting in the annual relative frequency of winter-related storms. Based on records in the NCEI Storm Events Database through May 2025, the relative frequency of winter-related storm events in Blue Earth County is 3.9 per year. This relative frequency can infer the probability of these events occurring in the future.

4.5.2 Vulnerability

Transportation systems, electrical distribution systems, and structures are vulnerable to winter storms throughout the county. These events do not vary geographically within the county; all jurisdictions are equally vulnerable. While it is highly likely these events will continue occurring annually, the amount of snow and ice and number of winter-related storm events to occur each year are unpredictable. People residing in climates such as these must always be prepared for situations that put their lives or property at risk. It is important that extra consideration be given to the vulnerable populations discussed in Section 3.2. Section 3.4 provides jurisdictional responses to localized vulnerabilities to specific hazards.

4.5.3 Winter Storms and Climate Change

Historically, winter storms have had a large impact on public safety in Minnesota. If the frequency of snowstorms and annual total snowfalls increase, as anticipated effects of Climate Change, the effects on public safety will also increase. Pressures on energy use, reduced reliability of services, potential outages, and potential rise in household energy costs are major climate change risks to public health that can occur from winter weather.

Table 7 in Section 3.3 discusses confidence that climate change will impact common Minnesota weather/climate hazards beyond 2025, there is some weak evidence that warming winters may make heavy snowfall events less frequent as winter warms.

4.5.4 Program Gaps and Deficiencies

Blue Earth County Emergency Management identified several program gaps and deficiencies that make its residents more vulnerable to severe winter storms. The following gaps and deficiencies should be addressed with new mitigation efforts to reduce that vulnerability:

Above-Ground Power Lines: Most powerlines throughout Blue Earth County are above ground, exposing them to impacts/damage from winter high wind and ice events, potentially leading to localized or extensive power outages.

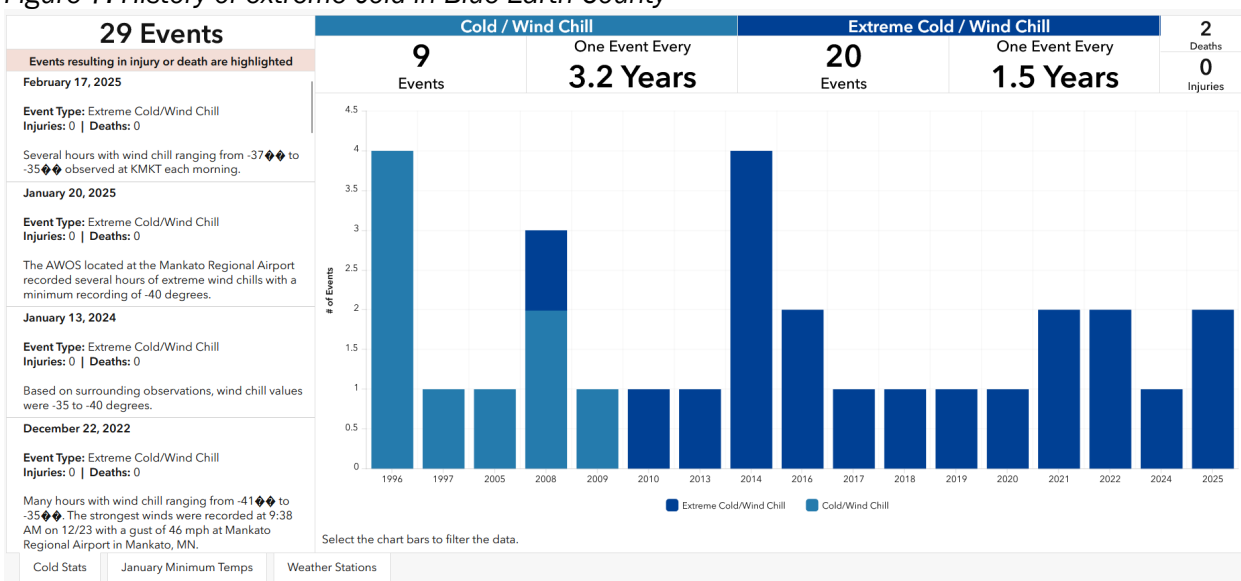
Public Education: Ongoing public education is needed to encourage residents to be ready for long-term power outages or to be snowed in during dangerous winter events such as ice storms and blizzards.

4.6 Extreme Cold

Due to Minnesota's position in the middle of the continent and subsequent climate, the state may experience extremely frigid temperatures in winter. Winter in Blue Earth County can be especially dangerous when low temperatures and wind create arctic-like wind chills. The history of extreme cold in Blue Earth County is shown in Figure 7; an interactive version of this dashboard can be found on the Blue Earth County HMP website.

[View interactive maps and see information about extreme cold history, risk, and vulnerability](#)

Figure 7. History of extreme cold in Blue Earth County



4.6.1 Probability of Occurrence

To determine the probability of future cold-related events in Blue Earth County, records of previous cold/wind chill and extreme cold/wind chill events were summed and divided by the dataset's period of record, resulting in the annual relative frequency. Based on records in the NCEI Storm Events Database through May 2025, the relative frequency of extreme cold/wind chill events in Blue Earth County is one event every 1.5 years (NCEI, 2025). This relative frequency can be used to infer the probability of these events occurring in the future.

4.6.2 Vulnerability

The risk of extreme cold does not vary geographically within the county. Citizens living in climates such as these must always be prepared for situations that put their lives or property at risk. The youngest and more elderly residents, homeless persons, individuals with chronic medical conditions, and those who are working or recreating outdoors are most at risk for frostbite and hypothermia (MDH, 2021).

[View at-risk populations in Blue Earth County](#)

It is not always the depth of the cold that poses a threat but rather unpreparedness for the cold, such as an individual with a vehicle breakdown who lacks a personal winter safety kit in the vehicle. The cost of propane can make rural residents more vulnerable to issues with extreme cold. A propane shortage and resulting crisis, such as that which occurred in 2014, may increase the cost of heating homes and farms to a prohibitive amount (Eaton, 2014). The Minnesota Department of Commerce presents options and suggestions for homeowners who use propane [on their website](#).

The CDC publication “Extreme Cold: A Prevention Guide to Promote Your Personal Health and Safety” outlines preparation measures that individuals can take to reduce their vulnerability to extreme cold. Highlights in this document include advice about travel preparations, securing your home water supply, and safety during recreation (CDC, 2021).

Section 3.4 provides jurisdictional responses to localized vulnerabilities to extreme cold.

4.6.3 Extreme Cold and Climate Change

Although climate research indicates that Minnesota's average winter lows are rising rapidly, and our coldest days of winter are now warmer than we have ever recorded, cold temperatures have always been a part of Minnesota's climate, and extreme cold events will continue.

As the climate changes, an increase in extreme precipitation or storm events could lead to a higher risk of residents being exposed to cold temperatures during power outages or other storm-related hazards. Extreme and changing temperatures are already challenging aging infrastructure and are expected to impair surface transportation and the electrical grid.

Key Message #4 in NCA5 in the Midwest Chapter states that green infrastructure and public and private investments may mitigate losses, provide relief from heat, and offer other ways to adapt the built environment to a changing climate.

4.6.4 Program Gaps and Deficiencies

Blue Earth County Emergency Management identified several program gaps and deficiencies that make its residents more vulnerable to extreme cold. The following gaps and deficiencies should be addressed with new mitigation efforts to reduce that vulnerability:

Generators for Backup Power to Critical Facilities & Shelters: Not all healthcare and other critical facilities utilized for the care of residents & visitors, including designated severe weather/emergency shelters (schools, churches, etc.) have backup power to run heating systems in the event of a power outage.

Public Education: Ongoing public education is needed to encourage residents to be prepared for extreme weather, including power outages during periods of extreme cold. Blue Earth County Emergency Management continues to do public education through the local schools, senior and health care centers, and local government for severe weather awareness.

4.7 Extreme Heat

Extreme heat describes weather that is much hotter and/or humid than typical for a place and time of year. In the United States, extreme heat is the deadliest weather-related hazard and causes more deaths than flooding, tornadoes, and hurricanes combined. While heat waves are infrequent in a northern state like Minnesota, they can have severe consequences for residents who are not acclimatized to their effects (Runkle et al., 2022).

The National Weather Service (NWS) issues extreme heat watches, heat advisories, and extreme heat warnings based on the heat index, which is a combination of air temperature and relative humidity that determines how hot it feels. The heat index threshold differs based on locality, since people in colder climates are less prepared for heat events than people who live in warmer climates (NWS, 2025b).

More recently, the NWS has developed the HeatRisk tool to issue a forecast of heat-related impacts to occur over a 24-hour period. It is intended to provide risk guidance to decision-makers and heat-sensitive populations. Historical data from the HeatRisk tool, available back to 2015, provide a more comprehensive look at extreme heat events beyond those reported as Extreme Heat Events in the Storm Events Database. The HeatRisk tool takes into consideration:

- How unusual the heat is for the time of year
- The duration of the heat, including both daytime and nighttime temperatures
- If those temperatures pose an elevated risk of heat-related impacts based on data from the Centers for Disease Control and Prevention (NWS, 2025a).

Impacts of extreme heat are far-reaching and can be severe. Some impacts include infrastructure failures, such as roads buckling and power outages; strain on essential services, such as increased demand for emergency medical services and law enforcement (Guo, 2017; Williams et al., 2020); and disruptions to important social and economic networks, such as school and event cancellations, which reduce access to education, physical activity, and community support.

[View interactive maps and see information about extreme heat history, risk, and vulnerability](#)

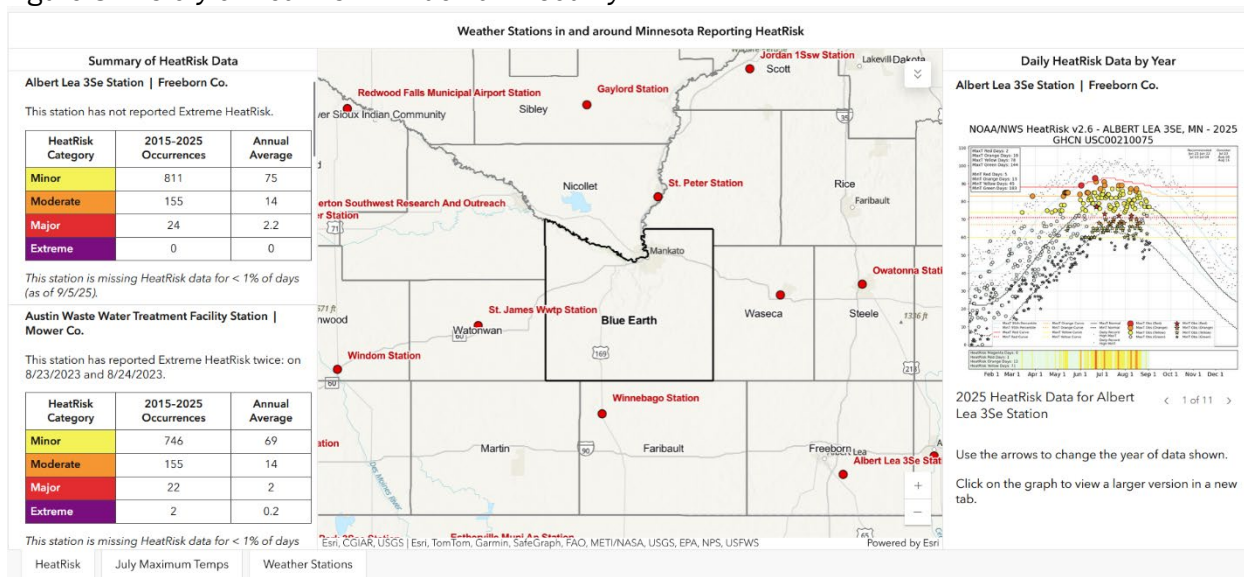
Blue Earth County's agricultural lands and structures are vulnerable to heat damage. Residents can suffer from increased heat-related illnesses, exacerbation of pre-existing chronic conditions, and even death (Moss, 2017). In the United States, heat is estimated to result in \$100 billion in economic losses annually, primarily due to lost productivity, and it accounts for \$1 billion in direct healthcare costs each year (American Public Health Association, 2025). In 2022, extreme heat led to 682 emergency department visits, 63 hospitalizations, and two deaths in Minnesota (MDH, 2025).

Extreme heat exacerbates poor air quality conditions because the stagnant air during a heat wave increases ozone and particulate pollution (Center for Science Education, 2025). Air pollution is particularly harmful for people over the age of 65, children under the age of five, outdoor workers, and people with respiratory or cardiovascular conditions. The [Minnesota Extreme Heat Toolkit](#) further details the health effects of poor air quality.

Data from the Spatial Hazard Events and Losses Database (SHELDUS) for the United States was examined to identify the county's monetary losses due to heat damage to crops. Ranking 29th among Minnesota counties in crop indemnity payments, heat-related losses for Blue Earth County totaled over \$1.8 million for the period of record spanning 1989 to 2022 (CEMHS, 2023).

The history of extreme heat in Blue Earth County is shown in Figure 8; an interactive version of this chart can be found on the Blue Earth County HMP website. This dashboard summarizes the occurrences of days when each HeatRisk category threshold was met for each year from 2015–2024.

Figure 8. History of HeatRisk in Blue Earth County



For the purposes of hazard mitigation planning, we have considered days in the Major (Red) Category (a level of heat affects anyone without effective cooling and/or adequate hydration. Impacts are likely in some health systems, heat-sensitive industries, and infrastructure) and the Extreme (Magenta) Category (level of rare and/or long-duration extreme heat with little to no overnight relief affects

anyone without effective cooling and/or adequate hydration. Impacts are likely in most health systems, heat-sensitive industries, and infrastructure) as extreme heat-related events.

While Blue Earth County has ranked extreme heat as a low-priority hazard, it is included in this plan on the Minnesota Department of Health recommendation that every county considers this hazard in their HMP due to its significant health impacts.

4.7.1 Probability of Occurrence

To determine the probability of future heat-related events in Blue Earth County, the average number of days exceeding the major or extreme HeatRisk categories is used to reflect heat events in the county. The relative frequency of Major heat events is 3.1 events each year at the St. James Weather Station (Watonwan County), and at the same station in 2021, Extreme HeatRisk was attained twice. This relative frequency can infer the probability of these events occurring in the future.

Based on records in the Midwestern Regional Climate Center (MRCC) that date back to 1991, the average daily maximum temperature for July in Blue Earth County has historically been in the 82–83.9 °F range (MRCC, 2021), which is below the 90 °F for 2–3 days criteria for “extreme” heat events (FEMA, 2024b). However, the nearest weather station to Blue Earth County, Winnebago Station in Faribault County, reported daily maximum temperatures above 90 °F a total of 350 times, an average of 11 days per year. This historical average can be used to infer future events, although climate change projections show an increase in the number of days that exceed 90 °F by mid-century (see Section 4.7.3).

4.7.2 Vulnerability

The Minnesota Department of Health updated the Minnesota Extreme Heat Toolkit in 2025 to help local governments prepare for extreme heat events. In their toolkit, they note extreme heat events are often dubbed “silent killers” because deaths and illnesses from these events are often misunderstood and underreported. In fact, extreme heat kills more people in the United States than all extreme weather events combined (Adams-Fuller, 2023). Minnesota does not have a mandated reporting system to report deaths and illnesses linked to extreme heat (MDH, 2025), but is important to not underestimate the danger of extreme heat events within the state.

High temperatures can be exacerbated by the urban heat island effect in developed areas, an effect that amplifies temperatures in areas with a higher concentration of impervious and paved surfaces. These types of surfaces absorb more heat and hold it for longer than vegetation cover (EPA, 2019). Impervious surfaces are not spread evenly throughout the county, and attention should be given to cities or areas within the county where this type of surface cover is most dense. The city with the highest concentration of impervious surfaces is Mankato at 18.25%. The distribution of heat-trapping surfaces and their proximity to tree canopy are more important than their total area.

The distribution of impervious surfaces can be viewed in the [Extreme Heat Risk & Vulnerability dashboard](#) in the Exposure tab. The metro counties have an additional layer that demonstrates tree canopy, an effective mitigation of extreme heat: urban tree canopy of at least 40% can result in as much as 7–9 °F cooler temperatures (Ziter et al., 2019). The Metropolitan Council [Growing Shade Tool](#) provides data and resources to inform tree planting and canopy preservation for the Twin Cities

region to realize benefits, such as cooler temperatures, improved air quality, cleaner stormwater, improved mental health, and enhanced biodiversity.

Rural areas have higher rates of heat-related emergency department visits compared with urban areas (MDH, 2024), and Americans living in rural areas are twice as likely as those in urban areas to have pre-existing health conditions that make them more vulnerable to extreme heat (Pohl, 2025). Rural agricultural regions can have higher rates of humidity due to moisture-producing crops like corn (Minnesota Supercomputing Institute, 2016), which produces evapotranspiration, or “corn sweat,” that can add as much as 5–10 °F to the dew point temperature (Steil, 2016).

Key Message #3 in the Midwest Chapter of the NCA5 lists strategies, such as expanded use of green infrastructure and heat-health early warning systems, have the potential to improve both individual and community health (Wilson et al., 2023).

Everyone is susceptible to extreme heat, but certain individuals are at a higher risk of developing heat-related illnesses. According to the Centers for Disease Control and Prevention (CDC), population groups more vulnerable to extreme heat include:

- Older adults (≥65 years old). The elderly cannot easily adjust to sudden changes in temperature and are more likely to have a chronic medical condition or take medication affecting their body’s ability to control its temperature.
- Infants and children. Young children and infants have limited control of their surroundings and rely on others to keep them cool and hydrated.
- Individuals with chronic health conditions. These individuals are less likely to respond to changes in temperature, may be taking a medication that exacerbates the effects of extreme heat, or have a condition that is a risk factor for heat-related illness (e.g., heart disease, mental illness, poor blood circulation, and obesity).
- People with low income. These individuals may not be able to afford to properly cool their homes and may face transportation challenges when trying to access cooling shelters.
- Athletes and people working outdoors. Both groups are likely to exert energy while being exposed to the heat (CDC, 2020).

Table 9 shows characteristics that MDH has determined make individuals more at risk to adverse health effects from extreme heat, including how that vulnerability ranks among Minnesota counties. The indicator’s percentile rank within Minnesota determines the vulnerability level of Blue Earth County for that indicator (e.g., the 81st – 100th percentile is associated with the highest vulnerability compared to other Minnesota counties). For more information on what makes individuals and communities more vulnerable, see the [Minnesota Extreme Heat Toolkit](#).

Facilities where vulnerable populations may be concentrated, such as prisons, group homes, and childcare centers, are considered to be at higher risk during heat events. Warming temperatures will continue to increase the risk of extreme heat, especially among these already vulnerable populations. Section 3.4 provides jurisdictional responses to localized vulnerabilities to extreme heat.

Table 9. Populations vulnerable to extreme heat in Blue Earth County

Vulnerability Indicator	Percentage of Population	Percentile Rank within Minnesota	Vulnerability Level
Adults with COPD	6.5%	33rd	Low
Adults with a self-care disability	3.7%	49th	Moderate
Adults with coronary heart disease	6.1%	14th	Lowest
Adults with diabetes	9.3%	8th	Lowest
Families at less than 200% of poverty level	19.2%	53rd	Moderate
Households where a person age 65 or over lives alone	8.8%	2nd	Lowest
Households with no computing device	4.1%	10th	Lowest
Households with no vehicle available	7.4%	87th	Highest
Households with rent over 50% of income	8.5%	98th	Highest
Medicare beneficiaries who are electricity-dependent	4.3%	52nd	Moderate
Medicare–Medicaid-enrolled beneficiaries	2.8%	36th	Low
People age 5 or over with limited English	2.3%	66th	High
People age 65 or over	14.8%	7th	Lowest
People over age 16 who work outdoors	5.6%	14th	Lowest
People under age 5	5.2%	17th	Lowest
People who are experiencing homelessness	0.1%	29th	Low
People who are uninsured	4.6%	45th	Moderate
People who do not identify as “White alone, not Hispanic or Latino”	14.8%	67th	High

[View interactive information about at-risk populations in Blue Earth County](#)

4.7.3 Extreme Heat and Climate Change

Minnesota’s annual average temperature has increased more than 3 °F since record-keeping began in 1895, and nine of Minnesota’s hottest 16 years on record have occurred since the year 2000 (MCAP, 2024). In Blue Earth County, the average temperature from July to September has increased 0.04 degrees Fahrenheit per decade since 1895 (MN DNR, 2025b).

Nights are warming at a much higher rate than days in Minnesota. In Blue Earth County, nighttime minimum temperatures from July to September have increased at a rate of 0.19 degrees Fahrenheit per decade (MN DNR, 2025b). While 94% of Minnesota households have some form of air conditioning (including central air, room units, dehumidifiers, and ceiling fans), only 68% have the central air conditioning that can provide reliable whole-house cooling (U.S. Energy Information Administration, 2023). Furthermore, homes with air conditioning equipment may not use it; for example, low-income homes might not turn on their units due to the associated costs, and homes in areas with higher crime rates may be reluctant to use window units for security reasons (EPA, 2006).

The average number of days per year with temperatures over 90 °F under a very high carbon emissions (SSP 585), mid-century (2040–2059) scenario is illustrated in the [Climate Dashboard](#) on the Plan website.

Climate models project that temperature and precipitation increases will continue in Minnesota through the 21st century, with hotter summers and increased drought severity during dry periods as well. Already, the maximum annual heat index values have been rising across the state, because increased humidity during heat waves (Blumenfeld, K. Minnesota State Climatology Office, personal communication, December 21, 2023).

Table 10 compares historical temperature averages to projections under a high emissions (SSP 585) scenario, demonstrating how many more days will reach above 90 °F and nights where the minimum does not go below 75.2 °F. The data in the table is taken from [Minnesota CliMAT](#), an interactive online tool that provides highly localized climate projections for Minnesota and visualize how even specific towns will likely be impacted in the coming decades (Liess, S. et al., 2023). While models differ on how many degrees of warming will be caused by climate change, all models agree that temperatures will continue to rise.

Table 10. Historical vs projected number of days reaching temperature thresholds in Blue Earth County

	Historical (1995–2014)	Projected (2040–2059)	Change
Days Above 90	24.99	51.05	+26.06
Nighttime Minimum > 75.2	1.11	6.57	+5.46

Greenhouse gas concentrations will continue rising through the century, and the air's ability to trap heat from the Earth's surface will increase accordingly. Warming of the atmosphere will evaporate even more water into the air, further limiting the amount of cooling Minnesota will be able to achieve at night and during the winter. As warmer winters and warmer baseline conditions transition into summer, it will be much easier to attain extreme heat (MN DNR, 2025a).

4.7.4 Program Gaps and Deficiencies

Blue Earth County Emergency Management identified several program gaps and deficiencies that make its residents more vulnerable to extreme heat. The following gaps and deficiencies should be addressed with new mitigation efforts to reduce that vulnerability:

Generators for Backup Power to Critical Facilities & Shelters: Not all healthcare facilities utilized for the care of residents & visitors, including designated severe weather/emergency shelters (schools, churches, etc.) have backup power to run cooling systems in the event of a power outage.

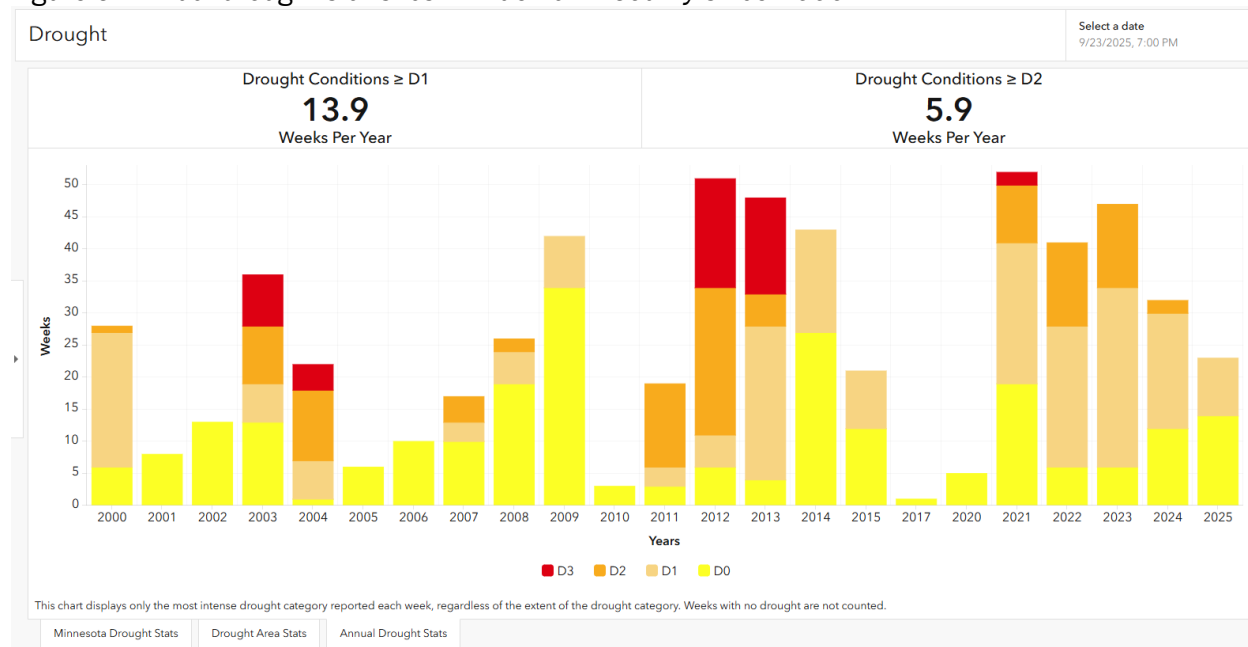
Public Education: Ongoing public education is needed to encourage residents to be prepared for extreme weather, including power outages during periods of extreme heat. Blue Earth County Emergency Management continues to do public education through the local schools, senior and health care centers, and local government for severe weather awareness.

4.8 Drought

There are numerous approaches to assessing drought conditions. The current gold standard for accurate drought conditions in the United States is the United States Drought Monitor (USDM). Annual drought statistics since 2000 can be seen in Figure 9; an interactive version of this dashboard can be found on the Blue Earth County HMP website.

See interactive information about drought, including history and the USDM Dashboard, on the Blue Earth County HMP website

Figure 9. Annual drought statistics in Blue Earth County since 2000



4.8.1 Probability of Occurrence

To determine the probability of future droughts in Blue Earth County, records of previous droughts were summed and divided by the dataset's period of record, resulting in the annual relative frequency of droughts. The USDM database was examined from January 2000–September 2025 for any occurrence of drought $\geq$ D1 in Blue Earth County, regardless of the duration of the drought. According to the weekly reported data, the relative frequency of the county experiencing drought conditions $\geq$ D1 is 13.9 weeks per year, and the relative frequency of drought conditions $\geq$ D2 is 5.9 weeks per year (NDMC, 2025b). The relative frequency of past droughts can be used to infer the probability of similar droughts occurring in the future.

4.8.2 Vulnerability

One way to identify county assets vulnerable to drought is by examining the impacts of previous droughts. Overseen by the National Drought Mitigation Center (NDMC), the Drought Impact Reporter (DIR) is a comprehensive database that gathers drought-related reports from a variety of sources and identifies the sector(s) impacted by each drought. The NDMC (NDMC, 2025b) defines a drought impact

as “[a]n observable loss or change that occurred at a specific place and time because of drought.” A drought meeting this definition is categorized based on the sector(s) the drought impacts; therefore, a single drought affecting multiple sectors will be counted once for each respective sector it impacted.

DIR records show six reported drought incidents in Blue Earth County from 2000 to 2024, impacting seven sectors with greatest impacts to the following sectors: agriculture; relief, response & restrictions; and water supply & quality (NDMC, 2025a). Since droughts are regional in nature, jurisdictions within Blue Earth County do not vary in their vulnerability to drought; however, the impact from droughts are not equal.

Drought conditions may impact soil moisture reserves, groundwater supplies, lake levels, and stream flows. Water-dependent industries that experience the greatest impacts include: agriculture, public utilities, forestry, and tourism (MN DNR, 2021). In addition, droughts may negatively affect an individual’s health by contributing to poor air quality caused by wildfire smoke and particulate matter, or a dusty environment. The 2021 drought resulted in elevated fire danger in roughly the northern two-thirds of the state, and record high particulate readings across Minnesota due to the Canadian wildfires (Huttner, 2021). [Populations vulnerable to these conditions](#) include children, older adults, and those with respiratory issues.

According to the DIR, Blue Earth County’s agriculture sector has been impacted by drought more than once, and with 75% of Blue Earth County’s land devoted to cultivated crops, the county’s agriculture community is also vulnerable to the economic impact a drought may have on crops. From 1989–2022, Blue Earth County received \$23.8 million in crop indemnity payments due to drought, placing it as the 38th-highest-paid county in Minnesota (CEMHS, 2023).

Section 3.4 provides jurisdictional responses to localized vulnerabilities to specific hazards.

4.8.3 Drought and Climate Change

Droughts have been happening throughout Minnesota’s history. While the degree at which climate change will impact future droughts is not certain, an increase in efforts and resources are being devoted to project these impacts. In 2023, the NCA5 was completed by the U.S. Global Change Research Program. It provided a comprehensive scientific review of how climate change is impacting the U.S. as well as providing climate change projections.

According to the report, a warming climate is contributing to oscillations between extreme droughts and floods, threatening the agriculture and livestock in the Midwest which produces more than 30% of the world’s corn and soybeans (Wilson et al., 2023). Climate change is attributed to an estimated \$31.9 billion (2022 USD adjusted) of US crop indemnity payments over the last 30 years, with the largest portion of payments going to farmers affected by drought (Wilson et al., 2023). In Minnesota, drought alone represents 25% of the total crop indemnity payments made in the state (CEMHS, 2023).

Climate projections indicate an increase in annual precipitation of 0.2%–0.5% in the western Midwest and the increase in cumulative runoff is expected to continue through the midcentury (Wilson et al., 2023).

Key Message #5 in the Midwest Chapter of the NCA5 states that managing extremes is necessary to minimize impacts on water quality and quantity. The extreme variability between wet and dry periods is expected to negatively impact the water quality and quantity of the Mississippi River System and adversely affect dependent ecosystems and commerce (Wilson et al., 2023).

4.8.4 Program Gaps and Deficiencies

Blue Earth County Emergency Management did not identify any program gaps or deficiencies that make its citizens more vulnerable to drought.

4.9 Landslides

The USGS definition of landslides includes a wide range of ground movement, such as rock falls, deep failure of slopes, and shallow debris flows. Although gravity acting on an over-steepened slope is the primary reason for a landslide, there are other contributing factors. Rivers create steepened slopes with erosion over time, rock and soil slopes are weakened through saturation by snowmelt or heavy rains, and the excess weight from accumulation of rain or snow or from man-made structures can stress weak slopes (DeLong, et al., 2022).

The most common type of landslide in Minnesota are shallow slope failures that occur during heavy rain (DeLong, et al., 2022). Landslides and mudslides often occur together with other major natural disasters, thereby exacerbating relief and reconstruction efforts. Wildfires may remove vegetation from hillsides, significantly increasing runoff and landslide potential. Floods and landslides are closely related, and both involve precipitation, runoff, and ground saturation that may be the result of severe thunderstorms. However, landslides also take place over time and often take place when no natural disaster is evident.

Streambank erosion is a natural process, but acceleration of this natural process leads to land loss, stream channel instability, increased sediment, habitat loss, and other adverse effects. Bank erosion takes place by two processes, channel migration and channel widening. Widening of channels can be caused by natural processes of incision and bank erosion or by direct modification by construction activities. The result is more erosion from stream bed and banks, increased sediment deposition, and loss of habitat. Increased flows due to watershed changes, stormwater runoff, reservoir releases, and scour below culverts and bridges can all contribute to channel enlargement and therefore bank erosion (Day, 2013).

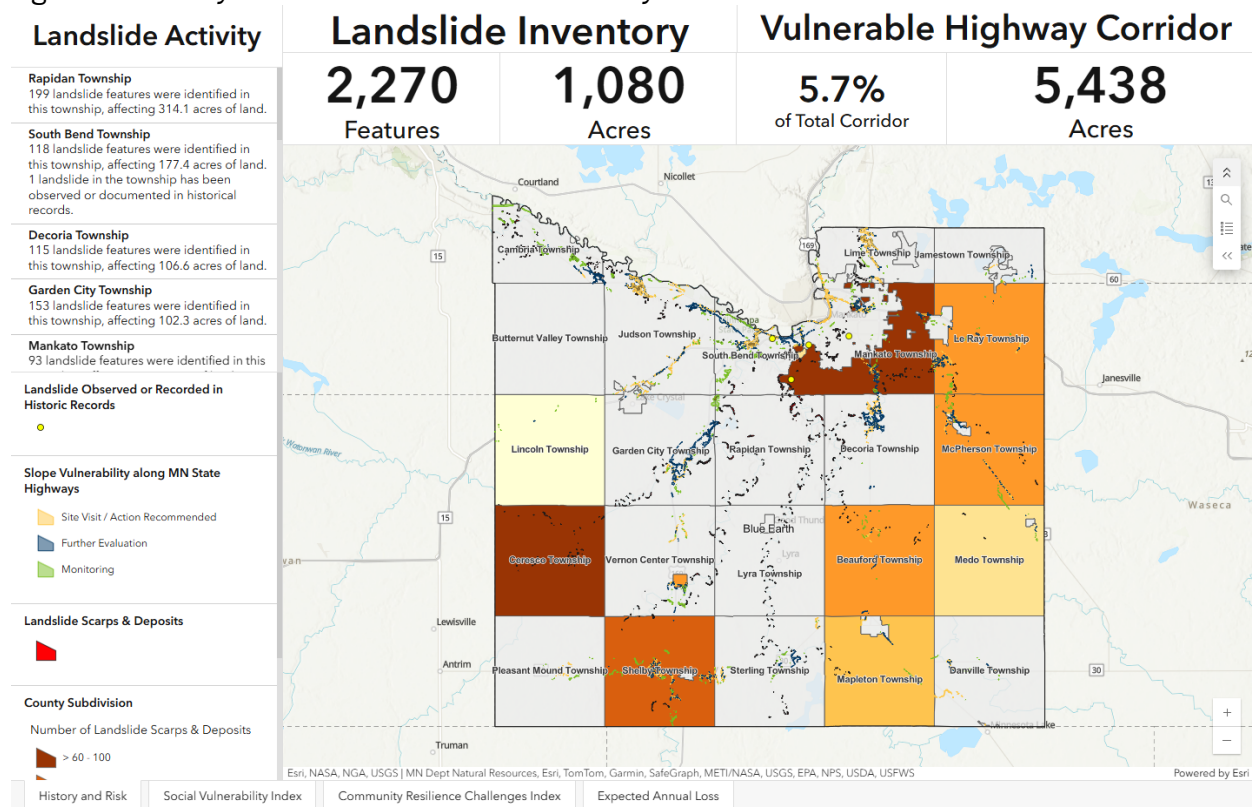
Researchers from eight colleges and universities across Minnesota examined the prevalence of landslides across the state and compiled an inventory of geological activity. This historical landslide inventory was published by USGS (DeLong, et al., 2022). The inventory includes all evidence of historical slides. Blue Earth County has 228 features in the USGS landslide inventory.

The history of landslides in Blue Earth County is shown in Figure 10; an interactive version of this map can be found on the Blue Earth County HMP website. Blue Earth County has more documented landslide features than any other county in Minnesota.

Several homes are at risk along the Blue Earth River due to degradation and scour of the riverbank. Six properties have been submitted to FEMA for home-buyouts or relocation after the severe flooding event of June 2024. Numerous ravines throughout the City of Mankato, such as Indian Creek, Viking Drive, and Thompson Ravine Road, have experienced slope instability and erosion, leading to damage of public infrastructure and private property. Heavy rainfall events increase this risk significantly, making landslides a moderate but growing hazard.

[See interactive information about landslides, including history, on the Blue Earth County HMP website](#)

Figure 10. History of landslides in Blue Earth County



4.9.1 Probability of Occurrence

To determine the frequency of landslides in Blue Earth County, we would require comprehensive records of previous landslides and the period in which they occurred. Landslide data exist for much of Blue Earth County, however without have dates of the slope failure. Statewide and national maps suggest that landslide risk in Blue Earth County is relatively high along the Minnesota River and in many other bluff areas and steep bedrock slopes in the county. There is a documented increase in frequency of the heaviest 1% of extreme precipitation events (NOAA Climate Adaptation Partnerships, 2022). These extreme rain events are the most likely to cause landslides. Although the risk to infrastructure and property in Blue Earth County is relatively low, there are known risks to some residences, and landslides remain a concern to Blue Earth County Emergency Management.

4.9.2 Vulnerability

Deeply incised rivers in Blue Earth County create unique hazards not seen in other areas in Minnesota. The geologic history of this area paired with modern land use, creates rivers highly susceptible to significant bluff failures, bank erosion, and ravine growth (Day, 2013).

The USGS historical research found that many Blue Earth County cities and townships are susceptible to landslides. Just in Rapidan Township, 199 landslide features were identified, affecting 314.1 acres of land. Just within the City of Mankato, 205 landslide features were identified but totaled a smaller area of 24.7 acres.

The Minnesota Department of Transportation (MnDOT) provided spatial data from a slope vulnerability assessment completed statewide in 2019. This assessment sought to identify slope failure risks along state trunk highways in several MnDOT districts. Then using GIS modeling, researchers mapped and ranked slopes along highways according to failure vulnerability and then developed a method for MnDOT to quantify failure risk for asset and emergency management planning. The assessment resulted in a statewide map also shown the Landslide Risk Dashboard classifying potential risks areas into four categories: high risk—a site visit or action is recommended; moderate risk—further evaluation is required, low risk—the area should be monitored, or no action is required. In Blue Earth County, 5400 acres of highway corridor at moderate or high risk for slope failure.

4.9.3 Landslides and Climate Change

The conditions that make certain lithologies more vulnerable to erosion, landslides, and mudslides will be exacerbated by the expected increase in the magnitude and frequency of flooding events. The expected increase in storm activity from climate change may increase the risk of soil saturation. Changing summer storm intensity may result in increased runoff and higher flows, leading to near-channel erosion (DeLong, et al., 2022).

According to NCA5, Key Message #1 in the Land Chapter, climate change has increased regional intensity and frequency of extreme rain, droughts, temperature highs, fires, and urban floods, threatening roads and other infrastructure.

Structures of all kinds are at risk where there may be increases in erosion, slope failure, fire, flooding, and shoreline retreat. Water supplies have been threatened in California after years of fire, as erosion and extreme rain washes excess sediment and pollutants downstream, shortening the lifespan of water-storage reservoirs (Thornton et al., 2023).

4.9.4 Program Gaps and Deficiencies

Blue Earth County Emergency Management identified existing program gaps and deficiencies that make its residents more vulnerable to landslides. The following gaps and deficiencies should be addressed with new mitigation efforts to reduce that vulnerability:

Ongoing Monitoring: Blue Earth County, and specifically the area around Minneopa State Park, is known to be prone to landslides. Researchers have mapped almost 500 points around Mankato where

landslides or rockslides have occurred. Ongoing monitoring of areas sensitive to potential landslides is an ongoing need.

Property Acquisitions: Several homes are considered at-risk of failure along the Blue Earth River due to degradation of the riverbank. A total of 6 properties have been submitted to FEMA for home-buyouts or relocation after the severe flooding event in June 2024. Significant grant funding is necessary to implement this flooding/landslide mitigation project.

Funding: Obtaining significant grant funding following the effects of the 2024 catastrophic flooding events is a barrier in implementing flood mitigation measures. This includes removal of the Rapidan Dam, river restoration, replacement of the CR9 bridge, and buyout of six homes due to flooding or erosion. These are the most pressing gaps that Blue Earth currently faces in order to mitigate against the impact of flooding/landslides along the Blue Earth River.

4.10 Land Subsidence

Subsidence is the gradual settling or sudden sinking of the earth's surface due to subsurface movement of earth materials. Subsidence commonly involves a gradual sinking, but it also refers to an instantaneous or catastrophic collapse. The level of subsidence ranges from a broad lowering to collapse of land surface. Many causes of subsidence are human induced, such as groundwater pumping, aquifer system compaction, drainage of organic soils, underground mining, and hydrocompaction. Natural compaction and thawing permafrost can also have natural causes of subsidence. Areas located above or adjacent to karst topography have a greater risk of experiencing subsidence. Sudden collapses of surface areas can damage and destroy buildings and infrastructure (FEMA, 2013). Other problems associated with subsidence include the formation of sinkholes, flooding and pollution.

A change in the local environment affecting the soil mass that then causes subsidence and sinkholes is called a triggering mechanism. The main triggering mechanisms for subsidence are water level decline, changes in groundwater flow, and increased loading and deterioration (abandoned coal mines) of the earth. Water level decline can happen naturally or be human-induced. Factors in water decline are pumping water from wells, localized drainage from construction, dewatering, and drought. Changes in the groundwater flow include an increase in the velocity of groundwater movement, increase in the frequency of water table fluctuations, and increased or reduced recharge. Increased loading causes pressure in the soil leading to the failure of underground cavities and spaces. Vibrations caused by an earthquake, heavy machinery, and blasting can cause structural collapse followed by surface settlement.

4.10.1 Probability of Occurrence

The probability of sinkholes and land subsidence in Minnesota is directly related to local landscape conditions and triggers likely to produce these conditions. The probability is very localized and is higher in karst landforms and is near zero in non-karst landforms (MN DNR, 2024c).

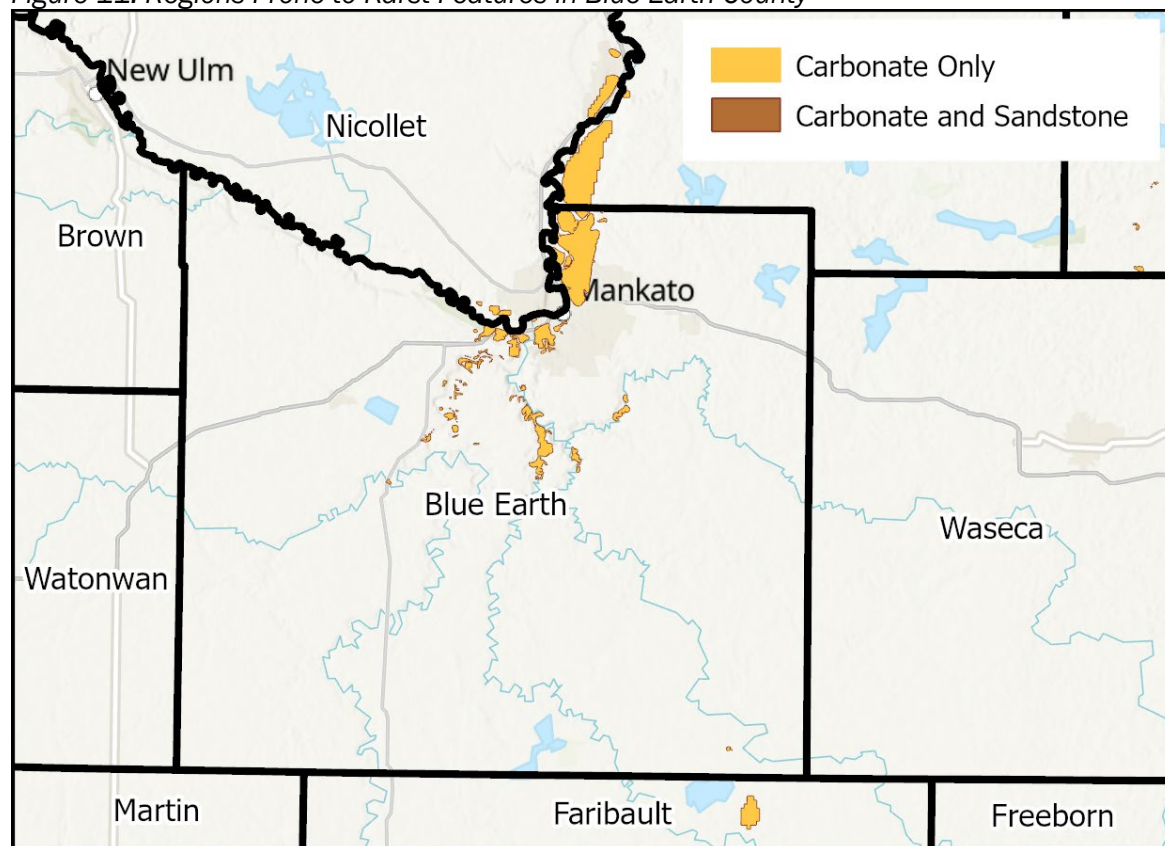
4.10.2 Vulnerability

In Minnesota, the primary natural causes of land subsidence are karst landforms, which develop on or in carbonate regions (limestone, dolomite), or gypsum by dissolution and are identified by the presence of features such as sinkholes, underground (or internal) drainage through solution-enlarged fractures (joints), and caves.

The western half of the county, particularly on flat hilltops between or adjacent to river valleys, is prone to sinkhole formation due to the presence of limestone and dolomite bedrock within 50 feet of the surface. A sinkhole was discovered in LeHillier during flood patrols in 2014 near the earthen dike along the Blue Earth River. The Minnesota River near Mankato, and the Blue Earth and Le Sueur Rivers all have carbonate regions which may be prone to karst features. Karst landforms can be hazardous because of the sinkholes that form there and for the ease with which pollutants can infiltrate into the water supply.

Figure 11 shows the regions in Blue Earth County that are vulnerable to land subsidence. Blue Earth County is not among the highest vulnerability in Minnesota counties based on numbers of significant karst features or karst-prone areas. The probability of land subsidence in Blue Earth County is relatively low, but there is evidence of sinkhole formation.

Figure 11. Regions Prone to Karst Features in Blue Earth County



4.10.3 Land Subsidence and Climate Change

The increased magnitude and frequency of flooding events resulting from climate change may in turn increase the risk of land subsidence in Minnesota if associated geological conditions exist.

4.10.4 Program Gaps and Deficiencies

Blue Earth County Emergency Management identified existing program gaps and deficiencies that make its residents more vulnerable to land subsidence. The following gaps and deficiencies should be addressed with new mitigation efforts to reduce that vulnerability:

Sinkholes: Blue Earth County experiences sinkholes, and local jurisdictions should continue to be aware of and plan for development considerations in karst sensitive areas. Specifically, the western half of the county, particularly on flat hilltops between or adjacent to river valleys, is prone to sinkhole formation due to the presence of limestone and dolomite bedrock within 50 feet of the surface. A sinkhole was discovered in LeHillier during flood patrols in 2014 near the earthen dike along the Blue Earth River.

4.11 Dam Failure

The MN DNR Dam Safety Program has the mission of protecting the life and safety of people by ensuring that dams are safe. Minnesota's Dam Safety Program sets minimum standards for dams and regulates the design, construction, operation, repair, and removal of both privately and publicly (non-federal) owned dams (MN DNR, 2020a). The federal government is responsible for regulating and maintaining dam safety of federally owned dams. No single agency regulates all federally owned dams. 42% of federal dams are owned and managed by the U.S. Army Corp of Engineers (USACE) and the Bureau of Reclamation. The remaining federal dams are owned and managed by other federal agencies, including the Fish and Wildlife Service, Forest Service, the Department of Defense, and the Bureau of Indian Affairs, among others (Normand, 2019). The Federal Energy Regulatory Commission (FERC) Dam Safety Program is the largest dam safety program in the U.S. The Commission works with federal and state agencies to ensure and promote dam safety of over 3,000 dams across the U.S. The Commission inspects projects on an unscheduled basis to investigate potential dam safety problems; complaints about constructing and operating a project; safety concerns related to natural disasters; and issues concerning compliance with the term and conditions of a license (FERC, 2020).

Dam Inventory: The National Dam Inventory reports that there are eight dams in Blue Earth County. Dams are mapped on the [MN State 2024 HMP website](#). Blue Earth County had seven dams classified as Low Hazard Dams, and one dam classified as a Significant Hazard Dam, the Rapidan Dam.

4.11.1 Probability of Occurrence

The dam classified as a Significant Hazard Dam has now failed twice. In April 1965, all seven spillway gates and the powerhouse intake structures of the Rapidan Dam were destroyed during heavy spring floods. The normal pool level fell eight feet. The damage was repaired. The Rapidan Dam experienced a partial failure on June 24, 2024, after the Blue Earth River overtopped the dam due to severe flooding. The failure occurred on the dam's west abutment, causing a new channel to erode around it and resulting in the loss of a house and an Xcel Energy substation. The dam's condition prior to the

failure was rated as "poor" by the National Inventory of Dams. Blue Earth County has determined that the dam needs to be removed and is in the process of preliminary engineering and environmental documentation for dam removal including river restoration. The CR9 bridge adjacent to the dam has also been removed due to flood damages and a replacement structure is being designed with an estimated construction time frame from 2026-2027.

Extreme precipitation is only one factor contributing to dam failure, and the possibility of failure is dam-specific, relating to both environmental and structural conditions. The only dam of significant hazard has failed. However, pending a proper replacement structure, the likelihood of failure in Blue Earth County in the future is low.

4.11.2 Vulnerability

Although dam regulatory authorities differ between various federal and state agencies, all authorities attempt to classify dams according to the potential impacts from a dam failure or mis-operation. In response to the numerous classification systems, FEMA's Interagency Committee on Dam Safety created a downstream hazard potential classification system that is adaptable to any agency's current system. Table 11 provides an overview of the main criteria agencies consider when determining a dam's downstream hazard potential. This classification system does not imply that the dam is unsafe, but rather categorizes dams based on the probable loss of human life and the impacts on economic, environmental, and lifeline interests (FEMA, 2004).

Table 11. Downstream hazard potential classification criteria

Hazard Potential Classification	Loss of Human Life	Economic, Environmental, Lifeline Losses
Class III (Low)	None expected	Low and generally limited to owner
Class II (Significant)	None expected	Yes
Class I (High)	Probable - one or more expected.	Yes (but not necessary for this classification)

SOURCE: (USACE, 2008)

Dams for which a hazard potential has not been designated, or is not provided, are classified as "Undetermined."

An Emergency Action Plan (EAP) is a document that identifies potential emergency conditions at a dam and specifies preplanned actions to be followed during a dam failure to minimize property damage or loss of life. An EAP is required for Class I dams and strongly recommended for Class II dams (MN DNR, 2020a).

4.11.3 Dam Failure and Climate Change

Dams are designed based on assumptions about a river's annual flow behavior that will determine the volume of water behind the dam and flowing through the dam at any one time. Changes in weather patterns due to climate change may change the hydrograph or expected flow pattern. Spillways are put in place on dams as a safety measure in the event of the reservoir filling too quickly. Spillway overflow events are mechanisms that also result in increased discharges downstream. It is conceivable that bigger rainfalls at earlier times in the year could threaten a dam's designed margin of safety, causing dam operators to release greater volumes of water earlier in a storm cycle in order

to maintain the required margins of safety. Such early releases of increased volumes can increase flood potential downstream.

Climate change may increase the probability of design failures. Some spillways may not be large enough to convey the increased flow pattern. An undersized spillway could lead to dam overtopping and failure.

The partial failure of the Rapidan Dam in Blue Earth County in June of 2024 highlighted the growing threat climate change poses to the country's aging infrastructure as extreme weather becomes more common and severe. The Rapidan Dam is a Significant Hazard Dam in "poor" condition. About 20% of Minnesota's Significant and High Hazard Potential Dams are in "fair" or "poor" condition, with a few in "undefined" condition, and about 70% of these dams were built before 1970 (USACE, 2024). These older dams are growing increasingly taxed by extreme weather, especially in the Midwest (Harrison, 2024). Climate change is adding a new level of uncertainty that needs to be considered with respect to assumptions made during the dam construction.

While the Rapidan Dam partial failure did not result in mass inundation, it sent an estimated 11.6 million cubic yards of sediment downstream. The sediment was high in phosphorus and nitrogen because of nearby agricultural runoff. The impacts to the fish habitat and ecology of the stream may not be known for years (MPR News, 2024). The sediment loading behind older dams adds another compounding threat of dam failure to the stream and structures below.

4.11.4 Program Gaps and Deficiencies

Blue Earth County Emergency Management identified existing program gaps and deficiencies that make its residents more vulnerable to dam failure and should be addressed with new mitigation efforts to reduce vulnerability:

Dam Improvements: The Rapidan Dam in Blue Earth County experienced a partial failure on June 24, 2024, after the Blue Earth River overtopped the dam due to severe flooding. The failure occurred on the dam's west abutment, causing a new channel to erode around it and resulting in the loss of a house and an Xcel Energy substation. The dam's condition was already rated as "poor" by the National Inventory of Dams. In August 2025, the Blue Earth County Board determined the dam needs to be removed and is exploring options and funding alternatives, including river restoration.

Section 5 – Mitigation Strategy

The goal of mitigation is to protect lives and reduce the impacts of future hazard events, including property damage, disruption to local and regional economies, the amount of public and private funds spent on recovery, and to build disaster-resistant communities. Mitigation actions and projects should be based on a well-constructed risk assessment as provided in Section 3 of this plan and on the HMP website. Mitigation should be an ongoing process, adapting over time to accommodate a community's needs.

5.1 Community Capability Assessments

The capability assessment identifies current activities and existing planning tools used to mitigate hazards. The capability assessment identifies the policies, regulations, procedures, programs, and projects that contribute to reducing disaster damages. The assessment also evaluates these capabilities to determine whether the activities can be improved to more effectively reduce the impact of future hazard events. The following sections identify existing plans and mitigation capabilities within all of the communities:

- Appendix D: Lists the plans and programs in place in Blue Earth County as related to hazard mitigation.
- Appendix C: As part of the Blue Earth County HMP update, the county and city governments were asked to participate in filling out a “Local Mitigation Survey” (LMS) form to report on their current mitigation capabilities and program gaps. Appendix C provides the LMS reports gathered for Blue Earth County.

Information from the capability assessments was used to support development of local mitigation actions for implementation over the next five years (see column *Comments on Implementation & Integration*).

5.1.1 National Flood Insurance Program (NFIP)

The NFIP is a federal program created by Congress to mitigate future flood losses nationwide through sound, community-enforced building and zoning ordinances and to provide access to affordable, federally backed flood insurance protection for property owners. The NFIP is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods. Participation in the NFIP is based on an agreement between local communities and the federal government that states that if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction in Special Flood Hazard Areas (SFHAs), the federal government will make flood insurance available within the community as a financial protection against flood losses.

Jurisdictional participation in the National Flood Insurance Program (NFIP) is outlined below. All jurisdictions with potential losses in the 1% annual chance flood boundary are participating in NFIP.

Blue Earth County

- Status: Participating
- Entry Date: 3/19/1971 (Emergency Entry); 11/24/1972 (Regular Entry)
- FEMA Map: FEMA Mapped High Risk Areas
- Current Effective Map Date: 2/22/2024
- Potential Buildings Damaged in Floodplain: 41 (in Townships)
- Adoption of Current Floodplain Ordinance: 1/23/2024 (Effective 2/22/2024)
- Adoption of latest DFIRM Map: 1/23/2024
- Floodplain Administrator: John Considine, Property and Land Supervisor (john.considine@blueearthcountymn.gov)

Amboy

- Status: Participating
- Entry Date: 4/24/2020 (Emergency Entry); 2/22/2024 (Regular Entry)
- FEMA Map: No Special Flood Hazard Areas
- Current Effective Map Date: (NSFHA) 2/22/2024
- Potential Buildings Damaged in Floodplain: 0
- Adoption of Current Floodplain Ordinance: 1/6/2020 (Effective 1/16/2020)
- Adoption of latest DFIRM Map: 1/6/2020 (adopted effective FIRM at that time, dated 3/3/1990)
- Floodplain Administrator: Patty Smith, City Admin/Clerk/Treasurer (patty@amboymn.com)

Eagle Lake

- Status: Participating
- Entry Date: 5/15/2017 (Emergency Entry); 2/22/2024 (Regular Entry)
- FEMA Map: FEMA Mapped High Flood Risk Areas (annexed & new on 2/22/24)
- Current Effective Map Date: 2/22/2024 (M)
- Potential Buildings Damaged in Floodplain: 0
- Adoption of Current Floodplain Ordinance: 2/5/2024 (Effective 2/8/2024)
- Adoption of latest DFIRM Map: 2/5/2024
- Floodplain Administrator: Jennifer Bromeland, City Administrator (jbromeland@eaglelakemn.com)

Good Thunder

- Status: Participating
- Entry Date: 3/26/1997 (Emergency Entry); 2/22/2024 (Regular Entry)
- FEMA Map: No Special Flood Hazard Areas
- Current Effective Map Date: (NSFHA) 2/22/2024
- Potential Buildings Damaged in Floodplain: 0
- Adoption of Current Floodplain Ordinance: NA
- Adoption of latest DFIRM Map: NA
- Floodplain Administrator: Sue Petty, City Clerk/Treasurer (goodthundercityclerk@gmail.com)

Lake Crystal

- Status: Participating
- Entry Date: 9/21/1976 (Emergency Entry); 07/03/1985 (Regular Entry)
- FEMA Map: FEMA Mapped High Risk Areas
- Current Effective Map Date: 2/22/2024
- Potential Buildings Damaged in Floodplain: 4
- Adoption of Current Floodplain Ordinance: 11/20/2023 (Effective 11/30/2023)
- Adoption of latest DFIRM Map: 11/20/2023
- Floodplain Administrator: Angela Grafstrom, City Administrator (lccity@hickorytech.net)

Madison Lake

- Status: Participating
- Entry Date: 10/2/2012 (Regular Entry)
- FEMA Map: No Special Flood Hazard Areas (unmapped panel)
- Current Effective Map Date: 2/22/2024
- Potential Buildings Damaged in Floodplain: 0
- Adoption of Current Floodplain Ordinance: 8/1/2011 (Effective 8/10/2011)
- Adoption of latest DFIRM Map: 8/1/2011 (adopted effective FIRM at that time, dated 7/21/1999)
- Floodplain Administrator: Elizabeth Wille, City Administrator (admin@madisonlakemn.gov)

Mapleton

- Status: Participating
- Entry Date: 10/11/2019 (Regular Entry)
- FEMA Map: No Special Flood Hazard Areas
- Current Effective Map Date: (NSFHA) 2/22/2024
- Potential Buildings Damaged in Floodplain: 0
- Adoption of Current Floodplain Ordinance: 7/23/2019 (Effective 8/1/2019)
- Adoption of latest DFIRM Map: 7/23/2019 (adopted effective FIRM at that time, dated 3/5/1990)
- Floodplain Administrator: Sarah Moore, Interim City Clerk/Treasurer

Pemberton

- Status: Participating
- Entry Date: 11/26/2019 (Regular Entry)
- FEMA Map: No Special Flood Hazard Areas
- Current Effective Map Date: (NSFHA) 2/22/2024
- Potential Buildings Damaged in Floodplain: 0
- Adoption of Current Floodplain Ordinance: 8/12/2019 (Effective 8/22/2019)
- Adoption of latest DFIRM Map: 8/12/2019 (adopted effective FIRM at that time, dated 3/5/1990)
- Floodplain Administrator: Kathy Grinnell, City Clerk/Treasurer (pemberton.city@mchsi.com)

Saint Clair

- Status: Participating
- Entry Date: 06/30/1998 (Regular Entry)
- FEMA Map: FEMA Mapped High Risk Areas (new on 2/22/24)
- Current Effective Map Date: 2/22/2024
- Potential Buildings Damaged in Floodplain: 0
- Adoption of Current Floodplain Ordinance: 1/17/2024 (Effective 1/21/2024)
- Adoption of latest DFIRM Map: 1/17/2024
- Floodplain Administrator: Stefanie Janike, City Clerk/Treasurer (citystc@hickorytech.net)

Skyline

- **Status:** NOT Participating
- Entry Date: NA
- FEMA Map: FEMA Mapped High Risk Areas
- Current Effective Map Date: 2/22/2024
- Potential Buildings Damaged in Floodplain: 0
- Adoption of Current Floodplain Ordinance: NA
- Adoption of latest DFIRM Map: NA
- Floodplain Administrator: NA

Vernon Center

- **Status:** NOT Participating
- Entry Date: NA
- FEMA Map: FEMA Mapped High Risk Areas
- Current Effective Map Date: 2/22/2024
- Potential Buildings Damaged in Floodplain: 0
- Adoption of Current Floodplain Ordinance: NA
- Adoption of latest DFIRM Map: NA
- Floodplain Administrator: NA

Mankato

- Status: Participating
- Entry Date: 10/23/1970 (Emergency Entry); 12/22/1972 (Regular Entry)
- FEMA Map: FEMA Mapped High Risk Areas
- Current Effective Map Date: 2/22/2024 (Blue Earth Co.); 7/17/2024 (Le Sueur Co.); 10/13/2022 (Nicollet Co.)
- Potential Buildings Damaged in Floodplain: 8
- Adoption of Current Floodplain Ordinance: 12/11/2023 (Effective 1/16/2024)
- Adoption of latest DFIRM Map: 12/11/2023 (also adopted preliminary FIRM for Le Sueur Co., dated 7/14/2022, and effective FIRM at that time for Nicollet Co., dated 10/13/2022)
- Floodplain Administrator: Susan Arntz, City Manager (sarntz@mankatomn.gov)

Minnesota Lake

- **Status:** NOT Participating
- Entry Date: NA
- FEMA Map: FEMA Mapped High Risk Areas
- Current Effective Map Date: 2/22/2024 (Blue Earth); 6/11/1976 (Faribault)
- Potential Buildings Damaged in Floodplain: 0
- Adoption of Current Floodplain Ordinance: NA
- Adoption of latest DFIRM Map: NA
- Floodplain Administrator: NA

Following a damaging flood event, any impacted jurisdiction would work with the MN DNR to use a form to track cumulative improvements and repetitive losses in the floodplain. The affected jurisdiction would also review the [Minnesota Post-Flood Substantial Damage Playbook for Local Officials](#).

5.1.2 Repetitive Loss Properties

Repetitive loss properties are defined as properties with two or more flood insurance claims of \$1,000 or more in any rolling 10-year period. Property owners are asked to consider mitigation activities such as acquisition, relocation, or elevation, among other options. FEMA's Repetitive Loss (RL) properties strategy is to eliminate or reduce the damage to property and the disruption to life caused by repeated flooding of the same properties. Property owners are notified of their status by FEMA.

A Severe Repetitive Loss (SRL) property is defined as a residential property that is covered under an NFIP flood insurance policy and:

- a) That has at least four NFIP claim payments (including building and contents) over \$5,000 each, and the cumulative amount of such claims payments exceeds \$20,000; or
- b) For which at least two separate claims payments (building payments only) have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building.
- c) For both (a) and (b) above, at least two of the referenced claims must have occurred within any 10-year period and must be greater than 10 days apart.

Blue Earth County has six RL properties and no SRL properties. Of the six RL properties, five are described as single-family homes and the remaining one as "other residential." Each property has 2–3 losses, and net payments for all properties total \$535,345.

For more on the areas that flood repeatedly in Blue Earth County, see the [Blue Earth County Flooding page](#).

5.1.3 Previous Integration of Hazard Mitigation into Planning Mechanisms

Blue Earth County and its incorporated communities are encouraged to integrate relevant information from this mitigation plan into their other planning mechanisms. This demonstrates local progress in mitigation efforts and strengthens the overall mitigation planning process. As part of this plan update, communities were asked to report whether and how information from the 2020 plan was incorporated

into other planning mechanisms (e.g., plans, policies, programs, partnerships, or other documents). The following provides an overview of their responses.

Blue Earth County

Blue Earth County incorporated the past HMP into our emergency management program. This included working with a stakeholder group on a quarterly basis to discuss mitigation and emergency management planning, ongoing update of the county EOP, ongoing public outreach and education (NWS Severe Weather Awareness weeks), and promotion of sign up for CodeRED. BEC Property & Environmental Services continued to administer and enforce requirements of the NFIP. Most recently, BEC Emergency Management has incorporated our past HMP into our 2024 efforts to buy out homes in highly erodible areas at risk for landslides. This is a current high priority following the high rain event of June, 2024 and failure of the Rapidan Dam.

City of Amboy

The city of Amboy incorporated the 2020 HMP into our flood risk reduction efforts. Our city public works program continued ongoing televising of the city sewer system. The city also adopted and enforces Chapter 151: Flood Plain Regulations under City of Amboy City Code of Ordinances.

City of Eagle Lake

The city of Eagle Lake incorporated the past plan into an update of the city's 2006 Land Use plan. The plan is being updated by graduate students from the Mankato State University Urban and Regional Studies Institute. The plan includes considerations for municipal stormwater management. The city also continued to enforce our floodplain ordinance, which regulates development in the flood hazard areas of the City of Eagle Lake and helps fulfill the City's compliance to participate in the NFIP.

City of Good Thunder

The city of Good Thunder incorporated the past HMP into our efforts to raise public awareness of natural hazard conditions. We utilized our city website to share information and promoted sign-up for the city's Alert system.

City of Lake Crystal

The city of Lake Crystal incorporated the past HMP into our Lake Crystal Municipal Utilities Commission and Public Works department planning efforts to reduce the risks of power outages. The city purchased and installed a generator for our fire/ambulance garage and a generator to City Hall. The city is in the process of putting in a substation for electrical redundancy in 2027-2028.

City of Madison Lake

The city incorporated the past HMP into our city Administration and Emergency Management Directors efforts to increase public outreach and education on severe weather. We made greater use of our city website to share information with our residents and to encourage sign up for the county's CodeRED system.

City of Mankato

The city incorporated the past HMP into our efforts to increase public outreach and education on severe weather, specifically we added information on tornado safety to the city website. Mankato actively promotes sign up for Blue Earth County's CodeRED system and participates in Minnesota's Severe Weather Awareness Week (April) and Winter Hazard Awareness Week (November), sharing multilingual materials to ensure messages reach our diverse community. The city additionally incorporated the past HMP into our stormwater management risk reduction planning via our Mankato Urbanized Area MS4 partnership Stormwater Pollution Prevention (SWPPP) program. Over the last 5 years the city collaborated with Blue Earth County and FEMA on mitigation planning strategies, particularly for high-risk floodplain properties and areas prone to repeat damage.

City of Mapleton

The city incorporated the HMP into our flood risk reduction for future development. We worked to enforce the city's local floodplain ordinance, adopted in 2019. The city incorporated the past HMP into our city Administration and Emergency Management Directors efforts to increase public outreach and education on severe weather, increasing use of our website to share information and encourage sign up for the city's Alerts & Notifications service.

City of Minnesota Lake

The city of Minnesota Lake incorporated the Blue Earth County 2020 HMP into our Public Works department efforts on reducing flood risk within the city and improving stormwater management through multiple approaches. The city also reduced our risk of the impact of extended power outages through installation of a generator at the water plant in case of power outages and purchase of monitoring software for the water tower and plant as well as the lift stations.

City of North Mankato

The city of North Mankato incorporated the county's past HMP into our efforts to improve emergency notifications to the public. In the last 5 years the city replaced two outdoor civil defense sirens and adopted a NIXLE warning system for emergency communication messaging. We also incorporated our prior mitigation priorities for flood mitigation into action on multiple fronts, including starting work on lower North Mankato drainage improvement and

comprehensive drainage and flood protection study, which will provide design information for major rehab of the flood protection system, particularly for obsolete lift stations.

City of Pemberton

The city of Pemberton adopted a new Floodplain Ordinance in 2019 as recommended by Blue Earth County. The city has enforced the ordinance to regulate new development within the city, thus reducing future flood risk to new buildings.

City of St. Clair

The city of St. Clair incorporated the past HMP into our local planning and regulations by updating and adopting a new Floodplain Ordinance. The city also completed a priority project to work with the St. Clair Public School to construct a safe room to be built onto the school

City of Skyline

The city of Skyline incorporated the county's past HMP into our overall efforts to keep our local residents informed on severe storm awareness through use of our city website and promoting sign up for CodeRED. The city of Skyline is a small city with a population of 289. We do not have extensive resources for local planning or project implementation. We have continued to work closely with the city of Mankato and Blue Earth County on any local mitigation efforts.

City of Vernon Center

The city of Vernon Center incorporated the county's past HMP by working to implement mitigation actions we had identified for the city. This included purchase backup generators for servicing the water treatment plan, Fire Dept. and City Hall as well as advancing our local flood mitigation efforts. This has included ongoing work to address flood-related erosion to the city's Wastewater Treatment Plant, which continues to be a priority mitigation effort for the next 5 years.

5.1.4 Plans and Programs in Place to Address Natural Hazards

Blue Earth County has numerous plans and programs in place to address natural hazards. Some of these programs are specific to a hazard and others address impacts and human safety for many types of events ("All-Hazards"). To group related natural hazards, "Summer Storms" encompasses Tornadoes, Windstorms, Lightning, and Hail. The plans and programs in place by Blue Earth County to support mitigation for the hazards addressed in this plan are described as follows:

All Hazards

All Hazards Emergency Operations Plan: Blue Earth County Emergency Management maintains an all-hazards Emergency Operations Plan (EOP) which lays out concepts and operating guidelines for all incident management and support functions that may be needed

to ensure life safety, incident stabilization, and property preservation during an incident and the transition to recovery.

Emergency Notification System: Blue Earth County maintains the CodeRED Emergency Notification System which allows residents and visitors to sign up (“opt-in”) to receive severe weather alerts targeted to their location, along with other local emergency alerts. A link to sign up for the system is located on the Blue Earth County Sheriff’s Office website. Blue Earth County also uses IPAWS (Integrated Public Alert Warning System), which allows for targeted and county-wide emergency notifications to both residents and visitors (not an “opt-in” service).

Preparedness Outreach & Education: Blue Earth County Emergency Management utilizes the Blue Earth County website and Facebook page, Sheriff’s Office website and Facebook page, and local news media to communicate with the public on emergency preparedness, severe weather, and other hazard conditions throughout the year. The Blue Earth County Emergency Management website page provides extensive information and resource links for public education on severe weather, extreme temperatures, and emergency preparedness. The county also receives all products/statements issued by the National Weather Service (NWS), and in turn shares or incorporates these into its community outreach and public education. Promotion of the use of NOAA weather radios occurs during the NWS Severe Weather Awareness Week as well as throughout the year. Blue Earth County Emergency Management provides special presentations or other planning assistance as requested to local governments, schools, or other local organizations and facilities within the county. Blue Earth County is a registered Weather Ready Nation Ambassador with the National Weather Service.

Mass Care Sheltering: In the event of a disaster where temporary sheltering is needed, Blue Earth County Emergency Management works in coordination with Blue Earth County Public Health, the American Red Cross, and local governments/Fire & EMS to provide mass care services as needed. The county EOP includes plans, procedures, and resources available for mass care sheltering. Blue Earth County has designated shelter facilities that have agreements with the Red Cross as well as Sheltering and Pet Sheltering Plans.

Backup Power: Blue Earth County works to ensure the continuity of operations of county government services and critical infrastructure in the event of an extended power outage. Local jurisdictions are encouraged to assess where backup power is needed and to obtain emergency generators.

Schools Support: Blue Earth County Emergency Management coordinates with local school districts as needed on related emergency planning and preparedness, including support for specific trainings, exercises, equipment, and relay of county-level emergency notifications. School districts have their own policies, decision-making protocols, and communications plans in place to determine the need to close school and to notify targeted audiences in the event of severe weather, extreme temperatures, or other events that pose risk to students and staff.

Regional Collaboration: Blue Earth County Emergency Management works closely with neighboring emergency managers in HSEM Region 1 and Region 5 on a range of planning, training, and exercises to support all-hazards preparedness, mitigation, response, and recovery capabilities. Blue Earth County Emergency Management also works closely with our regional National Weather Service (NWS) office, having access to all live and on-demand briefings, announcements, and educational opportunities, and contact information for direct collaboration as needed.

Building Regulations: Blue Earth County Property & Environmental Resources Department oversees the requirements for construction permits on properties located outside of city limits. All townships in Blue Earth County (except Lime Township and Mankato Township) must have permits issued through the county's Property and Environmental Resources Department.

Severe Winter Storms

Winter Weather Statements (Watch, Advisory, Warning, etc.): Blue Earth County Emergency Management works to relay winter weather statements received from the NWS to help alert residents and visitors to hazardous conditions plus emergency responders.

Winter Hazard Awareness Week: Blue Earth County participates in the Winter Hazard Awareness Week campaign sponsored by MN HSEM and the National Weather Service each November. The week-long effort provides specific information each day covering the topics of winter weather, outdoor winter safety, indoor winter safety, and winter driving safety. Blue Earth County Emergency Management promotes and shares information during the week via social media and area news media. Communities, schools, churches or other civic programs are encouraged to share locally. All 3rd grade students in Blue Earth County receive a *Winter Weather Awareness* presentation each year.

Snow Removal & Ice Control: The Blue Earth County Public Works Department conducts winter road maintenance on county roads in accordance with the Blue Earth County Snow and Ice Control Policy & Procedures. Other road jurisdictions conduct winter road maintenance on their respective road systems in accordance with each of their established policy and/or practices.

Severe Summer Storms (Includes: Tornadoes, Windstorms, Lightning, and Hail)

Severe Weather Statements (Watch, Advisory, Warning, etc.): Blue Earth County works to relay severe spring and summer weather statements (such as for thunderstorms, windstorms, or tornadoes) received from the NWS to help alert residents and visitors to hazardous conditions plus emergency responders.

Outdoor Warning Sirens: Outdoor warning sirens are located throughout the county and are tested monthly by the Blue Earth County Sheriff's Office in coordination with local jurisdictions. Warning sirens are owned and maintained by the cities and townships where they are located.

Skywarn® Program: Blue Earth County Emergency Management works with the National Weather Service to offer Storm Spotter training on a semi-annual basis to local fire and law enforcement departments and area residents that wish to be trained as spotters. SkyWarn Storm Spotters help to keep their local communities safe by providing timely and accurate reports of severe weather to their local NWS office.

Severe Weather Awareness Week: Blue Earth County participates in the Severe Weather Awareness Week campaign sponsored by MN HSEM and the NWS each April. The week-long effort provides specific information each day covering the topics of severe weather alerts and warnings, lightning, hail, floods, tornadoes (with statewide drills), and extreme heat. Each topic covered includes factsheets, checklists, data, and other resources. Blue Earth County Emergency Management promotes and shares information during the week via social media with communities, schools, churches or other civic programs are encouraged to share locally.

Vegetation Management: The Blue Earth County Public Works Department conducts vegetation management along county roads to reduce the risk of downed trees or branches resulting from severe spring and summer storm events. Local road authorities and electric utility providers also work to manage vegetation near power lines to reduce the risk of downed lines and power outages.

Extreme Cold

Emergency Notifications: Extreme cold temperature warnings are issued by the National Weather Service. Blue Earth County Emergency Management works to relay extreme cold temperature warnings from the NWS to help alert residents and visitors to hazardous conditions. The Blue Earth County Emergency Management Office also encourages residents to follow local news or NWS weather applications to receive severe weather and extreme temperature notifications.

Extreme Cold Safety Awareness: Blue Earth County Emergency Management and Blue Earth County Public Health promote public awareness of personal safety measures to take during periods of extreme cold, such as sharing information via Facebook posts.

Emergency Sheltering: In the event of an extended power outage coupled with a period of extreme cold, Blue Earth County Emergency Management will work with Blue Earth County Public Health and local Fire or EMS agencies as needed to assist vulnerable residents such as the elderly who may need temporary sheltering.

Extreme Heat

Emergency Notifications: Extreme heat temperature warnings are issued by the National Weather Service. Blue Earth County Emergency Management works to relay extreme heat temperature warnings from the NWS to help alert residents and visitors to hazardous conditions. The Blue Earth County Emergency Management Office also encourages residents

to follow local news or NWS weather applications to receive severe weather and extreme temperature notifications.

Extreme Heat Safety Awareness: Blue Earth County Emergency Management and Blue Earth County Public Health promote public awareness of personal safety measures to take during periods of extreme heat, such as sharing information via Facebook posts.

Emergency Sheltering: In the event of an extended power outage coupled with a period of extreme heat, Blue Earth County Emergency Management will work with Blue Earth County Public Health and local Fire or EMS agencies as needed to assist vulnerable residents such as the elderly who may need temporary sheltering.

Flooding

Floodplain Management: Blue Earth County participates in the National Flood Insurance Program, date of entry 11/24/1972. Blue Earth County has adopted the current effective Digital Flood Insurance Rate Map, 2/22/2024.

Floodplain & Shoreland Ordinances: Blue Earth County Property and Land Department administers land use and zoning ordinances for rural and unincorporated portions of Blue Earth County, including for floodplains and shoreland. The department also provides information and support for environmental health issues that may impact water quality after flooding occurs. Blue Earth County zoning ordinances address Shoreland Management Regulations including building regulations to mitigate against flooding during high-water elevation (for structures along lakes, ponds, flowages, rivers and streams).

Transportation Plan: The Blue Earth County Public Works Department maintains an update of the county's 5-Year Transportation Improvement Plan (2024-2028), which includes projects for road, bridge, and culvert improvements to reduce flood-related risks.

Buffer Ordinance and Minnesota Buffer Law: Blue Earth County Ordinances includes Article VIII Buffer Ordinance which establishes regulations for development in sensitive buffer areas. Blue Earth County provides resources and assistance to landowners about buffers through the Blue Earth County Soil and Water Conservation District (SWCD), which oversees compliance with the MN Buffer Law.

One-Watershed One Plan (1w1P): Blue Earth County participates in several area watershed plans (One Watershed, One Plan) 1W1P's: Minnesota River-Mankato 1W1P, Middle Minnesota River-Mankato 1W1P, Blue Earth River 1W1P.

Dam/Levee Failure

Rapidan Dam EAP: The Rapidan Dam is located on the Blue Earth River, two miles west of Rapidan. It is owned by Blue Earth County and maintains a detailed Emergency Action Plan for

the dam which addresses response measures such as emergency public notification and evacuation in the event of a dam breach.

Drought

Public Awareness & Outreach: In the event of extreme drought conditions, Blue Earth County works in concert with the NWS, MN DNR, and local communities to raise public awareness of drought conditions and recommended water use restrictions as per MN DNR guidance.

Precipitation Monitoring: The Blue Earth County SWCD participates in the MNGage Minnesota Volunteer Precipitation Observing Program, which is administered by the DNR Minnesota State Climatology Office. Data collected by volunteers is entered into a database for various studies and weather prediction simulations, including the assessment of drought severity and impacts.

Landslides

Planning and Zoning: Blue Earth County does plan for landslides, although it may not have specific ordinances solely focused on landslides. The county's planning and zoning efforts, including floodplain management, address risks related to land movement and erosion

Land Subsidence (Karst)

Blue Earth County Greenprint: The Blue Earth County Greenprint, a land use plan, includes Appendix F – Greenprint Priority Areas, which addresses sensitive areas of karst. The Greenprint mentions sinkholes as a feature that shoreline buffers can help protect. The Geologic Atlas of Blue Earth County, Part B, 2016, also shows areas with shallow depth to bedrock and karst.

Subsurface Sewage Treatment Systems: Blue Earth County has an ordinance related to subsurface sewage treatment systems (SSTS), however, it's not specifically a karst ordinance. The ordinance addresses the management of wastewater treatment in areas with high to moderate pollution sensitivity, including those with karst features. The SSTS ordinance aims to ensure proper wastewater treatment in areas where the potential for pollution is higher.

5.2 Mitigation Goals

The goals and strategies for natural hazards in the 2024 Minnesota State Hazard Mitigation Plan were adopted for use in the Blue Earth County Plan. This framework, as outlined below, will allow for integration of the mitigation actions that are listed by Blue Earth County and its jurisdictions into the state plan. The state will then be able to develop a statewide strategy that will benefit all of Minnesota.

Flooding Goal: Reduce deaths, injuries, property loss and economic disruption due to all types of flooding (riverine, flash, coastal, dam/levee failure).

Wildfire Goal: Reduce deaths, injuries, property loss, natural resource and economic disruption due to wildfires (forest, prairie, grass, and peat bogs).

Windstorms Goal: Reduce deaths, injuries, property loss, and economic disruption due to windstorms.

Hail Goal: Reduce deaths, injuries, property damage, and economic disruption due to hailstorms.

Winter Storms Goal: Reduce deaths, injuries, property loss, and economic disruption due to winter storms (blizzard, ice, and ice storm).

Lightning Goal: Reduce deaths, injuries, property losses, loss of services, and economic disruption due to lightning.

Tornado Goal: Reduce deaths, injuries, property loss, and economic disruption due to tornadoes.

Drought Goal: Reduce economic loss and environmental impacts due to drought.

Extreme Heat Goal: Reduce deaths, injuries, and economic disruption due to extreme heat.

Extreme Cold Goal: Reduce deaths, injuries, and economic disruption due to extreme cold.

Dam/Levee Failure Goal: Reduce deaths, injuries, property loss, natural resource and economic disruption due to dam/levee failure.

Erosion/Landslide/Mudslide Goal: Reduce deaths, injuries, property loss, and economic disruption due to hillside, coastal, bluff: caused primarily by oversaturation of soil.

5.3 Mitigation Action and Project Strategies

The mitigation actions in this plan are summarized into four main strategy types, as described in the FEMA publications *Local Mitigation Planning Handbook* (2013) and *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* (2013). Minnesota HSEM determined a fifth strategy type for use within the state: Mitigation Preparedness and Response. The strategies and example actions are listed in Table 12.

Table 12. Mitigation strategies and action types

Mitigation Strategy	Description	Example Mitigation Actions
Local Plans and Regulations	These actions include government authorities, policies, or codes, that influence the way land and buildings are developed and built.	• Comprehensive plans • Land use ordinances • Planning and zoning • Building codes and enforcement • Floodplain ordinances • NFIP Community Rating System • Capital improvement programs • Open space preservation • Shoreline codes • Stormwater management regulations and master plans

Mitigation Strategy	Description	Example Mitigation Actions
Structure and Infrastructure Projects	These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards. Many of these types of actions are projects eligible for funding through the FEMA Hazard Mitigation Assistance program.	• Acquisitions and elevations of structures in flood-prone areas • Utility undergrounding • Structural retrofits • Floodwalls and retaining walls • Detention and retention structures • Culverts • Safe rooms
Natural Systems Protection	These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.	• Sediment and erosion control • Stream corridor restoration • Forest management • Conservation easements • Wetland restoration and preservation
Education and Awareness Programs	These are actions to inform and educate residents, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady or Firewise Communities. Although this type of mitigation reduces risk less directly than structural projects or regulation, it is an important foundation. A greater understanding and awareness of hazards and risk among local officials, stakeholders, and the public is more likely to lead to direct actions.	• Radio or television spots • Websites with maps and information • Real estate disclosure • Presentations to school groups or neighborhood organizations • Mailings to residents in hazard-prone areas. • StormReady Certification • Firewise Communities
Mitigation Preparedness and Response	This is a State of Minnesota mitigation strategy with the intent of covering preparation and actions that protect life and property during a natural disaster.	• Emergency operations plan • Flood fight plans and preparedness • Dam emergency action plans • Warning • Backup power • Emergency capabilities

Local leaders work together with the Blue Earth County emergency management director to assure that the hazards and mitigation actions included in this plan are accurate and addressed in their jurisdictions. Development of mitigation actions for the county and each city was informed by a community's hazard and risk assessment; identification of local vulnerabilities, and review of capabilities in place to address mitigation. Planning team members, local elected officials and staff from Blue Earth County and each city actively participated in the development and review of mitigation action charts for implementation through participation in planning team meetings (see Appendix F) and development of Local Mitigation Surveys (see Appendix C). Additional jurisdictional and public

feedback was incorporated following news releases inviting public input to the planning process (see Appendix G).

The Blue Earth County risks and mitigation activities identified also incorporate the concerns and needs of townships, school districts, and other entities participating in this plan. Appendix H contains the jurisdictional mitigation action charts for participating cities.

[See Mitigation Actions for all jurisdictions and provide ongoing feedback on the HMP website](#)

The following is an overview of the mitigation action charts and a description of each element of the chart.

Number (#)

Each mitigation action is identified by a number.

Hazard

Each mitigation action is identified by the natural hazard it relates to. Actions that fall under “All Hazards” relate to both natural and non-natural hazards. “Severe Winter Storms” includes blizzards, heavy snow, ice storms, winter storms, and winter weather. “Severe Summer Storms” includes windstorms, tornadoes, lightning, and hail.

Mitigation Strategy

Each mitigation action is identified by one of the following five mitigation strategies.

- Local Planning and Regulations
- Structure and Infrastructure Projects
- Natural Systems Protection
- Education and Awareness Programs
- Mitigation Preparedness and Response Support

See Table 12 for a description of each mitigation strategy and related types of actions.

Mitigation Action

Each mitigation action provides a concise, action-oriented description of the action or project to be undertaken. If a mitigation action reduces risk to new or existing buildings/infrastructure, it is noted.

Status

The status of each mitigation action is indicated by one of the following categories:

- New – New actions that have been identified since the last plan.
- Existing – Actions that are carried over from the last plan or have been updated.
- In Progress – Actions from the last plan that are currently being acted upon.

Mitigation actions that have been completed or deleted from the 2020 Blue Earth County Hazard Mitigation Plan are identified and reported on in Appendix H. Completed and deleted mitigation actions are not carried over into the updated mitigation action chart.

Priority

In the review and discussion of selected mitigation strategies and actions, the planning team ranked mitigation actions by priority for implementation. Table 13 provides criteria that were taken into consideration in the process.

Table 13. Criteria for Mitigation Action Priority Ranking

Ranking	Criteria
High Priority	• Methods for reducing risk from the hazard are technically reliable. • The jurisdiction has experience in implementing mitigation measures. • Mitigation measures are eligible under federal grant programs. • There are multiple mitigation measures for the hazard. • The mitigation measure(s) are known to be cost-effective. • The mitigation measures protect lives and property for a long period or are permanent risk reduction solutions.
Moderate Priority	• Mitigation methods are established. • The jurisdiction has limited experience with the types 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.
Low Priority	• Methods for reducing risk from the hazard are not well-established, are not proven reliable, or are experimental. • The jurisdiction has 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 measure(s) 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.

Time frame

Each mitigation action identifies the anticipated timeframe for implementation within the next five-year planning cycle. If a mitigation action is considered an ongoing effort, the next five-year period in which the activity would occur is listed. If a mitigation activity has a defined period for implementation (e.g., a specific year), it will be noted.

Responsibility

Each mitigation action identifies what personnel, department, or agency will serve as lead for the administration or implementation of the action.

Comments on Implementation & Integration

Each mitigation action provides a description of how the jurisdiction will work to implement the mitigation action and incorporate the activity into other existing planning mechanisms. This can include description of methods for public outreach, enforcement of policies, development of plans, and coordination of key staff and partnership efforts.

Possible Funding

Each mitigation action identifies potential funding sources to support implementation of the mitigation activity, such as existing county or city funding, or state or federal funding. Projects that may be eligible for future FEMA Hazard Mitigation Assistance grant funding are noted.

5.3.1 Blue Earth County Mitigation Action Chart

The Blue Earth County Mitigation Action Chart is provided in Table 14. Appendix H provides the mitigation action charts developed for each city participating in the 2025 HMP update. A report on the status of mitigation actions related to natural hazards included in the Blue Earth County 2020 plan update can be found in Appendix E.

See Mitigation Actions for all jurisdictions and provide ongoing feedback on the HMP website

Table 14. Blue Earth County Mitigation Action Chart, 2025–2029

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Utilize effective methods to share information with the community about severe weather, extreme temperatures, and personal preparedness.	Existing High 2026-2031	Blue Earth Emergency Management (BEC EM)	BEC EM utilizes the Blue Earth County website and Facebook page, Sheriff's Office website and Facebook page, EM website page, and local news media to communicate with the public on emergency preparedness, severe weather, and other hazard conditions throughout the year. BECEM participates annually in the NWS's annual Winter/Spring Weather Awareness Week. BEC also works with the NWS to hold bi-annual SkyWarn Storm Spotter training. Our participation in NWS severe weather awareness weeks will continue as well as encouraging local communities to share information locally.	Internal: BEC SO/EM
2	All-Hazards	Education & Awareness Programs	Conduct outreach to encourage residents to opt-in for the county's emergency notification system.	Existing High 2026-2031	BEC EM	Blue Earth County uses the CodeRED emergency notification system. Information about CodeRED and a link to sign in are available on the Sheriff's Office website. BECEM encourages residents to sign up with reminders throughout the year using our social media pages as well as during Severe Weather Awareness Week. Local municipalities are encouraged to also promote sign up for their area residents.	Internal: BEC SO/EM
3	All-Hazards	Local Planning & Regulations	Adopt and enforce regulations governing new construction to prevent damage to buildings and infrastructure from severe weather events.	Existing Moderate 2026-2031	BEC Planning & Zoning	Blue Earth County has not adopted the MN State Building Code. The BEC Property & Environmental Resources Dept. oversees the requirements for construction permits on properties located outside of city limits. All townships in Blue Earth County (except Lime Township and Mankato Township) must have permits issued through the BEC Property and Environmental Resources Dept.	Internal: BEC Property & Land Div. (P&Z)
4	All-Hazards	Local Planning & Regulations	Implement existing plans and policies in place that help to mitigate against the impacts of flooding and other natural hazards to future development.	Existing High 2026-2031	BEC Planning & Zoning	Blue Earth County continues to enforce the BEC Code of Ordinances which includes policies that reduce risk for future development, such as the county's Floodplain Ordinance, Shoreland Zoning Ordinance, Subdivision Ordinance, and Buffer Ordinance.	Internal: BEC Property & Land Div. (P&Z)

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
5	All-Hazards	Local Planning & Regulations	Utilize departmental staff and elected officials to work together to accomplish identified mitigation efforts.	Existing High 2026-2031	BECEM in coord with other county depts.	Blue Earth County has a full-time Emergency Management Director and supporting staff, BEC Sheriff's Office, Property & Environmental Resources staff (P & Z, Drainage Management, Water Resources, Assessor, Mapping & Data), Public Works Director/Highway Engineer and staff, Public Health Department, Planning Commission, and Soil and Water Conservation District. BEC departments and staff continue to work together on integrated mitigation efforts.	Internal: BEC general cross dept. funding
6	All-Hazards	Local Planning & Regulations	Develop and sustain partnerships with outside agencies, organizations, businesses, and neighboring jurisdictions to accomplish mitigation efforts.	Existing High 2026-2031	BECEM	Blue Earth County works with cities, townships and other governmental agencies (like Minnesota State University -Mankato) on mitigation efforts and is a liaison with HSEM & FEMA. BECEM works closely with neighboring emergency managers in HSEM Region 1 and 5 as well as our regional National Weather Service (NWS) office. We sustain working partnerships with the SWCD, MN DNR, MnDOT, Rural and Municipal Electric Cooperatives, and Watershed Districts.	Internal: BEC SO/EM
7	All-Hazards	Mitigation Preparedness & Response Support	Regularly convene the Blue Earth County Emergency Preparedness Group to support coordinated planning for EM functions.	Existing High 2026-2031	BECEM	BECEM continues to hold quarterly City/County Emergency Preparedness meeting with Blue Earth & Nicollet Counties.	Internal: BEC SO/EM
8	All-Hazards	Mitigation Preparedness & Response Support	Ensure the county's Emergency Operations Plan (EOP) is updated and addresses policies & procedures needed to support EM functions prior to, during, and following a disaster.	Existing High 2026-2031	BECEM	Blue Earth Emergency Management maintains an all-hazards Emergency Operations Plan (EOP) which lays out concepts and operating guidelines for all incident management and support functions that may be needed to ensure life safety, incident stabilization, and property preservation during an incident and the transition to recovery.	Internal: BEC SO/EM

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
9	All-Hazards	Mitigation Preparedness & Response Support	Identify critical infrastructure or facilities that need backup generators and work to obtain them.	Existing High 2026-2031	BECM in coord with other county depts.	Blue Earth County works to ensure the continuity of operations of county government services and critical infrastructure in the event of an extended power outage. Local jurisdictions are encouraged to assess where backup power is needed and to obtain emergency generators.	Internal: BEC Facilities External: Private Partners, Local Govt's
10	All-Hazards	Mitigation Preparedness & Response Support	Ensure that plans, procedures, and designated facilities are in place to provide temporary sheltering due to a severe weather or other disaster event.	Existing High 2026-2031	BECM, BEC Public Health	In the event of a disaster where temporary sheltering is needed, BECEM works in coordination with Blue Earth County Public Health, the American Red Cross, and local governments/Fire & EMS to provide mass care services as needed. The county EOP includes plans, procedures, and resources available for mass care sheltering. Blue Earth County has designated shelter facilities that have agreements with the Red Cross as well as Sheltering and Pet Sheltering Plans.	Internal: BEC SO/EM, BEC PH External: Red Cross, Local Govt's
11	All-Hazards	Mitigation Preparedness & Response Support	Encourage schools and other facilities that house seniors or other vulnerable populations to have emergency plans in place to deal with severe weather, extreme temperatures, and extended power outages.	Existing Moderate 2026-2031	BECM in coord with local jurisdictions	BECM continues to work with local jurisdictions provide outreach to and support to schools and other facilities on emergency planning. Schools and long-term care (LTC) facilities are required to have such plans in place. BECEM provides direct training or planning support as requested.	Internal: BEC SO/EM External: Schools, LTC Facilities
12	All-Hazards	Local Planning & Regulations	Identify and work to secure internal as well as external funding (grant or loan sources) to help accomplish mitigation activities in the county.	Existing Moderate 2026-2031	BECM, Other County depts as related	Blue Earth County internal budgets are used for funding emergency management, planning and zoning, and public works projects. FEMA grant funding may also be available to communities for hazard mitigation projects. BECEM will work to assist communities to apply for outside grant funding for eligible mitigation projects as applicable, including from FEMA, MN DNR, USDA, and other state, federal, or local resources.	Internal: BEC SO/EM, BEC PW, BEC P&Z External: FEMA EMPG, FEMA HMGP, MN DNR FHM, USDA CF

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
13	Flooding	Local Planning & Regulations	Enforce policies and ordinances that address development in high-risk flood areas.	Existing High 2026-2031	BEC Planning & Zoning	BEC Property and Environmental Resources (PER) – Planning & Zoning Division administers land use and zoning ordinances for rural and unincorporated portions of Blue Earth County, including for floodplains and shoreland. The BEC Shoreland Management Regulations include building regulations to mitigate against flooding during high-water elevation (for structures along lakes, ponds, flowages, rivers and streams).	Internal: BEC PER Dept. budget
14	Flooding	Local Planning & Regulations	Work with area watershed organizations to address mitigation plans and projects that address risk reduction for localized flooding and erosion.	Existing High 2026-2031	BECEM	Blue Earth County participates in several area watershed plans (One Watershed, One Plan) 1W1P's: Minnesota River-Mankato 1W1P, Middle Minnesota River-Mankato 1W1P, Blue Earth River 1W1P.	Internal: BEC SO/EM External: Watershed Orgs.
15	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Plan for and implement measures to address flood risk reduction projects for roads, bridges, and culverts throughout the county.	Existing High 2026-2031	BEC PW in coord with townships	Blue Earth BEC maintains an update of the county's 5-Year Transportation Improvement Plan (2024-2028), which includes projects for road, bridge, and culvert improvements to reduce flood-related risks. Blue Earth County works with townships to address areas of local flooding concern. BEC Public Works continues to monitor priority areas in which to armor shorelines, streambeds, bridge abutments, foundational infrastructure supports and other shoreline structures.	Internal: BEC PW External: Local Township PW funding, MnDOT Funding, FEMA HMGP grant funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
16	Flooding	Local Planning & Regulations	Participate as a partner to the Army Corps of Engineers, MnDOT, and local jurisdictions on the Minnesota River Flow Frequency (FFA) Curve Update Study (FPMS).	New High 2025-2027	ACOE Silver Jackets Program	This project is led by the ACOE Silver Jackets Program. Blue Earth County will work to participate as a partner in the study as appropriate. The Minnesota River Flow-Frequency Analysis project will be assessing the flood risk and resiliency within the Minnesota River Basin. This project will also help Minnesota achieve its hazard mitigation goals through the application of current information and technology to inform potential flow rates of the river and prevent damages from future flood events. Ensuring the discharge-frequency curve is accurate will inform future design decisions made by MNDOT for projects that aim to reduce the impacts of repetitive flooding on MNDOT highways within the basin. Status. The project is planned to initiate in the last quarter of fiscal year 2025 and completed in the fall of 2027.	External: This project is funded through the ACOE
17	Flooding / Landslides	Structure & Infrastructure Projects / Natural Systems Protection	Work with cities and townships to assess, plan for, and implement projects that improve stormwater storage solutions that can better handle flash flooding and reduce impacts of ravine erosion and sedimentation.	New High 2025-2027	BEC Property & Environmental Resources (P&Z) in coord with local govt's and agency partners	Flash flooding occurs in all areas of Blue Earth County. Highest areas of concern include South Bend Township, Mankato Township, the City of Skyline, and the City of Mankato. BEC Property and Environmental Resources seeks to work with these communities to conduct an assessment and feasibility study of stormwater storage to help reduce public costs of ravine erosion and sedimentation. A comprehensive review of issues, hot spot identification, and preliminary design for stormwater storage and retro-fits for this area would be beneficial. The county and local jurisdictions will seek outside grant funding to support planning and project implementation.	Internal: BEC PER / BEC Public Works budgets External: FEMA HMGP grant, MN PFA funding, MPCA funding, MN DNR Flood FHM grant program, BEC SWCD Cost Share Funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
18	Flooding / Landslides	Structure & Infrastructure Projects / Natural Systems Protection	Minnesota State University – Mankato: Implement planned mitigation measures to reduce ravine erosion and reduce localized campus flooding and impacts to critical infrastructure.	New High 2026-2031	Minnesota State University - Mankato	Minnesota State University - Mankato critical infrastructure of concern includes the campus boiler plant and chiller building, and residential life housing. MSU has identified the Campus Rec fields ravine (Viking Ravine) as a critical/imminent need for repair/correction. We are currently working with FEMA, Minnesota HSEM and professional engineers on designing restoration and mitigation plans. MSU will work research and secure outside funding to support planning and implementation efforts. Blue Earth County Emergency Management and the City of Mankato will provide support to MSU in these efforts as appropriate, which may include seeking FEMA HMGP or other grant funding.	Internal: Minnesota State University - Mankato External: FEMA HMGP, BEC SWCD Cost Share Funding, MPCA, Other sources TBD
19	Severe Winter Storms	Local Planning & Regulations	Implement snow removal and ice control to ensure the safety of county roads impacted by winter storms.	Existing High 2026-2031	BEC Public Works	Blue Earth County Public Works Department conducts winter road maintenance on county roads in accordance with the Blue Earth County Snow and Ice Control Policy & Procedures. Other road jurisdictions conduct winter road maintenance on their respective road systems in accordance with each of their established policy and/or practices.	Internal: BEC PW External: Townships PW's
20	Severe Summer Storms	Education & Awareness Programs	Work with the National Weather Service (NWS) to provide SkyWarn training and develop a network of trained Storm Spotters throughout the county.	Existing High 2026-2031	BECEM in coord with NWS	BECEM works with the NWS to offer this training on an semi-annual basis to local fire and law enforcement departments and local residents that wish to be trained as spotters.	Internal: BEC SO/EM External: NWS

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
21	Severe Summer Storms	Mitigation Preparedness & Response Support	Ensure outdoor warning sirens are located where needed and functioning properly.	Existing High 2026-2031	BECEM in coord with local jurisdictions	Outdoor warning sirens are located throughout the county and are tested monthly by the Blue Earth County Sheriff's Office in coordination with local jurisdictions. Warning sirens are owned and maintained by the cities and townships where they are located. 2 new sirens were added in county parks during 2024. One additional siren was added in Mapleton and one was replaced in Amboy in 2025. In 2026 a comprehensive assessment of all county-wide sirens will take place. Outside grant funding may be sought as needed from external grant funding sources, including FEMA HMGP or the USDA Community Facilities Grant Program.	Internal: BEC SO/EM External: FEMA HMGP grant, USDA CF grant, Local Gov'ts
22	Severe Summer Storms	Structure & Infrastructure Projects	Address the need for the construction of storm shelters or tornado safe rooms in areas where residents or visitors are vulnerable to high wind events, such as mobile home parks and campgrounds.	Existing High Ongoing	BECEM in coord with local jurisdictions	BECEM will assist any communities in their effort to assess and address the need for construction of a storm shelter or tornado safe room. Grant funding may be available for tornado safe rooms from FEMA Hazard Mitigation Assistance (HMA) grant program funding, based on application approval.	Internal: BEC SO/EM External: Local Gov'ts, FEMA HMGP grant
23	Severe Winter & Summer Storms	Structure & Infrastructure Projects	Encourage municipal and rural electric cooperatives to address burying powerlines or strengthening power poles to avoid power outages from high wind events and storms.	Existing High Ongoing	BECEM, local jurisdictions in coord with electric utility providers	BECEM works with our utility coops and local governments on these efforts as needed. FEMA HMA grant funding may be a source for powerline infrastructure retrofits that eligible rural and municipal electric coops can apply for.	External: Rural Electric Coops, FEMA HMGP grant
24	Severe Winter & Summer Storms	Natural Systems Protection	Manage trees and other vegetation along roads from severe storm events to reduce risk to powerlines and passing motorists.	Existing Moderate Ongoing	BEC Public Works Dept., Local Utility Providers	Blue Earth Public Works Dept. regularly conducts vegetation management along county roads to reduce the risk of downed trees or branches resulting from severe spring and summer storm events. Local utility providers also work to manage vegetation near power lines to reduce the risk of downed lines and power outages.	Internal: BEC PW External: Electric Company Providers

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
25	Extreme Cold/Heat Temps	Education & Awareness Programs	Provide outreach and education to the public on personal safety measures to take during periods of extreme cold or extreme heat.	In-Progress High 2024	BECM & BEC Public Health	BECM works to share information received from the National Weather Service when periods of extreme cold or heat are forecast and occurring. BECEM utilizes the county EM website page, and EM Facebook. Local radio and TV stations also provide this information to the public. BECEM and Blue Earth County Public Health continue to partner together to promote weather safety.	Internal: BEC SO/EM, BEC PH
26	Extreme Cold/Heat Temps	Mitigation Preparedness & Response Support	Work with local jurisdictions to plan for temporary warming/cooling facilities and promote their use for those that are vulnerable to extremely heat or cold temperatures (i.e., homeless, elderly)	Existing High 2025-2030	BECM in coord with PH and local govt's	BECM and BEC Public Health continue to work together to be ready for community sheltering needs in response to extreme temperature events. BECEM addresses planning for extreme temperature sheltering within the county EOP and in coordination with Public Health and local jurisdictions. Designated facilities in the county are identified for use for emergency warming/cooling centers.	Internal: BEC SO/EM, BEC PH
27	Drought	Local Planning & Regulations	Continue to participate in the MnGAGE precipitation monitoring program to help track and report data related to periods of drought.	Existing Moderate 2026-2031	SWCD	Blue Earth SWCD participates in the MnGAGE Minnesota Volunteer Precipitation Observing Program, which is administered by the DNR Minnesota State Climatology Office.	External: BEC SWCD, MN DNR MnGage Program
28	Drought	Local Planning & Regulations	Encourage communities to establish and enforce watering restrictions during drought conditions and raise public awareness of water conservation measures.	Existing High Ongoing	BECM in coord with MN DNR and local jurisdictions	BECM encourages city and townships to promote drought awareness to residents on limiting non-essential water usage. Local communities will be encouraged to establish watering restrictions as per MN DNR guidelines during periods of severe drought.	Internal: BEC SO/EM, External: MN DNR, Local Govt's
29	Land Subsidence (Karst)	Local Planning & Regulations	Plan for and monitor areas of the county that experience karst and address any areas of risk for land subsidence.	Existing Moderate 2026-2031	BEC P&Z in coord with SWCD	The Blue Earth County Greenprint, a land use plan, includes Appendix F – Greenprint Priority Areas, which addresses sensitive areas of karst. The Greenprint mentions sinkholes as a feature that shoreline buffers can help protect. The Geologic Atlas of Blue Earth County, Part B, 2016, also shows areas with shallow depth to bedrock and karst.	External: SWCD Cost Share Funding or other grant programs

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
30	Karst / Landslides	Local Planning & Regulations	Work with the Blue Earth SWCD to implement stormwater storage or other retrofit projects that may benefit areas of concern for sinkholes and erosion.	Existing High 2026-2031	BEC Property and Envr. Resources in coord with SWCD	BEC continues to work with the Blue Earth SWCD and other partners to monitor and address areas of concern for sinkholes, eroding ravines, and eroding bluffs. Water storage and wetland restorations are priorities in the County Water Plan and the One Watershed One Plans that for the watersheds completed for in the area. County Drainage management will consider applying for external funding for water storage practices within the county to help reduce flows, flooding and downstream erosion.	Internal: BEC PER, Drainage Mgmt. External: SWCD Cost Share Program or other grant programs
31	Landslides	Natural Systems Protection	Enforce ordinances that help to reduce risk where flooding or erosion could occur and increase risk for landslides.	Existing Moderate 2025-2031	BEC Property and Envr. Resources	Blue Earth County's planning and zoning efforts, including floodplain and shoreland management, address risks related to land movement and erosion. Blue Earth County Ordinances includes Article VIII Buffer Ordinance which establishes regulations for development in sensitive buffer areas. In 2023, Blue Earth County added a definition of "Actively Eroding Bluff" and standards for when a geotechnical evaluation is required for development activity in proximity to an actively eroding bluff.	Internal: BEC PER (P&Z) External: Grant Opportunities
32	Landslides	Awareness & Education Programs	Provide technical information for landowners and farmers about preventing and managing soil erosion to ravines and farmlands to reduce soil losses from flood events.	Existing Moderate 2025-2031	Blue Earth SWCD	This is an ongoing service that that Blue Earth SWCD District provides. It is also a priority in the One Watershed One Plan processes that have been completed and the ones in the county that are being developed.	External: Blue Earth SWCD Cost Share Program

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
33	Flooding / Landslides	Structure & Infrastructure Projects / Natural Systems Protection	Conduct buyouts of 6 properties along the Blue Earth River that are at risk of landslide failure due to the 2024 severe flooding event.	In-Progress High 2026-2031	BECEM in coord with HSEM	Blue Earth County has initiated an effort to obtain FEMA grant funding to conduct property acquisition projects for 6 properties that are at high risk of landslide failure (or were flooded and are uninhabitable) along the Blue Earth River due to degradation and scour of the riverbank. A total of 6 properties have been submitted to FEMA for home-buyouts or relocation after the severe flooding event in of June 24, 2024. Once the properties are bought out and removed, the land will be converted to open-space in perpetuity. BECEM is working in coordination with property owners and MN HSEM on this effort.	Internal: BEC SO/EM External: FEMA HMGP grant funding, Private property owner cost share
34	Flooding / Dam Failure	Structure & Infrastructure Projects / Natural Systems Protection	Remove the Rapidan Dam and address river restoration following dam removal.	In-Progress High 2026-2031	BEC PW in coord with BECEM	Blue Earth County's highest priority mitigation project is the removal of the Rapidan Dam. BEC has determined that the dam needs to be removed and is in the process of preliminary engineering and environmental documentation for dam removal including river restoration.	Internal: BEC PW External: FEMA HHPD grant, MN DNR Dam Safety Grant for dam removal
35	Flooding / Dam Failure	Structure & Infrastructure Projects	Complete reconstruction of the County Road 9 Bridge which was damaged due to the June, 2024 Rapidan Dam failure.	In-Progress High 2026-2028	BEC PW	The CR9 bridge adjacent to the dam has also been removed due to flood damages and a replacement structure is being designed with an estimated construction time frame from 2026-2028.	Internal: BEC PW External: Federal Highway Admin and MnDOT funding
36	Flooding / Dam Failure	Local Planning & Regulations	Inspect all Blue Earth County dams and reservoirs to ensure structural integrity and safety.	Existing Moderate 2026-2031	BEC PW	Since the Rapidan Dam partial breach in June 2024, BEC continues to work with regulatory agencies on the recovery including any emergency actions.	Internal: BEC PW External: MNDNR Dam Safety Program

Section 6 – Plan Maintenance

6.1 Monitoring, Evaluation, and Updating the Plan

The Blue Earth County Hazard Mitigation Plan (HMP) should be considered a living document. The plan should be updated and approved by FEMA at least every five years. The guidance in this section will function as the primary tool when reviewing progress on the implementation of the Blue Earth County HMP.

The Blue Earth County emergency management director (EMD) is the individual responsible for leading all efforts to monitor, evaluate, and update the HMP within the five-year window. Throughout the five-year planning cycle, the Blue Earth County EMD will work with a stakeholders group to help monitor, review, evaluate, and update the HMP. The group will include county staff, township representatives, and designated city emergency managers from cities participating in the plan update, and include other city elected officials or staff as needed. Representatives from agencies or organizations that are involved with related mitigation work in the county as well as those that work with underserved communities or socially vulnerable populations will also be invited to participate in the group. The Blue Earth County EMD will conduct quarterly outreach to and communicate with the group on emergency management matters regarding severe weather awareness, local preparedness, mitigation, and response & recovery as needed. Additional stakeholders will be added based on need or in response to severe weather events.

If necessary, the Blue Earth County EMD will convene the group to meet more regularly to monitor plan implementation progress and reassess needs and opportunities. This could be done in response to funding cycles of programs that provide resources for hazard mitigation activities. If there is a need for a special meeting due to new developments or a declared disaster occurring in the county, the group will meet to update pertinent mitigation strategies. Depending on Blue Earth County opportunities and fiscal resources, mitigation projects may be implemented independently by individual communities or through local partnerships.

The group will continue to review the HMP goals and objectives to determine their relevance to changing situations in Blue Earth County. In addition, state and federal policies will be reviewed to ensure they are addressing current and expected conditions. The group will also review the risk assessment portion of the plan to determine if this information should be updated or modified. The parties responsible for the various implementation actions will report on the status of their projects, and will include which implementation processes worked well, any difficulties encountered, how coordination efforts are proceeding, and which strategies should be revised.

Updates or modifications to the HMP during the five-year planning process will require a public notice and a meeting prior to submitting revisions to the individual jurisdictions for approval. The plan will be updated via written changes, submissions as the group deems appropriate and necessary, and as approved by county commissioners.

During the five-year plan period, the EMD will require all relevant county departments and jurisdictions to report on the status of their mitigation actions using the worksheets provided in Appendix I. This

information will be used to track progress for the next plan update. Additionally, the EMD will establish and implement an HMP maintenance schedule. Forms for these purposes are drawn from FEMA's 2023 Local Mitigation Planning Handbook and can be found in Appendix I (FEMA, 2023a).

The EMD will also solicit feedback from the stakeholders group using the following prompts (also found in Appendix I):

- Are there any new representatives from jurisdictions, agencies, or organizations that you feel should be included in our stakeholder outreach?
- Do you feel your community has any new vulnerabilities that may be impacted by hazard events? (critical infrastructure, systems, or populations)
- Has your community identified any new mitigation activities that would help reduce risk to future hazard events?
- Are there any funding opportunities or other resources that may be available to help implement local mitigation activities?
- How is your community integrating information from the mitigation plan into other planning mechanisms (such as plans, policies, or partnerships)?

6.2 Implementation

Blue Earth County and its included municipalities share a common HMP and work together closely to develop, revise, and implement it. This HMP provides a comprehensive chart of mitigation actions for Blue Earth County and its jurisdictions (see Appendix H and Section 5.3). The cities participating in the HMP planning process identified the specific mitigation strategies that they would seek to implement in their communities during the five-year planning cycle. These mitigation actions are provided in Appendix H.

Several implementation tools are available to address hazards. The strategies to use will be part of an ongoing discussion as Blue Earth County looks for opportunities for plan implementation. The following tools will be considered:

Education: In many cases, education of residents has been identified as one of the most effective mitigation strategies.

Capital Investments: Capital investments such as fire and ambulance equipment, sprinkler systems, and dry hydrants are tools that can limit risks and impacts of natural and manmade hazards.

Data Collection and Needs Assessments: Data collection and needs assessments can aid in gaining a better understanding of threats and allow planning for mitigation strategies accordingly. As resources are limited for this part of the planning process, additional data collection is likely to be an ongoing activity as resources become available.

Coordination: Responsibilities for mitigation strategies run across various county departments, local fire and ambulance departments, city and township governments, and a host of state and federal agencies. Ongoing coordination is an important tool to ensure resources are used efficiently. Coordination can also avoid duplication of efforts or prevent gaps that are created because of unclear

roles and responsibilities. The mitigation plan review process can function as a tool to have an ongoing discussion of roles, responsibilities, and opportunities for coordination.

Regional Cooperation: Counties and public safety services providers throughout the region often share similar challenges and concerns. In some cases, a regional approach may be warranted as a mitigation strategy in order to save resources. Mutual aid agreements are a tool already in use for a number of services. Needs assessments for fire and ambulance services and development of assistance for volunteer recruiting, training, and retention could benefit from a regional approach. Cooperation among counties could also help in lobbying for certain funding priorities that address concerns relating to challenges in service delivery in rural areas. Organizations such as FEMA Region 5 and the Minnesota Division of Homeland Security and Emergency Management (HSEM) through the Regional Program Director can offer tools and resources to assist in these cooperative efforts. Blue Earth County participates in multiple Mutual Aid Agreements with other jurisdictions. Additionally, the Quad Counties emergency management group meets and coordinates on regular intervals, including training and exercises.

Regulation: Regulation is an important mitigation tool for Blue Earth County. Regulation plays a vital role in land use, access to structures, and the protection of water resources and public health.

6.3 Continued Public Involvement

Continued public involvement is critical to the successful implementation of the Hazard Mitigation Plan. The Blue Earth County Emergency Management Director and the stakeholders group will continue to engage new public stakeholders in planning discussions and project implementation during the five-year cycle of this plan.

[The Blue Earth County HMP website provides opportunities for continued public involvement and feedback](#)

To seek continued public participation after the plan has been approved and during the five-year window of implementation for this plan, Blue Earth County will take the following measures:

- The Blue Earth County HMP website link will be posted on the Blue Earth County Emergency Management website. The website provides a PDF of the plan for download and an interactive experience for the public to understand the planning process, where county-specific vulnerabilities lie, national best practices, as well as a chance to submit feedback. Collected feedback will be reviewed during the five-year plan cycle and will be noted for future update of the plan or addressed as necessary.
- Following any major storms or natural disasters, Blue Earth County Emergency Management will seek to gather concerns and new ideas for mitigation from local residents to include in the next update of the plan. This may be done through public meetings, outreach via social media, or news releases via local media.
- Each community participating in the plan will be responsible for keeping their local government, schools, and community members updated and engaged in the implementation of their respective mitigation action charts (see Appendix H or the Blue Earth County HMP

website). Each respective jurisdiction will be required to report on the status of mitigation actions in their charts to the Blue Earth County EMD.

- Blue Earth County and its jurisdictions will use numerous means of public outreach to engage new public stakeholders in providing input on mitigation concerns, including those from underserved communities or socially vulnerable populations. Outreach methods may include presentations at county board, city council, or township board meetings, sharing information at special events, working with local schools and partner organizations, and posting information in areas that are used to communicate with the public (bulletin boards, websites, social media, and local media sources that communities use to inform and engage the public). As mitigation projects are implemented, jurisdictions will work to keep the public updated and engaged in those local efforts.
- To ensure an equitable outreach strategy continues after the plan is adopted, the planning team will continue to seek to engage with underserved and vulnerable populations during the next five years. This will vary across jurisdictions, as underserved or vulnerable populations will differ across the planning area. Methods of engagement will include those listed above, as well as working with partner agencies, local organizations, facilities, or community interest groups (e.g., schools, nursing homes, and civic groups) to conduct more targeted outreach or presentations to share information on hazard mitigation and solicit for feedback on concerns and ideas.

Appendices

Appendix A – References

Appendix B – Adopting Resolutions

Appendix C – Local Mitigation Survey Report

Appendix D – Plans & Programs in Place

Appendix E – Past Mitigation Action Review Status Report

Appendix F – Planning Team Meetings

Appendix G – Public Outreach & Engagement Documentation

Appendix H – Mitigation Actions by Jurisdiction

Appendix I – Plan Maintenance & Monitoring Worksheets

Appendix A – References

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Appendix B – Adopting Resolutions



Board of Commissioners Resolution
Adoption of the Blue Earth County 2025 Hazard Mitigation Plan

WHEREAS the Blue Earth County Board of Commissioners recognize the threat that natural hazards pose to people and property within Blue Earth County; and

WHEREAS the Blue Earth County has prepared a multi-hazard mitigation plan, hereby known as the Blue Earth County 2025 Hazard Mitigation Plan in accordance with federal laws, including the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended; the National Flood Insurance Act of 1968, as amended; and the National Dam Safety Program Act, as amended; and

WHEREAS the Blue Earth County 2025 Hazard Mitigation Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Blue Earth County from the impacts of future hazards and disasters; and

WHEREAS adoption by the Blue Earth County Board of Commissioners demonstrates its commitment to hazard mitigation and achieving the goals outlined in the Blue Earth County 2025 Hazard Mitigation Plan.

NOW THEREFORE, BE IT RESOLVED BY THE BLUE EARTH COUNTY BOARD OF COMMISSIONERS, MINNESOTA, THAT:

The Blue Earth County 2025 Hazard Mitigation Plan is hereby approved. While content related to Blue Earth County may require revisions to meet the plan approval requirements, changes occurring after adoption will not require Blue Earth County to re-adopt any further iterations of the plan. Subsequent plan updates following the approval period for this plan will require separate adoption resolutions.

Approved this 4th day of November, 2025.

A handwritten signature in black ink, appearing to read "Kip Bruender".

Kip Bruender, Board Chair

A handwritten signature in black ink, appearing to read "Robert W. Meyer".

Robert W. Meyer, County Administrator

Appendix C – Local Mitigation Survey Report

Blue Earth County

LOCAL MITIGATION SURVEY

As part of the Blue Earth County 2025 Hazard Mitigation Plan update, the **Local Mitigation Survey (LMS)** Form is used to gather jurisdictionally-specific information that is used to meet FEMA requirements and to support development of local mitigation actions.

Jurisdictions to Complete LMS:

This form is to be completed by representatives from **Blue Earth County** and the **cities of Amboy, Eagle Lake, Good Thunder, Lake Crystal, Madison Lake, Mankato, Mapleton, Minnesota Lake, North Mankato, Pemberton, St. Clair, Skyline, and Vernon Center**.

Additional stakeholders on the Blue Earth County HMP contact list are also invited to provide feedback to this form in the designated areas. (See “Other Stakeholders” section with each question).

LMS - Main Point of Contact (Name, Work Title, and Email)

Blue Earth County	Eric Weller, Emergency Management Director, Eric.Weller@blueearthcountymn.gov
City of Amboy	Patty Smith, City Administrator/Clerk-Treasurer patty@amboymn.com
City of Eagle Lake	Jennifer Bromeland, City Administrator jbromeland@eaglelakemn.com
City of Good Thunder	Sue Petty, City Clerk-Treasurer goodthundercityclerk@gmail.com
City of Lake Crystal	Angela Grafstrom, City Administrator cityadmin@lakecrystalmn.org
City of Madison Lake	Liz Wille, City Administrator lwille@madisonlakemn.gov
City of Mankato	Justin Neumann, Commander jneumann@mankatomn.gov
City of Mapleton	Sarah Moore, City Clerk s.moore@mapletonmn.gov
City of Minnesota Lake	Dawn Whitehead, City Clerk dawn@minnesotalakemn.gov
City of North Mankato	Ross Gullickson, Chief of Police/EM Director rgullickson@pd.ci.north-mankato.mn.us
City of Pemberton	Kathy Grinnel, City Clerk pemberton.city@mchsi.com
City of St. Clair	Stefanie Janike, City Clerk citystc@hickorytech.net
City of Skyline	Samantha Erickson, City Clerk skylineclerk@gmail.com
City of Vernon Center	Kara Hansen, City Clerk vcclerk18@gmail.com

Review: Prioritization of Hazards

During the Blue Earth County HMP Planning Team Meeting #1, participants determined the following natural hazards below to be of high, moderate, or low priority as they relate at a countywide level. Hazards noted as high or moderate priority are considered to be of greatest risk and concern, reflecting the frequency of past events, the probability of future events, and the severity of impacts that can occur. Hazards listed as a low priority are considered to be of lower risk and concern, reflecting an infrequency of past events and/or occurring without significant impacts to local vulnerabilities.

Prioritization of Hazards for 2025 Blue Earth County Update

Natural Hazards	Current Priority
Flooding	High
Winter Storms	High
Windstorms	High
Tornadoes	High
Landslides	High
Hailstorms	Moderate
Extreme Cold	Moderate
Extreme Heat	Moderate
Drought	Moderate
Land Subsidence	Moderate
Dam Failure	Moderate
Lightning	Low
Wildfire	Low

SURVEY QUESTIONS (1-15)

#1 - HAZARD IDENTIFICATION

Does the priority level listed for any of the hazards in the table above differ for your jurisdiction? If so, please describe how.

Blue Earth County	No changes, these are appropriate priority levels for the natural hazards that are of concern for Blue Earth County.
City of Amboy	No changes
City of Eagle Lake	The hazards listed closely align with those that are of concern to Eagle Lake, along with recognizing an increase in the frequency and intensity of extreme heat waves and warmer winters.
City of Good Thunder	No changes
City of Lake Crystal	No changes
City of Madison Lake	No changes
City of Mankato	The City of Mankato closely aligns with the hazard priorities identified in the Blue Earth County Hazard Mitigation Plan. Flooding is considered our highest priority due to the city's geographic location at the confluence of the Minnesota and Blue Earth Rivers and the history of significant flood

	events in recent years. Winter storms, windstorms, and tornadoes are also high-priority hazards because of their frequency and potential to disrupt transportation, utilities, and critical services—particularly impacting vulnerable populations. Moderate-priority hazards for Mankato include hail, lightning, drought, extreme temperatures, landslides, and dam failure. Lightning is classified as a moderate risk due to the increase in local lightning activity and its potential to disrupt the city’s growing inventory of electronic and sensitive infrastructure. Drought is a moderate concern because reduced river flows can limit the available water supply for the City’s Ranney well system, which draws from the Minnesota River. Landslides are also a moderate concern due to Mankato’s unique topography, which includes numerous ravines and steep embankments. These areas are prone to slope instability and erosion, which have led to damage of both public infrastructure and private property. While wildfire remains a low priority in the urban core, it is still monitored as part of overall hazard awareness. The city is also categorizing dam failure as a moderate priority for this planning cycle. Although the partial failure of the Rapidan Dam in 2024 heightened downstream safety concerns, ongoing mitigation planning—including dam removal and river restoration—are expected to reduce this risk in future years. Mankato anticipates that dam failure could be reprioritized as a lower threat in the next hazard mitigation cycle if planned efforts are completed successfully.
City of Mapleton	No Changes
City of Minnesota Lake	No Changes
City of North Mankato	No Changes.
City of Pemberton	No Changes
City of St. Clair	No Changes
City of Skyline	No Changes
City of Vernon Center	No changes

#2 - LOCAL VULNERABILITIES

Describe any specific community assets (infrastructure, systems, or populations) that are susceptible to damage or loss from natural hazard events in your jurisdiction. Consider how recent severe storms or other natural hazard events have caused damages or threatened life safety to people in your community. Please list the natural hazards and related local vulnerabilities separately.

Blue Earth County	Dam Failure: The Rapidan Dam in Blue Earth County experienced a partial failure on June 24, 2024, after the Blue Earth River overtopped the dam due to severe flooding. The failure occurred on the dam's west abutment, causing a new channel to erode around it and resulting in the loss of a
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	house and an Xcel Energy substation. The dam's condition was already rated as "poor" by the National Inventory of Dams. Blue Earth County has determined that the dam needs to be removed and is in the process of preliminary engineering and environmental documentation for dam removal including river restoration. The CR9 bridge adjacent to the dam has also been removed due to flood damages and a replacement structure is being designed with an estimated construction time frame from 2026-2027. Flooding: Blue Earth County Public Works/Parks Department is responsible for maintenance of 743 center lane miles of roads and 199 bridges, as well as parks, trails and boat ramps. All of these assets may be vulnerable to high rain events that cause localized flooding. Flooding/Landslides: Several homes are considered at-risk of failure along the Blue Earth River due to degradation and scour of the riverbank. A total of 6 properties have been submitted to FEMA for home-buyouts or relocation after the severe flooding event of June 2024. Flash Flooding: ● Flash flooding occurs in all areas of Blue Earth County. Highest areas of concern include South Bend Township, Mankato Township, the City of Skyline, and the City of Mankato. ● Flash floods involve a rapid rise in water level, high velocity, and large amounts of debris, which can lead to significant damage that includes scouring of new channels, the tearing out of trees, undermining of buildings, and undermining of infrastructure. The intensity of flash flooding is a function of the intensity 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. Flash flooding in the county can be destructive in steep watersheds and in narrow valleys and ravines. ● Jurisdictions of Concern: In recent years with the intense rainfall events, flash floods and subsequent erosion from ravines and bluffs has been particularly impactful to public and private infrastructure like roads and culverts. South Bend Township, Mankato. While this is an issue throughout the county, it has been particularly impactful in the areas with steeper slopes like Township, the City of Mankato, and the City of Skyline. When these areas initially developed, stormwater storage and infrastructure was either not planned or undersized. The combination of large rain events and no historic comprehensive stormwater planning with the large rain events, flash floods are causing erosion and sedimentation.
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	Examples of infrastructure impacted by erosion and sedimentation include roads, culverts, water lines, sanitary sewer lines and the flood control system in Mankato. Windstorms, Tornadoes: A coordinated approach is needed to identify where storm shelters or tornado safe rooms are needed and to evaluate whether new construction or a retrofit of facilities is possible. Finding funding for the implementation of such construction projects is also a barrier. Land Subsidence: Blue Earth County does experience sinkholes, and local jurisdictions should continue to be aware of and plan for development considerations in karst sensitive areas. Specifically, the western half of the county, particularly on flat hilltops between or adjacent to river valleys, is prone to sinkhole formation due to the presence of limestone and dolomite bedrock within 50 feet of the surface. A sinkhole was discovered in LeHillier during flood patrols in 2014 near the earthen dike along the Blue Earth River. Ponderosa Landfill: The Ponderosa Landfill has had a fire and flooding event in the last year causing issues with air quality and a release of “contact water” into public waters.
City of Amboy	Flooding: Heavy rainfall does overwhelm our undersized pipes. The EQ basin can full up at the WWTP and we have to bypass to relieve pressure on the system so residents will not have backup in their homes. By the end of 2025 will have engineers preliminary report for funding infrastructure needs for WWTP and storm sewers. Severe Storms (Power Outages): BENCO has mostly overhead power lines. Severe storm events can bring down power lines resulting in power outages.
City of Eagle Lake	Flooding: Eagle Lake has experienced flooding due to the increased frequency of flooding events and intensity of extreme precipitation. Drainage infrastructure is not always sufficient to adequately address larger precipitation events. Large tributaries to the City’s drainage infrastructure can overburden open channels, subsurface storm networks, and storage basins. When there are flooding events, it can overwhelm the City’s lift stations and potentially cause backups or overflows due to infiltration and inflow. We recently worked with a consultant to devise a stormwater and community resilience plan and have identified some solutions to help alleviate flooding impacts to residential properties and community assets such as parks and roadways, however, a lack of funding to complete the solutions is a barrier. Windstorms and Tornadoes: The mobile home park, slab-on-grade housing, and large multi-family housing complexes could be vulnerable during high-wind or tornado events despite having designated storm

	shelters on site. City Hall does not have an area designated as a storm shelter or safe room for community members and staff in the event of a windstorm or tornado. Winter Storms, Extreme Cold, and Heat: Snow and ice events can cause disruptions to services and utilities. Community members are most at risk when there are extended power outages during extreme cold and extreme heat.
City of Good Thunder	Flooding: We have low areas of town where flash flooding has overwhelmed the city's storm sewer system. There is also a low-area near the wastewater stabilization ponds. Winter Storms: Access to emergency services can be an issue and power outages can occur. The majority of our electric grid is overhead.
City of Lake Crystal	Flooding: Is a minor concern but mostly due to the overload of our sanitary sewer system. It was an issue last year with the extreme rain event. We continue to add stormwater drains to the community as we add projects and have plans to expand another stormwater pond near Jones Park. Wind storms/blizzards: Anything that makes the Xcel lines gallop. We have generators for some of the city buildings and a power plant, but our power plant cannot generate power for the whole town at once or long term so power outages are a concern. We have a new substation planned for 2027/28 and will use the old one for redundancy, but our power is still affected by the Xcel lines.
City of Madison Lake	Flooding - Flood events overload the sanitary collection system. We have a couple of lift stations for our sewer and storm sewer service. Extreme flooding can impact the lift stations and cause damage for our residents. Flooding overloads the sanitary collection system. We often have to bypass the system during large rainfall events in order to prevent backup flooding into residents' homes. Severe Storms (Power Outages) - A generator for the City Office and Public Works shop is necessary to be able to provide services even when power is down. Most electrical service in town is from overhead lines, susceptible to heavy ice/snowfalls, high winds, and tornadoes. Windstorms, Tornadoes - We have a large mobile home park and a campground that are susceptible to high winds and tornadic events.
City of Mankato	The City of Mankato faces a range of vulnerabilities associated with natural hazards, aging infrastructure, and the increasing severity of weather events. The city's position at the confluence of the Minnesota and Blue Earth Rivers, along with its extensive ravine system and dense infrastructure, creates complex risks that require proactive mitigation and planning.

	• Flooding: Low-lying neighborhoods, major roadways (such as Riverfront Drive and Highway 169), and riverfront businesses are at continual risk from high river levels and flash flooding. Repeated events have led to extended road closures, emergency evacuations, and damage to homes and small businesses. Many stormwater and retention ponds throughout the city have flooded during major events, contributing to local street flooding and overwhelming parts of the system. Additionally, concerns have been raised about the potential for floodwall compromise along the Minnesota and Blue Earth Rivers, which could cause significant downstream impacts to residential neighborhoods and commercial areas. • Dam Failure: The 2024 partial failure of the Rapidan Dam resulted in severe erosion, the destruction of a power substation, and heightened concerns about uncontrolled downstream surges. These surges could affect riverbanks, bridges, and critical infrastructure in Mankato. While mitigation work is underway, dam failure remains a moderate concern for this planning period. • Landslides and Slope Failures: Numerous ravines throughout the city, such as Indian Creek, Viking Drive, and Thompson Ravine Road, have experienced slope instability and erosion—leading to damage of public infrastructure and private property. Heavy rainfall events increase this risk significantly, making landslides a moderate but growing hazard. • Windstorms and Tornadoes: Mobile home parks, slab-on-grade housing, public housing complexes, and campgrounds without storm shelters are particularly vulnerable during high-wind or tornado events. The Land of Memories campground, a popular public space, currently lacks a storm shelter—something the city is actively working to address. Overhead power lines across the city are frequently impacted during windstorms, leading to outages that affect homes, businesses, and public safety services. • Winter Storms, Extreme Cold, and Heat: Snow and ice events cause widespread disruptions to transportation, services, and utilities. Elderly, low-income, and homeless populations are most at risk during cold weather events, particularly during curtailments by Xcel Energy, which can leave residents without power for up to four hours. Extreme heat has also become an increasing concern, straining the electrical grid and increasing the risk of infrastructure failure. • Electrical Grid and Power Infrastructure: Much of the city’s electrical infrastructure is above ground and susceptible to damage during wind or ice events. In addition, the underground electrical grid in the downtown core is already at capacity, creating concerns about reliability and the ability to accommodate future growth or emergency demand.
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	• Wastewater and Sanitary Systems: Heavy rain and high river levels have led to increased flows into the wastewater system, at times requiring bypasses to prevent flooding or backup. These challenges don't just affect Mankato residents—Mankato provides regional wastewater treatment services to surrounding communities, compounding the risk during extreme events. • Stormwater Infrastructure and Retention Ponds: Many of Mankato's stormwater holding and retention ponds are vulnerable during heavy rainfall or backflow events. When overtopped, these ponds can contribute to street flooding and property damage, particularly in areas with limited overflow capacity or downstream restrictions. • Flood Control Stations: The City's flood control stations rely on aging electrical systems, many of which are no longer supported by replacement parts. These stations are critical during high water events and any power failure—especially during flooding—could jeopardize their operation. • Critical Infrastructure: Key infrastructure such as bridges, storm sewers, wastewater lift stations, and aging power equipment remain vulnerable. While long-term replacement projects are planned, interim solutions are necessary to maintain operational capacity during severe weather events and emergencies.
City of Mapleton	Severe Storms (Power Outages): Most electrical service in town is from overhead lines, which are susceptible to heavy ice/snowfalls, high winds, and tornadoes.
City of Minnesota Lake	Flooding - Flood events overload the sanitary collection system. We have a couple of lift stations for our sewer and storm sewer service. Extreme flooding can impact this lift station and cause damage for our residents. Flooding overloads the sanitary collection system. We often have to bypass the system in order to prevent backup flooding into residents' homes. Severe Storms (Power Outages) - A generator for the City Office and Public Works shop is necessary to be able to provide services even when power is down. Most electrical service in town is from overhead lines, susceptible to heavy ice/snowfalls, high winds, and tornadoes.
City of North Mankato	Flooding - We have two stormwater lift stations in the levee system (Sherman St and Wheeler Ave) that are outdated/obsolete. A third internal lift station that controls the water level in Spring Lake. These stations are 50+ years old and in urgent need of rehabilitation. These three stations are required to keep lower North Mankato free from flooding. Flooding – The city has a community pool that is susceptible to high ground water levels.

	Windstorms, Tornadoes, Heavy Snow or Ice Storms - We have two Xcel Energy power lines that span the Minnesota River in two locations that power lower North Mankato. These lines are prone to failure from severe weather events like windstorms, tornadoes, heavy snow, or ice storms. Windstorms, Tornadoes - We have two large mobile home parks in North Mankato that are susceptible to high wind or tornadic events.
City of Pemberton	Flooding: We do currently have a back up generator to handle the power needs of our lift station. Without fuel, that generator would not be able to power the two pumps at our lift station. Windstorms, Tornadoes, Heavy Snow or Ice Storms can leave our City without power. We have a generator for our waste water lift station, but do not have back-up power for the City Hall, Fire Station, or the well pump. Residents are on their own during electrical outages and the water will not pump unless we can obtain a generator for the well pump house. Windstorms, Tornadoes: The city's warning siren is old and needs to be updated.
City of St. Clair	Flooding: We are the only city on the Le Sueur River and have experienced several flooding events in recent years. We expect this to continue to be a problem due to larger rain events and too many large farms with tiling that drains into the river. We have done mitigation projects on our WWTP and Lift Station, but residential flooding still remains a huge concern. During heavy rain events the city experiences heavy I & I introduced into our sanitary sewer system. Severe Storms (Power Outages): Windstorms, Tornadoes, Heavy Snow or Ice Storms can leave our city without power. We only have one electric line coming into the city. We have generators for our water plant and sewer plant, but do not have back-up power for City Hall or the Fire Station. Residents are on their own during electrical outages. The city only has one transmission line into town from the electrical contractor. Most lines are overhead which leads to an increased vulnerability. Windstorms, Tornadoes: The city has a warning siren that is old and need to be updated.
City of Skyline	Flooding: We have undersized tile lines, high water table, basement flooding, street flooding, ravine washouts. In relation to Skyline's localized flooding, particularly homeowner basement flooding, there are a number of issues that contribute to these conditions. Stormwater runoff is increased when impervious surface areas increase. Groundwater levels are also impacted by vegetation - or lack thereof, particularly high evapo-transpiring plants like trees. Severe Storms (Power Outages): The majority of our electrical service is above ground. We do not have backup generator power for city's pump house, water tower, City Hall, or lift stations.

	Evacuation: One way in and out of Skyline creates a vulnerability in emergency.
City of Vernon Center	Flooding: The city has no lift stations for the WWTP. We have newer sewer and water mains, but not tested for flooding yet. We have had some river erosion by the WWTP. Severe Storms (Power Outages): Our electrical system is mostly overhead, which can result in power outages due to downed power lines from severe storms.
OTHER STAKEHOLDERS	Minnesota State Mankato: The western and southern campus property boundaries converge with environmentally sensitive ravine drainages leading to the Minnesota River. When we experience significant 10 yr...50 yr ...100 yr rain events exceeding 4-6" in a few hours we experience overtopping of rain water, causing degradation to numerous ravines as well as localized campus flooding into critical infrastructure including the campus boiler plant and chiller building, and residential life housing.

#3 - REDUCTION IN VULNERABILITY

In the last 5 years, has your jurisdiction taken any actions to reduce vulnerability against future severe weather or disaster events? Please describe.

Blue Earth County	Rapidan Dam - Blue Earth County has begun the process of seeking to surrender their Federal Energy Regulatory Commission (FERC) licensure and subsequent removal of the Rapidan Dam including options for river restoration. The CR 9 bridge has been removed and a replacement bridge is in the planning stages. The Blue Earth County Long Range Transportation Plan (2023) states that "The County should continue monitoring and implementing emerging infrastructure fortification practices as practicable. Fortification methods and tools include low cost/high value practices such as employing riprap and other stabilizing practices to protect shoreline structures against scour, water, and ice erosion. The County should continue to monitor priority areas in which to armor shorelines, streambeds, bridge abutments, foundational infrastructure supports and other shoreline structures." with respect to the County road and bridge infrastructure transportation network. Property Acquisition Projects – Blue Earth County Emergency Management has actively been working with HSEM & FEMA on plans for buyouts of several homes that are at risk of failure with DR-4797 funding in 2025 or 2026. Warning Sirens - In 2024, Blue Earth County received a grant to place tornado sirens at Bray Park in Madison Lake and Daly Park in Mapleton.
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	Actively Eroding Bluffs - In 2023, Blue Earth County added a definition of “Actively Eroding Bluff” and standards for when a geotechnical evaluation is required for development activity in proximity to an actively eroding bluff. The Ponderosa Landfill has put together an emergency response kit to respond to fire events in the landfill. They have also been working with their consulting firm to ensure all site improvements factor in stormwater runoff to ensure there are no future releases of “contact water”.
City of Amboy	Replaced the tornado siren with a new siren in 2025 and relocated to the fire station, which is more centrally located than the water tower. Added a portable generator and extra trash pump and new hoses to help with flooding issues in the City (now have 2 pumps/hoses ready to go). Did I/I from 2016-2019 and now again starting in 2024. Mitigating items found.
City of Eagle Lake	Eagle Lake has added a generator to City Hall, which is our designated Emergency Operations Center. A generator was also added at the City’s main lift station and wells. This is important in the event of an extended power outage. A SCADA system was also installed to help with real-time monitoring and control, early detection and alarms if abnormal operating conditions arise. One aging outdoor siren has been replaced. We’ve added an app notification system to alert residents to important information such as drinking water advisory, etc. A stormwater and community resilience plan was recently completed, however, a lack of funding is a barrier to implementing solutions identified during the process.
City of Good Thunder	Added generators at wastewater ponds. Have existing generators at the fire station and wellhouse. storm sewer upgrades in parts of town
City of Lake Crystal	We added a generator to our fire/ambulance garage and a generator to city hall. Continue with utility upgrades (5 & 10 year Capital Improvement Plans). Storm water plan expansion.
City of Madison Lake	Replaced aging infrastructure during Highway 60 Project and local road projects. Tornados: Repaired siren at North Duck Lake and replaced siren at Point Pleasant. Also worked with BEC to install a new siren at Bray Park Campground. We have generators at City Hall and back-up generators for our lift stations. Prioritizing CIP projects based on aging infrastructure.

City of Mankato	Over the past five years, the City of Mankato has implemented several actions to reduce vulnerability to hazards and enhance community resilience: ● Stormwater Improvements: Expanded stormwater drainage capacity in identified neighborhoods to reduce localized flooding and prevent sanitary sewer backups. ● Riverbank Stabilization: Armored riverbanks in Land of Memories Park (to protect Well 15) and near the Water Resource Recovery Facility (WRRF) to reduce erosion risks during high water events. ● Infrastructure Protection: Rebuilt aging retaining walls along Division Street to prevent slope failure and protect adjacent infrastructure. ● Highway 169 Elevation: Partnered with MnDOT on the Highway 169 flood mitigation project, elevating a critical transportation corridor above the 100-year flood level to improve emergency response and evacuation access. ● Lift Station Installation: Installed a new lift station in the Viking Drive area to improve wastewater handling and reduce risk of system backups during heavy rainfall. ● Power Resiliency: Upgraded backup power generators at essential city facilities, including the water treatment plant, WRRF, and emergency operations locations. ● Public Warning Systems: Initiated a project in collaboration with Blue Earth County and the City of North Mankato to upgrade and modernize outdoor warning sirens throughout the community. ● Education and Public Awareness: Increased outreach and public preparedness messaging through a multi-pronged approach that includes the Communications and Engagement Team, public safety staff, and other departmental specialists. The City uses platforms like CodeRED, official social media channels, and community meetings to engage residents on safety topics, hazard awareness, and emergency readiness. ● Mitigation Planning: Collaborated with Blue Earth County and FEMA on mitigation planning strategies, particularly for high-risk floodplain properties and areas prone to repeat damage.
City of Mapleton	The City of Mapleton has added a second outdoor civil defense siren in the past 5 years.

City of Minnesota Lake	We are currently working with an engineering firm to determine the best route of updating aging water/sewer/sanitary systems. Some systems are over 50 yrs old. The City of Minnesota Lake has contracted with a company to camera/flush sanitary lines, taking a different section of town for 5 years. Our Public Works Dept works with the Wells Public Utilities Vac truck to clear out debris from our storm sewers in the spring and fall. Along with the vac, Public Works sweeps the streets in the spring, fall or when necessary. We installed, through a matching grant through MN Dept of Health, a generator at the water plant in case of power outages. A matching grant was also used to purchase monitoring software for the water tower and plant as well as the lift stations.
City of North Mankato	The City of North Mankato has replaced two outdoor civil defense sirens in the past 5 years. We are also converting to an octagonal warning system that activates sirens based on specific threat areas. The city has recently begun work on lower North Mankato drainage improvement and is embarking on a comprehensive drainage and flood protection study, which will provide design information for major rehab of the flood protection system, particularly for obsolete lift stations. The city has adopted a NIXLE warning system for emergency communication messaging. Rock scaling performed along Judson Bottom Road to reduce risk of rock fall/slides thus impacting traffic flow. The city has begun a study to eliminate the need for temporary earthen levees at Lee Blvd. and Lookout Dr. during major flood events. Recently completed USACE flood protection system inspection. This is done every 5 years. We make the Police Department annex available for emergency shelter during extreme cold/heat events.
City of Pemberton	We are currently working with an engineering firm to determine the best route of updating aging water/sewer/sanitary systems. We have been working with Blue Earth County Finance for funding on this project as well. The City of Pemberton has a contractor clear out debris from our storm sewers in the spring and fall. In July 2025 the city replaced one of the two pumps at our lift station that was struggling to handle the demands of our town.
City of St. Clair	We put a berm around our WWTP and built a cement wall around our lift station. We are currently doing a large street project which includes new watermain, sewer and storm sewer. Hoping to reduce I & I and increase our stormwater capacity. The school has added a storm shelter.

City of Skyline	The city has made revisions to the pump house and equipment, and replaced the water tower. We have also made updates to the city's tornado siren.
City of Vernon Center	In 2020 a generator was installed for City Hall, WWTP, and Fire Hall to keep FD going and keep the town supplied with water. The local utility (BENCO) did minor improvements. 2022-2025 collection system sealed, new roads, storm sewer & water and sewer mains installed. Berm rip rock reinforced at WWTP.
OTHER STAKEHOLDERS	Minnesota State Mankato: MSU has invested significant financial resources into storm water mitigation plans consisting of but not limited to installation of storm water holding ponds, below grade water retention, additional curb and gutter, upsizing of underground stormwater piping capacity etc. With all these improvements we are able to maintain during normal rain events. When we experience significant 10 yr...50 yr ...100 yr rain events exceeding 4-6" in a few hours we experience overtopping of rain water, causing degradation to numerous ravines as well as localized campus flooding into critical infrastructure including the campus boiler plant and chiller building, and residential life housing.

#4 – INCREASE IN VULNERABILITY

In the last 5 years, has your jurisdiction experienced an increase in new development? Has this new development created new vulnerabilities to natural hazards in your community? Please describe.

Blue Earth County	Blue Earth County has had development of 108 new dwellings in the last 5 years. This is down from 148 dwellings in the previous 5 year period. The development is generally in low density areas (one house per 40 acres) or infill in existing subdivisions. There are no new vulnerabilities as a result of this development. With the increase in products available to the general public that are constructed with embedded batteries it has dramatically increased the risk of landfill fires. We are also constructing new cells within the landfill at a faster rate than we ever have. Averaging every 2 years vs. 5 years previously. Mostly due to population increases leading to far more waste being deposited in the landfill.
City of Amboy	The city has had development with a new Dollar General. South Street Extension and Grover Transport expansion (last 2 are just starting and should be completed in 2026). Storm ponds will be included in both areas to help with excessive rainwater.
City of Eagle Lake	Eagle Lake has added 163 new housing units and 3 commercial buildings during the time period of 2021-2025. New development creates more runoff, however, the city has an erosion and sediment control ordinance and MS4 standards to help reduce erosion from land disturbance activities.
City of Good Thunder	No increase in new developments

City of Lake Crystal	The city has added 36 new housing units in the last five years. Much of our new construction does not have a basement, so in tornado conditions, we will have more people seeking shelter. We also annexed about 218 acres of land which will require additional snowplowing in snow conditions. Will need more storm pond retention.
City of Madison Lake	The City will have a new Dollar General Market by the end of 2025. That water should be handled by the surface water management plan and retention pond. The city has added 76 new housing units in the last five years, including several patio homes and three 6--plex buildings, so in tornado watch/warning scenarios we may potentially have many more people seeking shelter. The new construction happening in our Tomahawk and Three Lakes subdivisions will increase the flow of water to an area that already deals with flooding in large rainfall events. We will need to discuss raising Co Rd 44 when that project happens and upsize culverts to aid in mitigation efforts.
City of Mankato	New residential and multifamily developments over the past five years—particularly slab-on-grade construction without basements—have increased the number of residents without access to below-grade shelter during tornadoes or high-wind events. Population growth and the addition of impervious surfaces have contributed to increased stormwater runoff, placing added strain on the City’s stormwater infrastructure during periods of heavy rainfall. Continued development near river corridors and bluff areas has also raised long-term exposure to flood risks, erosion, and slope instability. In addition, the installation of extensive agricultural field drainage (e.g., tile drainage) in areas outside city limits over the past 10–20 years has significantly increased the volume and speed of water flowing into Mankato from upstream rural areas. This added flow during major precipitation events has further stressed stormwater systems and increased the potential for downstream flooding and erosion. To help manage and reduce vulnerabilities associated with development, the City of Mankato utilizes a Site Plan Review Committee. This interdepartmental committee evaluates proposed commercial, industrial, and residential developments to ensure alignment with zoning regulations, floodplain management requirements, and infrastructure capacity. The committee makes formal recommendations on items such as building permits, variances, conditional use permits, and subdivision applications to

	help mitigate development-related risks and promote safe, sustainable growth.
City of Mapleton	The City of Mapleton has added approximately 20 new homes in the last 5 years that our current infrastructure can handle. The new school was added and they added their own retention pond. We have no increase in vulnerability due to these new developments.
City of Minnesota Lake	No. We have not had any new development or increase in vulnerability.
City of North Mankato	Yes. Within the past 5 years, the city has issued building permits for many attached townhome dwellings and a few apartments. As these buildings do not have basements, occupants do not have below grade spaces during high wind or tornado events. All new developments in the past 5 years have been professionally designed by civil engineers to address stormwater runoff and detention.
City of Pemberton	We have not had any new development or increase in vulnerability.
City of St. Clair	We have not had any new development or increase in vulnerability.
City of Skyline	The city has had no new development; we are landlocked.
City of Vernon Center	We have not had any new development or increase in vulnerability.
OTHER STAKEHOLDERS	

#5 - PUBLIC OUTREACH

How does your jurisdiction share information with community members about severe weather events and personal preparedness? If this is not something that is currently done, how could it be done in the future?

Blue Earth County	Blue Earth County helps to promote and participate in the MN Homeland Security & Emergency Management's "Severe Weather Awareness Week" held in April of each year as well as "Winter Hazard Awareness Week" held in November of each year. The Blue Earth County Emergency Management website provides extensive links and resources for the public on severe weather awareness and personal preparedness. Both the County and Sheriff's Office Facebook pages are used to push out information on a regular basis.
City of Amboy	We post alerts through our website for anyone that has signed up for text or email notifications. We also send out notices with our quarterly newsletter.
City of Eagle Lake	In recent years, Eagle Lake has included information about the Code Red system in quarterly newsletters and periodic communications. We share information from Blue Earth County's Facebook page and website during Severe Weather Awareness Week and Winter Hazard Awareness Week with our community members. GoGOV, a notification app, has been set up and in place to help alert community members of important information in the event of an emergency.
City of Good Thunder	Post alerts on our website, residents who signed up for notifications receive the alerts. We also post on our Facebook page
City of Lake Crystal	We have used the Code Red system, but mostly we reach the community with our website and Facebook page. In some situations, staff have gone

	door to door. We try to include preventive and safety information in our monthly newsletter. EMS & Fire do multiple PR events during the year. Winter weather talks at the elementary school each fall.
City of Madison Lake	The City of Madison Lake shares the Code Red resource via website and Facebook. We also communicate severe weather announcements via Facebook and text alerts. Our snow emergency notifications are done via our website, Facebook, text alerts, local radio and television stations.
City of Mankato	The City of Mankato uses a layered, multi-platform approach to share information about severe weather events and promote personal preparedness among residents: • Digital Channels: The City's website, social media platforms (Facebook, Instagram, X), CodeRED emergency alerts, and email newsletters are used to distribute timely warnings and preparedness tips. • Traditional Media: During significant weather events, the city coordinates with local radio and television stations to relay urgent updates and safety guidance. • Community Engagement: Staff conduct outreach at public events, neighborhood meetings, and local schools. The City also partners with Minnesota State University to connect with the student population, especially during seasonal weather transitions. • Seasonal Campaigns: Mankato actively participates in Minnesota's Severe Weather Awareness Week (April) and Winter Hazard Awareness Week (November), sharing multilingual materials to ensure messages reach our diverse community. • Outdoor Warning Sirens: The City maintains a system of outdoor warning sirens tested regularly to ensure functionality. These sirens are a key component of Mankato's layered notification system and serve as an essential warning tool for residents during tornadoes and high wind events. Public outreach efforts are coordinated in part by the City's Communications and Engagement team, who work across departments to ensure consistent, timely, and inclusive messaging.
City of Mapleton	The City of Mapleton posts information on the city's social media page as well as on the Police Department social media page. We utilize our website to send email and text alerts.
City of Minnesota Lake	The City of Minnesota Lake posts information on the city's social media page as well as on the Police Department social media page, as well as uses Email to share information with the public. We are also exploring a new text service for the community.
City of North Mankato	The City of North Mankato has shared resources during severe weather events and information during Severe Weather Awareness week. This information and announcements have been shared through our weekly e-newsletter, monthly utility bill, social media posts (Facebook, Instagram, X), bi-annual print newsletter, press releases, flyers at City Hall, and on our website.

City of Pemberton	The City of Pemberton communicates to its residents through public postings, flyers/newsletters included with utility billings, online City website, and social media sites.
City of St. Clair	Notifications are put out on the city website and City Facebook page. We have also gone door to door with flyers during emergency events.
City of Skyline	No current consistent method. Use of alert system through website, emails, informal city Facebook page, postings to website. We need a public awareness campaign.
City of Vernon Center	We use the city website, tornado siren, and iPAWS, local TV & radio stations. City uses website to encourage residents to sign up for updates.
OTHER STAKEHOLDERS	

#6 - EMERGENCY NOTIFICATIONS

Does your jurisdiction encourage residents to sign up for the county's emergency notification system and/or a local emergency alert system? If yes, how? If this not something that is currently done, how could it be done in the future?

Blue Earth County	Blue Earth County uses the CodeRED emergency notification system. Information about the CodeRED and a link to sign in are available on the Sheriff's Office website. Blue Earth County Emergency Management encourages residents to sign up with reminders throughout the year using our social media pages as well as during Severe Weather Awareness Week. Local municipalities are encouraged to also promote sign up for the countywide CodeRED system.
City of Amboy	The city website has a link to Blue Earth County so they can sign up for Code Red.
City of Eagle Lake	In recent years, Eagle Lake has included information about the Code Red system in quarterly newsletters and periodic communications. We share information from Blue Earth County's Facebook page and website during Severe Weather Awareness Week and Winter Hazard Awareness Week with our community members. GoGOV, a notification app, has been set up and in place to help alert community members of important information in the event of an emergency.
City of Good Thunder	Link on the city's website to Blue Earth County website where they can sign up for Code Red
City of Lake Crystal	We have in the past, but we should repost on FB or the website, or add to the newsletter, a reminder for people to sign up for CodeRED.
City of Madison Lake	The city website has a link to Blue Earth County so they can sign up for Code Red. We can also re-share this via Facebook and text alert.
City of Mankato	The City of Mankato actively promotes and utilizes the Blue Earth County CodeRED system to deliver emergency notifications to residents, businesses, and visitors. The city encourages sign-ups through utility bill inserts, social media campaigns, e-newsletters, and in-person outreach at community events.

	Recognizing the importance of reaching transient and vulnerable populations, the City coordinates with Minnesota State University, area landlords, and major employers to encourage enrollment in CodeRED among students and seasonal workers. The city also leverages its Communications and Engagement team to amplify messaging during severe weather or emergencies. This includes issuing alerts through social media, the City's website, and collaboration with local media outlets. Outdoor warning sirens serve as a backup to digital alerts, especially in situations requiring immediate action such as tornado warnings. These sirens are tested monthly and located strategically throughout the community for maximum reach. Together, these notification methods support a comprehensive and redundant system that enhances public awareness and response during emergencies.
City of Mapleton	We have in the past, but not recently.
City of Minnesota Lake	No, we have not done this previously. However, we will be adding information to our billing invoice and City webpage over the next couple of months and can add information about signing up for CodeRED.
City of North Mankato	The City of North Mankato has not previously encouraged residents to sign up for the county's CodeRED emergency notification system, but we do encourage residents to sign up for our emergency notification system, Nixle. We have included information about our Nixle system and how to sign up through our weekly e-newsletter, monthly utility bill, social media posts (Facebook, Instagram, X), bi-annual print newsletter, press releases, flyers at City Hall, and on our website.
City of Pemberton	We do currently have a link on our City's website that directs our residents to sign up for Blue Earth County Alerts and Waseca County Alerts.
City of St. Clair	The city uses its website, Facebook, door to door, schools alerting system (Honeywell), Code Red, and local media.
City of Skyline	We will encourage residents to sign up and are recommended through the newsletter. Start an awareness campaign.
City of Vernon Center	We have information on the county's CODERED system on our website and provide a link to the Blue Earth County website for people to sign up. We also encourage residents to sign up in the city newsletter.
OTHER STAKEHOLDERS	

#7 - BUILDING CODES

Has your jurisdiction adopted the Minnesota State Building Code? Please clearly answer yes or no and provide supporting detail. IF YES, please describe how it is enforced. IF NO, please describe if there are other building codes or permitting processes in place to reduce the risk to future development.

Blue Earth County	No, Blue Earth County has not adopted the MN State Building Code. Blue Earth County Property & Environmental Resources Department oversees the requirements for construction permits on properties located outside of city limits for the following: Building a structure, including agricultural structures; moving a structure; adding onto an existing structure, including decks; or making a structural alteration, including change of roof lines and excavation for footings, foundations, slabs, basements, or other parts of a structure. All townships in Blue Earth County (except Lime Township and Mankato Township) must have permits issued through the county's Property and Environmental Resources Department. Typical structure maintenance like re-shingling, re-siding, or replacing windows and doors does not require a construction permit from Blue Earth County. Residents of city municipalities are advised to consult their local zoning authority for permit requirements for these activities.
City of Amboy	No. Our Planning Commission said we are too small for a cost to do that. The City of Amboy Planning Commission and City Council review and approve building permits. No permits are required for roofing, siding, windows or inside work. Permits are needed for fences, decks, stairs, garages, additions and anything that would change the "footprint" of a current structure. All contractors are expected to follow MN Building codes. If someone appears to build something not up to code, our City Council can request a building inspection.
City of Eagle Lake	Yes, the City of Eagle Lake has adopted the MN State Building Code and contracts with licensed building officials. City staff review and approve all zoning permits while the building official approves all permits and inspections as required by the code.
City of Good Thunder	No. Our Maintenance Supervisor reviews zoning permits and follows up if there are questions. We require permits for additions, garages, decks, anything that changes the outside appearance or footprint. If there is a question regarding a building, the council reviews and requests an inspection if needed
City of Lake Crystal	The city of Lake Crystal requires the submission and approval of permits to construct or alter a building, which must be accompanied by a detailed plan drawn to scale and location. Inspections are required upon completion by our contracted building official. The city charges double for work done without a permit.
City of Madison Lake	Yes, the City of Madison Lake has adopted the MN State Building Code which is enforced by our Building Official/Building Inspector. Additionally, the city has adopted City Code zoning requirements for new development which are enforced by Building Inspectors and the City's Zoning Administrator.
City of Mankato	Yes. Mankato has adopted and enforces the Minnesota State Building Code. The City's Building Inspections Division reviews all new development, additions, and significant remodels to ensure compliance with both state code and local zoning, including floodplain elevation standards.

	In addition to permitting and inspections, proposed developments are reviewed by the City's Site Plan Review Committee, which evaluates projects for safety, infrastructure impact, and hazard mitigation considerations. Enforcement is maintained through a formal approval and inspection process, with penalties for non-compliance.
City of Mapleton	No, the city does not adopt and enforce the MN State Building Code. The City of Mapleton enforces the city's zoning ordinance and requires building permits for new construction. After the Zoning Board approves a permit, it must go to the City Council for approval. The Zoning Board and the Mapleton City Council approve building permits.
City of Minnesota Lake	No, the City of Minnesota Lake does adopt and enforce the MN State Building Code. The city does have a permitting process and an oversight Planning Committee that reviews permits that fall outside of current city construction code. We do not have a formal building inspector; however, a City Council member is appointed to review permits and visit building sites when necessary. The city has had no development in the last 10 years.
City of North Mankato	Yes, the City of North Mankato has adopted the MN State Building Code which is enforced by a Building Official and a Building Inspector. Additionally, the city has adopted City Code zoning requirements for new development which are enforced by Building Inspectors and the Community Development Department.
City of Pemberton	Yes, the City of Pemberton has adopted the MN State Building Code which is enforced by a Building Official and Building Inspector.
City of St. Clair	Yes. The City of St. Clair adopted the MN State Building Code in 2008. The city requires a Building Permit for almost all building and construction projects in the city. Inspections are conducted by the City's Building Official.
City of Skyline	No. We have ordinances that provide general rules such as setbacks. We ask residents to provide information about projects prior to starting. We follow the MN State Electrical Permit.
City of Vernon Center	No. The city follows its own zoning ordinance. We have a city Building Permits and Inspections Department which is responsible for permitting all construction and conducting inspections of all construction-related permits as well as issuance of Certificates of Occupancy, Fire Prevention, and Special Events.
OTHER STAKEHOLDERS	

#8 - OTHER PLANS AND POLICIES

What other plans or policies does your jurisdiction have in place to help mitigate against the impacts of flooding and other natural hazards to future development? Please describe.

Blue Earth County	Blue Earth County has the following plans and policies in place that help to support mitigation for natural hazards: Emergency Operations Plan – updated regularly for All-Hazards
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	Blue Earth County Code of Ordinances, which includes: Floodplain Ordinance – Chapter 8 Shoreland Zoning Ordinance – Chapter 14 Subdivision Ordinance – Chapter 24 Article VIII Buffer Ordinance – BEC SWCD oversees compliance & tracking Participation in the National Flood Insurance Program, date of entry 11/24/1972. Blue Earth County has adopted the current Digital Flood Insurance Rate Map, effective 2/22/2024. Forest Management Plan - BEC participates in Class 2c Managed Forest Land program BEC Water Management Plan 2017-2026 Burning Permits are required from the BEC Sheriff's Office Blue Earth County Public Works – 5-Year Transportation Improvement Plan (2024-2028) Blue Earth County Public Works - Long Range Transportation Plan (2023) Blue Earth County is part of the West Central Initiative's MN Region 4 Climate Action Plan, July 2023 Blue Earth County Hazard Mitigation Plan (updated every 5 years) The Blue Earth County Greenprint, a land use plan, includes Appendix F – Greenprint Priority Areas, which addresses sensitive areas of karst. The Greenprint mentions sinkholes as a feature that shoreline buffers can help protect. The Geologic Atlas of Blue Earth County, Part B, 2016, also shows areas with shallow depth to bedrock and karst. Blue Earth County participates in several area watershed plans (One Watershed, One Plan) 1W1P's: Minnesota River-Mankato 1W1P, Middle MN Cottonwood River 1w1p, Le Sueur River-Mankato 1W1P, Blue Earth River 1W1P, Watonwan River 1W1P, Canon River 1W1P.
City of Amboy	Point of Sale with MPCA - sewer connection check. The Planning Commission reviews zoning permit applications. The city's Code Enforcement Division enforces the city code.
City of Eagle Lake	The City of Eagle Lake enforces our City Code. The city also enforces an Erosion and Sediment Control Permit. Ordinance 18.020 requires that an erosion and sediment control permit be obtained prior to any construction activity disturbing one acre or more of soil or less than one acre of soil if that activity is part of a larger "common plan of development or sale" that covers more than one acre. In order to obtain a permit, an erosion and sediment control plan conforming to the standards set forth by city code, shall be submitted, reviewed and approved by the City of Eagle Lake. The

	city also has a new floodplain ordinance, adopted 2/5/2024 and made effective 2/8/2024.
City of Good Thunder	The city has Land Use Zoning ordinances in place.
City of Lake Crystal	We have actively participated in the 1W1P process and have included a stormwater pond expansion in the funding plan. We have our sirens tested monthly. Planning Commission ordinances. 5 & 10 year Capital Improvement Plan (CIP).
City of Madison Lake	Madison Lake has multiple plans and policies in place that support mitigation against natural hazards: ● Comprehensive Plan guiding safe development, infrastructure investment, and land use. ● Floodplain Ordinance aligned with NFIP standards. ● Stormwater Management Plan requiring detention, infiltration, and erosion control in developments. ● Wellhead Protection Plan safeguarding drinking water supplies. ● Emergency Operations Plan (EOP) providing all-hazards guidance for response and recovery. ● Capital Improvement Plan (CIP) – a robust tool used to prioritize infrastructure improvements that reduce community vulnerability and improve system resilience. ● Participation in watershed partnerships
City of Mankato	Mankato has multiple plans and policies in place that support mitigation against natural hazards: ● Comprehensive Plan guiding safe development, infrastructure investment, and land use. ● Floodplain Ordinance aligned with NFIP standards. ● Stormwater Management Plan requiring detention, infiltration, and erosion control in developments. ● Wellhead Protection Plan safeguarding drinking water supplies. ● Emergency Operations Plan (EOP) providing all-hazards guidance for response and recovery. ● Climate Action Plan adopted to help the City proactively identify and address future climate-related hazards and impacts. ● Capital Improvement Plan (CIP) – a robust tool used to prioritize infrastructure improvements that reduce community vulnerability and improve system resilience. ● Participation in watershed partnerships (1W1P) for regional water resource and flood mitigation planning. ● Dedicated environmental staff, including an Environmental Sustainability Coordinator and Environmental Compliance Specialist, support hazard mitigation through MS4 stormwater compliance and sustainability initiatives.

	Together, these plans and staffing resources help reduce long-term vulnerabilities, guide responsible development, and protect critical infrastructure and community well-being.
City of Mapleton	The City of Mapleton has a Wellhead Protection Plan in place, zoning restrictions, as well as a Flood Plain Ordinance.
City of Minnesota Lake	The City of Minnesota Lake has a Wellhead Protection Plan in place, zoning restrictions, and follows guidance from our city engineer. We are working with engineers to develop an infrastructure plan. The city does have a Comprehensive Plan, but may need updating. We also have the City of Minnesota Lake Comprehensive Municipal Plan (See Appendix C, City Addendums - Faribault County 2015-2035 Comprehensive Plan).
City of North Mankato	The City of North Mankato's Public Works Dept. and Community Development Dept/ enforce our floodplain requirements and bluff/ravine land regulations. We have a 20-year Comprehensive Plan that guides the physical growth and development of our city. Our Public Works Department administers a Wellhead protection plan to prevent the water supply from being contaminated. We are currently working on a Climate Action Plan which will be completed in 2025. Lastly, upon sale of any residential dwelling within the city, Building Inspectors conduct an Inflow and Infiltration inspection to ensure sump pump water is being discharged properly.
City of Pemberton	The City of Pemberton has an Emergency Management Plan in place.
City of St. Clair	The city has an updated floodplain ordinance, well protection plan, city ordinance, 10 year "wish list". Our City Engineers are looking into installing a berm along the Le Sueur River in our most critical areas.
City of Skyline	The city has Land Use Zoning ordinances in place.
City of Vernon Center	The City has Zoning Ordinances in place that are enforced. The city is under an I/I/ compliance schedule from MPCA, financing is available for individuals needed to replace their sewer laterals.
OTHER STAKEHOLDERS	

#9 - ORGANIZATIONAL CAPACITY

What departmental staff or elected officials in your jurisdictional help to accomplish hazard mitigation in your community? Please describe.

Blue Earth County	Blue Earth County has a full-time Emergency Management Director and supporting staff, BEC Sheriff's Office, Property & Environmental Resources staff (P & Z, Drainage Mgmt, Water Resources, Assessor, Mapping & Data), Public Works Director/Highway Engineer and staff, Public Health Department, Planning Commission, and Soil and Water Conservation District.
City of Amboy	City Council, City Administrator, Public Works.
City of Eagle Lake	City Council, City Administrator, Public Works, and Contract with BECSO.
City of Good Thunder	City Council, Public Works, City Clerk, Fire Dept, contracted with BEC Sheriff Dept.

City of Lake Crystal	Police Sergeant/Emergency Manager, City Administrator, City Council, PUC, Public Works, Fire Chief, and ambulance service.
City of Madison Lake	Hazard mitigation in the City of Madison Lake is a collaborative effort involving multiple departments, staff, and elected officials: ● City Manager and Mayor – Provide executive leadership, policy direction, and resource support. ● City Council – Adopts policy and allocates funding to support mitigation and resilience initiatives. ● Public Safety Personnel – Includes Police Chief, Fire Chief, and Emergency Management responsible for emergency planning, response coordination, public education, and continuity of operations. ● Public Works and Engineering – Manage stormwater systems, roads, bridges, and other critical infrastructure impacted by natural hazards. ● Facilities Management and Information Technology – Ensure building resilience and continuity of government operations. ● Community Development and Building Inspections – Oversee safe development practices, permitting, and enforcement of building codes and zoning regulations. ● Planning Commission – Provides interdepartmental review of proposed developments to evaluate risks, infrastructure needs, and alignment with hazard mitigation priorities. ● Geographic Information Systems (GIS) Team – Supports hazard mitigation planning with mapping, spatial analysis, and visualization tools used for risk assessment, infrastructure planning, and emergency response coordination. ● Collaboration with Blue Earth County Emergency Management – Ensures regional coordination and access to state and federal resources for planning, training, and response efforts. This coordinated structure enhances the City’s ability to plan for, respond to, and reduce the impacts of natural hazards on residents, infrastructure, and services.
City of Mankato	Hazard mitigation in the City of Mankato is a collaborative effort involving multiple departments, staff, and elected officials: ● City Manager and Mayor – Provide executive leadership, policy direction, and resource support. ● City Council – Adopts policy and allocates funding to support mitigation and resilience initiatives. ● Public Safety Department – Includes Police, Fire, and Emergency Management divisions responsible for emergency planning,

	response coordination, public education, and continuity of operations. ● Public Works and Engineering – Manage stormwater systems, roads, bridges, and other critical infrastructure impacted by natural hazards. ● Facilities Management and Information Technology – Ensure building resilience and continuity of government operations. ● Community Development and Building Inspections – Oversee safe development practices, permitting, and enforcement of building codes and zoning regulations. ● Community Development and Housing Support Team – Supports affordable housing, public housing programs, and residents who may be disproportionately impacted by hazards. ● Site Plan Review Committee – Provides interdepartmental review of proposed developments to evaluate risks, infrastructure needs, and alignment with hazard mitigation priorities. ● Geographic Information Systems (GIS) Team – Supports hazard mitigation planning with mapping, spatial analysis, and visualization tools used for risk assessment, infrastructure planning, and emergency response coordination. ● Collaboration with Blue Earth County Emergency Management – Ensures regional coordination and access to state and federal resources for planning, training, and response efforts. This coordinated structure enhances the City’s ability to plan for, respond to, and reduce the impacts of natural hazards on residents, infrastructure, and services.
City of Mapleton	City Council and City Clerk/Treasurer, Public Works Supervisor, Police Chief, and Fire Chief.
City of Minnesota Lake	City Council and City Clerk, Public Works Dept., Fire and EMS. Our city firefighters take classes and are trained to spot severe weather/tornadoes.
City of North Mankato	Police Chief/EM, Public Works Director, City Council, City Administrator, City Planner, City Engineer, Fire Chief.
City of Pemberton	City Council, City Clerk, Public Works Staff and Fire Department work together with Blue Earth County Emergency Management.
City of St. Clair	City Council, City Clerk, Public Works Staff and Fire Department work together with B.E. County Emergency Management. We have also worked with FEMA to get mitigation ideas.
City of Skyline	Mayor and Council, City Clerk, Treasurer, Water staff member to test and treat our water. Collaborative effort by volunteers to maintain the city infrastructure and water system.
City of Vernon Center	City Clerk keeps records and residents can contact the clerk for any issues during business hours and communicates through the city website and newsletter. PW Supervisor keeps track of the WTP and WWTP and if he is unavailable there are other qualified individuals who can come in and help.
OTHER STAKEHOLDERS	

#10 – PARTNERSHIPS

Are there any agencies, organizations, or businesses that your jurisdiction has worked with to address mitigation efforts in your community? Please describe.

Blue Earth County	Blue Earth County works with cities, townships and other governmental agencies (like MSU-Mankato) on mitigation efforts and is a liaison with HSEM & FEMA. Blue Earth County maintains regional mutual aid agreements as well as Tri-County MAA (Blue Earth, LeSueur, Nicollet) for all county/city services including law enforcement, fire, EMS, public works, etc. Blue Earth County is working closely with FEMA & MN Homeland Security and Emergency Management to address obtaining funding for property buyouts. BEC participates in several area watershed plans (One Watershed, One Plan) 1W1P's: Minnesota River-Mankato 1W1P, Middle Minnesota River-Mankato 1W1P, Blue Earth River 1W1P
City of Amboy	Blue Earth County, MPCA, BOPI grant (DEED)
City of Eagle Lake	Blue Earth County, FEMA, MDH, DNR, MPCA, MNWARN, ISG, Bolton and Menk, MnDOT, Utility Companies, Local Developers and Contractors, Mutual Aid.
City of Good Thunder	BEC, FEMA, MPCA, MDH, DNR, Bollig Engineering, MNWARN, MN Rural Water
City of Lake Crystal	Crystal Waters Project on run-off issues, Heartland Energy, DGR Engineering, and MMUA on generated power issues, Bolton-Menk, and Minnesota River-Mankato 1W1P, DNR, MN AWWA, MN PCA, MDH, MnWARN, MN Rural Water.
City of Madison Lake	MNDOT, DNR, 3 different Lake Associations, SWCD, BEC PER
City of Mankato	Mankato maintains strong partnerships with a variety of agencies and organizations that support hazard mitigation, emergency response, and community resilience. Key partnerships include: ● Blue Earth County Emergency Management, FEMA, MN Homeland Security and Emergency Management, and the U.S. Army Corps of Engineers for mitigation planning, disaster recovery, and infrastructure support. ● MnDOT for transportation planning and flood mitigation projects along critical corridors such as Highway 169. ● Minnesota Department of Natural Resources (DNR) for riverbank stabilization, restoration, and conservation efforts along the Minnesota and Blue Earth Rivers.

	● Local utilities, including Xcel Energy and BENCO Electric Cooperative, for improving energy resilience, outage response, and grid coordination. ● Municipal water and wastewater partners, including the cities of Madison Lake, South Bend, Eagle Lake, and North Mankato, who rely on Mankato for wastewater services and are affected by shared infrastructure vulnerabilities. ● Watershed groups, such as the Minnesota River-Mankato 1W1P, which coordinate regional water management and flood mitigation strategies. ● Engineering and design firms, such as Bolton & Menk, that provide technical assistance, modeling, and infrastructure planning. ● Local contractors, who support mitigation construction, infrastructure maintenance, and emergency repair efforts. These partnerships are essential to planning, implementing, and sustaining mitigation actions that protect both Mankato and surrounding communities.
City of Mapleton	FEMA, State of Minnesota
City of Minnesota Lake	Minnesota Lake is a member of MNWARN and the MN Rural Water Association.
City of North Mankato	The city works with the U.S. Army Corps of Engineers, Nicollet County, Bolton & Menk Engineers, and MN DNR.
City of Pemberton	Blue Earth County, DNR, MNDOT, FEMA
City of St. Clair	MDH, Blue Earth County SWCD, DNR, private foundations. St. Clair is a member of MNWARN and the MN Rural Water Association. City Engineers and FEMA
City of Skyline	Region 9, Blue Earth County, MDH, Well Water Protection, MPCA, FEMA, ISG
City of Vernon Center	MPCA to address I/I, DEED and legislature supplied funds for infrastructure project, FEMA, MNWarn.
OTHER STAKEHOLDERS	

#11 - PROGRAMS IN PLACE

What sort of programs does your jurisdiction participate in to help raise awareness and reduce risk from natural hazards in your community?

Blue Earth County	Blue Earth County Emergency Management participates annually with the NWS's annual Winter/Spring Weather Awareness Week. BEC also works with the NWS to hold annual SkyWarn Storm Spotter training for local law enforcement, fire fighters, and area residents that wish to be trained on a semi-annual basis. Blue Earth County Emergency Management speaks to community groups as requested.
City of Amboy	Participate with Blue Earth County Emergency Management in spring/winter weather awareness. Fire station & City Hall can serve as winter shelter if needed with back-up power.

City of Eagle Lake	Eagle Lake promotes and shares information from BEC about winter and severe weather preparedness via City communication channels.
City of Good Thunder	BEC Emergency Management, Winter weather safety talks, Fire prevention week, through website and Facebook
City of Lake Crystal	Winter weather safety talks. Fire Department spotter, City Website & Facebook.
City of Madison Lake	Madison Lake actively participates in state and national awareness campaigns, including Severe Weather Awareness Week and Winter Hazard Awareness Week, participating in outdoor siren tests, social media messaging, and public safety outreach.
City of Mankato	Mankato actively participates in state and national awareness campaigns, including Severe Weather Awareness Week and Winter Hazard Awareness Week, coordinating outdoor siren tests, social media messaging, and public safety outreach. The City also hosts community preparedness events and partners with schools to deliver safety education programs, including Winter Weather Talks presented annually to all 3rd grade students in public and private schools across the city. These presentations focus on personal preparedness, weather safety, and understanding emergency alerts. These programs help build a culture of preparedness, particularly among youth and vulnerable populations, and reinforce community-wide understanding of natural hazard risks.
City of Mapleton	The National Weather Service provides the City of Mapleton with updates during potential weather threats. This info is also shared with residents when possible via posting on the City Website and Social Media pages.
City of Minnesota Lake	The National Weather Service provides the City of Minnesota Lake with updates during potential weather threats which we seek to share with residents The city posts information on the city's social media page as well as on the Police Department social media page.
City of North Mankato	The city participates in NWS annual Severe Weather Awareness Week information and testing. Messages for the public are posted via social media and Press Release. Schools practice tornado drills. Cold Weather Awareness program for Elementary age students. USACE Flood Protection System Inspection Program. We make the Police Department annex available for emergency shelter during extreme cold/heat events.

City of Pemberton	The National Weather Service provides the City of Pemberton with updates during potential weather threats. This info is also shared with residents when possible, via posting on the City Website and Social Media pages.
City of St. Clair	The City participates in the NWS annual Severe Weather Awareness Week information and testing. School practices Tornado Drills. We are connected to the Blue Earth County emergency siren system. City uses its website and Facebook.
City of Skyline	Planning a Green Plan for water mitigation to homeowners. Starting a flooding mitigation committee.
City of Vernon Center	The city shares information through the official website and newsletter, fire department does storm spotting on as as needed basis, siren testing is done monthly.
OTHER STAKEHOLDERS	

#12 - FUNDING & OTHER RESOURCES

What funding sources are available to help your jurisdiction to accomplish implementation of mitigation activities? Please describe. Include internal local government funding as well as external funding sources (grant or loan sources from local, state, or federal agencies).

Blue Earth County	County internal budgets are used for funding emergency management, planning and zoning, and public works projects. FEMA grant funding may also be available to communities for hazard mitigation projects.
City of Amboy	Continuously looking for grants otherwise local budgets.
City of Eagle Lake	Funding for mitigation activities comes from a combination of local, state, and federal sources including operating budget and capital improvement funds, grants, state and federal funding, etc.
City of Good Thunder	Operating budget, new city engineer looking for funding and assessing needs of the city
City of Lake Crystal	We received FEMA funding in 2024, DNR funding, watershed district, and local municipal funding.
City of Madison Lake	The city uses its own general operating budget to fund the work of staff to establish and enforce regulatory ordinances and to share information with the public. A portion of that general operating budget is set aside for civil defense and emergency management specifically which allows us to maintain and enhance our sirens throughout the city. Our utility budgets allow us to address flood related mitigation projects, such as the replacement of culverts, maintaining the lift stations, and doing stormwater repairs. Each year the police department receives grants from the State to reimburse for training courses for the officers. We continuously look for grants, and are awaiting a Congressionally Directed Spending award that we are hoping to put toward much needed infrastructure projects.

City of Mankato	Funding for mitigation activities in Mankato comes from a combination of local, state, and federal sources: • City's general operating budget and capital improvement funds, which prioritize infrastructure resilience and long-term risk reduction. • Utility enterprise funds that support stormwater, sewer, and drainage improvements. • Emergency readiness funds, including a dedicated \$1 million reserve in the general fund for use during declared emergencies or significant unplanned response needs. • Partnerships with MnDOT for transportation and flood mitigation infrastructure projects. • Grant funding from the Minnesota Department of Natural Resources (DNR), particularly for riverbank restoration and erosion control. • FEMA alternative project funding, used to support eligible large-scale mitigation and infrastructure upgrades. The City actively monitors funding opportunities to ensure it can implement critical projects that reduce community vulnerability and support long-term resilience.
City of Mapleton	The City of Mapleton uses its own general operating budget, and grants when available.
City of Minnesota Lake	The City of Minnesota Lake uses its own general operating budget and has had FEMA provide funding for storms of 2024. Our city engineer is looking into funding options for the city.
City of North Mankato	The city uses its own general operating budget to fund the work of staff to establish and enforce regulatory ordinances and to share information with the public. A portion of that general operating budget is set aside for civil defense and emergency management specifically which allows us to maintain and enhance our sirens throughout the city. Our utility budgets allow us to address flood related mitigation projects, such as the replacement of culverts, maintaining the lift stations, and doing stormwater repairs. Each year the police department receives grants from the State to reimburse for training courses for the officers.
City of Pemberton	Our city engineer is looking into funding options for the city. We continuously look for grants, and are awaiting a Congressionally Directed Spending award that we are hoping to put toward much needed infrastructure projects. We are currently also working with Blue Earth County for financial aid with our pending infrastructure project.
City of St. Clair	We have received FEMA funding. Local City funding.

City of Skyline	All funding is local tax base only. We have applied numerous times over the years with no success.
City of Vernon Center	USDA-RD, PFA, MPCA, Savings accounts are set up with interest for funds, MDH, always looking for grants to assist.
OTHER STAKEHOLDERS	

#13 - LOCAL MITIGATION PROJECTS

Please describe what mitigation actions would help to reduce risk to your community from future natural hazard events. Please include mitigation activities that address local vulnerabilities that were identified in Question #2. Please be as specific as possible in your responses. The mitigation actions you identify will be used to develop your local mitigation action charts. If you have any mitigation projects you are aware that your jurisdiction will be seeking to apply for FEMA HMA Grant Program funding for, please make note of that.

Blue Earth County	Blue Earth County's highest priority mitigation project is the Rapidan Dam. - Blue Earth County has determined that the dam needs to be removed and is in the process of preliminary engineering and environmental documentation for dam removal including river restoration. The CR9 bridge adjacent to the dam has also been removed due to flood damages and a replacement structure is being designed with an estimated construction time frame from 2026-2027. Property Buyouts - Blue Earth County's other high priority mitigation project is to obtain federal grant funding to conduct property acquisition projects. A total of 6 properties have been submitted to FEMA for home-buyouts or relocation after the severe flooding event in of June 2024. Flash Flooding / Ravine Erosion - Jurisdictions include South Bend Township, Mankato Township, City of Skyline, and City of Mankato. Conduct an assessment and feasibility study of stormwater storage to help reduce public costs of ravine erosion and sedimentation. There are many locations in this area where the local units of government have to regularly repair and remove sediment from culverts, ditches and ponds after large rain events. A comprehensive review the issue, hot spot identification, and preliminary design for stormwater storage and retro-fits for this area would be beneficial. Public Outreach - Blue Earth County continues to strengthen and expand our public outreach efforts to raise awareness of severe weather and personal preparedness. Our participation in NWS severe weather awareness weeks will continue as well as encouraging local communities to share information locally. Land Subsidence, Karst - Work with the Blue Earth County SWCD and other partners to monitor and address areas of concern for sinkholes, eroding
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	ravines and eroding bluffs. Stormwater storage and retrofits from existing developed areas that did not have stormwater infrastructure like South Bend, would be beneficial to help address flash flooding and bluff/ravine erosion. Flooding - Continue to enforce floodplain and shoreland ordinances to regulate development in flood risk areas. Extreme Heat, Extreme Cold - Continue to partner with Blue Earth County Public Health to be ready for community sheltering needs in response to extreme temperature events plus continued promotion of weather safety. Windstorms, Tornadoes - Work with local communities to help obtain grant funding to install new outdoor warning sirens where needed in the county. Also continue to work with jurisdictions to plan for effective emergency communications, evacuations, and construction of storm shelters or tornado safe rooms where needed. BEC Emergency Management is able to provide guidance and support to local governments on these efforts. BEC Emergency Management will continue to work with the NWS to hold SkyWarn storm spotter training on a semi-annual basis.
City of Amboy	Awaiting preliminary report from engineers for comprehensive infrastructure. Will look for future state bonding requests
City of Eagle Lake	Eagle Lake recently obtained a grant from the MPCA to plan for future flooding and extreme weather impacts to community facilities and overall wellbeing. A comprehensive approach to stormwater management by modeling current and future flooding, planning for climate scenarios, and developing flooding mitigation strategies and solutions was undertaken. The project also included a city-wide assessment of community and asset vulnerability as well as a feasibility assessment of a yard waste compost site. The result was a Stormwater and Community Resilience Plan, which includes recommended high quality and cost effective solutions. The plan serves as a future resiliency roadmap and an aid in procuring future funding for prioritized solutions through grants. The recommended solutions include the restoration of a wetland west of the city which would result in the storage of runoff and could substantially reduce flash flows in the western portion of the city. Another solution would be to raise County Road 27 as this would help to reduce overtopping and be less vulnerable to increased precipitation trends. The final solution includes the construction of a meandered stream through the wetland area on the south end of the city. It might not reduce significant flood reduction benefits but would help reduce peak flows and enhance stability for future erosion, and add ecological and recreational value to the area. At this time, a lack of funding is a barrier to implementing the three above-described solutions.
City of Good Thunder	Reducing I and I. Increase Storm sewer capacity with bonding bill. water retention pond. working with new engineers on needs assessment for infrastructure.
City of Lake Crystal	We continue to use code enforcement for shoreland management, in the process of putting in a substation for electrical redundancy, working

	towards stormwater pond expansion. Electric - renewal sustainability & resilience plan. HWY 60 project 0 increase trunk sewer line. I/I - part of CIP.
City of Madison Lake	Mitigation actions for Madison Lake include focusing efforts on aging infrastructure, enhancing storm sewer systems with new projects and replacement of the City Hall/Fire Hall generator as it also serves as our EOC. Replacement of aging lift station generators as well as purchase of new generators for lift stations that don't currently have them. We have identified I&I issues but need funding to implement plan and fixes
City of Mankato	Priority mitigation actions for Mankato include: ● Expansion and upgrading of storm sewer systems to better manage larger and more frequent rain events. ● Installation of additional backup power generators for critical infrastructure and flood control systems. ● Replacement or relocation of vulnerable utility lines, including efforts to bury overhead power lines to reduce outage risks. ● Long-term riverbank stabilization and erosion control, especially near bridges, parks, and public infrastructure. ● Construction of a new municipal well at Land of Memories Park, improving water system redundancy and capacity. ● Significant upgrades to wastewater lines, particularly in ravines and creek corridors, to enhance resilience, reduce infiltration/inflow, and prevent environmental contamination during extreme weather events. ● The City has also explored and pursued state bonding dollars to support large-scale mitigation efforts that exceed the capacity of local funding sources. These projects reflect Mankato's commitment to long-term resilience through strategic infrastructure investment and pursuit of outside funding support.
City of Mapleton	Mitigation actions for the City of Mapleton include getting more electricity lines underground when available and keeping up with the I&I plan in place. Our lift station has excess capacity. We have generators in place to run much of our city facilities, including City Hall/Police Station, Filter Plant and one of the wells, the Lift Station, and the Fire Station.
City of Minnesota Lake	Flooding – We are currently working with an engineering firm to determine the best route of updating aging water/sewer/sanitary systems. Some systems are over 50 yrs old. We are continuing to work with a company to camera/flush sanitary lines, taking a different section of town for 5 years. We are working to address how to reduce the impact of flood events what

	overload the city's sanitary collection system. We often have to by-pass the system in order to prevent backup flooding into residents' homes. Severe Storms (Power Outages) – We need to obtain a generator for the City Office and Public Works shop to be able to provide services when the power is down.
City of North Mankato	Flooding – Continue planning for future rehab of stormwater lift stations. Also Implement pool improvement project to mitigate effects of high ground water. Severe Storms (loss of power) - Coordinate/request Xcel Energy to replace/move overhead power lines to underground.
City of Pemberton	Mitigation Actions for Pemberton include focusing efforts on improving our aging infrastructure, continued maintenance on enhancing storm sewer systems and replacement of City Hall/Fire Hall generator.
City of St. Clair	Building a berm or structure to keep the Le Sueur from overflowing into our City. Bank restoration needs to be done to save the City Hall/Fire Dept/Public Works building. Emergency generator to power City Hall/Fire Dept/Public Works building is greatly needed. An additional 6" trash pump to be solely used at the WWTP. Future I & I inspections.
City of Skyline	Working with ISG to create a proposal for feasibility study. New water drainage mitigation committee is being started with volunteers from community. We are working on a Green Plan for water mitigation to homeowners and starting a flooding mitigation committee. We need backup power for lift stations, city hall, pump house, and water tower. Funding is a barrier to purchasing these.
City of Vernon Center	Work with local utility contractor (BENCO) to put more electrical lines underground, a current pending bid involve the overhead electrical line to be buried at the WWTP. WWTP erosion control will be addressed in the future, shelter at city hall and fire hall for cold weather emergencies.
Minnesota State Mankato	MSU has identified the Campus Rec fields ravine (Viking Ravine) as a critical/imminent need for repair/correction. We are currently working with FEMA, Minnesota HSEM and professional engineers on designing restoration and mitigation plans. Given the urgency and vulnerability of the project, MSU is anticipating beginning work on this area in the fall of 2025.
OTHER STAKEHOLDERS	

#14 - GAPS OR DEFICIENCIES

Please describe any specific gaps or deficiencies that are a barrier to implementing local mitigation measures.

Blue Earth County	Obtaining significant grant funding following the effects of the 2024 catastrophic flooding events. This includes removal of the Rapidan Dam, river restoration, and replacement of the CR9 bridge. Also funding for the
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	buyout of 6 homes due to flooding or erosion are the most pressing gaps that Blue Earth currently faces in order to mitigate against the impact of flooding/landslides along the Blue Earth River. Local jurisdictions within the county face financial challenges to budget for or acquire outside grant funding for important local mitigation projects. FEMA federal HMA grant funding is a critical resource we hope will be sustained. Blue Earth County has some of the highest number of river miles in the state of Minnesota. With these actively eroding rivers comes many threats to County-owned infrastructure due to river meandering & erosion. For all other hazards, ongoing continued public education needs to be done to encourage people to utilize resources such as CodeRED and NOAA weather radios.
City of Amboy	Lacking of funding available to improve infrastructure which is over 50 years old.
City of Eagle Lake	A lack of funding is a significant barrier to implementing additional local mitigation measures.
City of Good Thunder	Funding and engineering have been a major hurdle
City of Lake Crystal	Continual funding
City of Madison Lake	Lack of funding for our small communities due to qualifications. Median household income is too high, but that does not take into consideration the population increases that we see from April to October. Madison Lake balloons from 1300 to approximately 3300 or so during these months.
City of Mankato	The primary barriers to implementing mitigation measures in Mankato include: ● Limited funding for major infrastructure and long-term resilience projects. ● Aging infrastructure that requires upgrades to withstand increasingly severe and frequent weather events. ● Capacity constraints, including staffing and technical resources, that limit the ability to evaluate, design, and implement large-scale mitigation efforts while managing other city priorities. ● Public engagement challenges despite ongoing outreach efforts. ● General lack of public awareness or interest in hazard mitigation, which often only increases after a major event or disaster. This creates a reactive rather than proactive dynamic that can hinder long-term planning and support. Addressing these gaps remains a priority as the City works to build a more resilient and informed community.
City of Mapleton	Funding

City of Minnesota Lake	Minnesota Lake has aging infrastructure with limited funding available to rebuild/replace/update aging systems and plan for future hazard events. Staffing limitations also make it difficult to do funding/project research. The city's Comprehensive Plan may need to be updated.
City of North Mankato	-Funding sources for high dollar projects. -Competing projects for other entities.
City of Pemberton	Funding
City of St. Clair	Funding
City of Skyline	Backup power for lift stations, city hall, pump house, and water tower. Funding
City of Vernon Center	We are a small city with limited financial and staff resources and are always looking for funding.
OTHER STAKEHOLDERS	

#15 - SURVEY PARTICIPANTS

Please list the names & titles of all persons that contributed information to this survey. Participant information is important to ensure good jurisdictional participation.

Blue Earth County	Eric Weller, Emergency Management Director Brenda Olmscheid, EM Office Coordinator Ryan Thilges, Public Works Director/Engineer John Considine, Zoning Administrator Scott Salisbury, Land Use Planner - GIS Specialist
City of Amboy	Patty Smith, Administrator, Clerk-Treasurer Chris Kruse - Public Works Supervisor
City of Eagle Lake	Jennifer Bromeland, City Administrator Andrew Hartman, Public Works Director
City of Good Thunder	Sue Petty - Clerk-Treasurer, Eli Depuydt - Maintenance Supervisor, Brian Severns Water Superintendent
City of Lake Crystal	Angela Grafstrom, City Administrator Jeremy Hutchens, PUC Manager
City of Madison Lake	Liz Wille, City Administrator Al Dorn, Mayor Phil Wills, Police Chief/Emergency Management Director Adam Fennell, Public Works Director
City of Mankato	Susan Arntz – City Manager Parker Skophammer – Director of Administrative Services Jeremy Clifton – Director of Public Safety Justin Neumann – Public Safety Commander/Emergency Management Jeff Bengtson – Associate Director of Public Safety/Emergency Management Joe Grabianowski – Public Works Operations Superintendent

	Jim Tatge – Facilities Manager Tony Talamantez – Infrastructure Superintendent
City of Mapleton	Sarah Moore, City Clerk/Treasurer Ben Honsey, Police Chief Jake Thompson, Public Works Supervisor
City of Minnesota Lake	Dawn Whitehead, City Clerk
City of North Mankato	Luke Arnold, City of North Mankato Public Works Director Jessica Ryan, City of North Mankato Finance Director Anna Brown, City of North Mankato PIO Mike Fischer, City of North Mankato Community Development Director Ross Gullickson, City of North Mankato Chief of Police/EM Director. James Zwaschka, City of North Mankato Fire Chief
City of Pemberton	Kathy Grinnell, City Clerk Randy Gillette, Public Works David Lau, Fire Chief Ronda Mortensen, City Councilor
City of St. Clair	Thad Baker, Deb McCollum - Public Works; Stefanie Janike - City Clerk
City of Skyline	Paige Attarian - City Mayor Joanne Boettcher - City Council Member Samantha Erickson - City Clerk
City of Vernon Center	Kara Hansen, City Clerk Mark Willette, PW Supervisor
OTHER STAKEHOLDERS	Minnesota State Mankato Chandler Holland - Dir. of Environmental Health, Safety & Risk Management Nate Huettl - Director of Planning & Construction

Appendix D – Plans & Programs in Place

Blue Earth County

HMP Plans & Programs in Place Form

EMERGENCY PLANNING CAPABILITIES	Yes/No	Comments
Emergency Notification System (please specify, i.e., CodeRED, Smart911, Everbridge, etc)	Yes	CodeRED
Outdoor Warning Sirens (please note locations and # per jurisdiction)		Amboy – 1 Eagle Lake – 3 Garden City – 1 Good Thunder – 1 Lake Crystal – 3 Madison Lake – 4 Mankato – 12 Mapleton – 2 Pemberton – 1 Rapidan – 1 St. Clair – 2 Skyline – 1 Southbend – 3
Emergency Operations Plan (EOP)	Yes	EOP is updated annually
Mass Care Sheltering Plan / List of Shelter Facilities	Yes	Addressed in EOP and in coordination with local jurisdictions
Tornado Safe Rooms / Storm Shelters (please list any existing specific locations)	Yes	Addressed in coordination with schools & local jurisdictions with local vulnerabilities. Currently rooms at St. Clair School and Maple River School.
NWS Weather Ready Nation / StormReady Certification	Yes	BEC Emergency Management is a registered WRN Ambassador
Coordination with Schools	Yes	Tornado Drills, Lockdown Drills, Active Shooter Exercises and quarterly meeting with school districts.
Coordination with Neighboring Jurisdictions	Yes	Quarterly City/County Emergency Preparedness meeting with Blue Earth &

		Nicollet Counties. Annual regional planning and training; statewide AMEM conference
Coordination with Local and Regional Agencies involved in mitigation	Yes	SWCD, MN DNR, MnDOT, Rural and Municipal Electric Cooperatives, Watershed Districts
Coordination with organizations or agencies addressing disaster related issues and vulnerable populations, emergency preparedness, access and functional needs populations (List as applicable)	Yes	South Central Healthcare Coalition, Local Public Health, American Red Cross, Salvation Army
Past storm hazard data and information	Yes	Damage information is kept on file from past storm events and disaster declarations
<i>Other (please describe)</i>	Yes	Public Health has preparedness plans in place. BEC also has an EAP in place for the Rapidan Dam.

PLANNING & REGULATORY CAPABILITIES	Yes/No	Comments
Comprehensive/Land Use Plan	Yes	Blue Earth County Land Use Plan, approved 12/18/2018
Capital Improvements Plan	Yes	Blue Earth County Public Works CIP
Economic Development Plan	Yes	Blue Earth County Economic Development Authority.
Climate Adaptation Plan	Yes	BEC is part of the West Central Initiative's MN Region 4 Climate Action Plan, July 2023
Continuity of Operations Plan (COOP)	Yes	Under BEC Emergency Management and across county departments. Updated 2023.

Transportation Plan	Yes	Blue Earth County Public Works – 5-Year Transportation Improvement Plan (2024-2028)
Stormwater Management Plan / Drainage Plan	Yes	Blue Earth County Drainage Management Coordinator (BEC Property and Environmental Resources Dept).
Burning Permits/Restrictions (i.e., identify if issued through Sheriff's Office or MN DNR)	Yes	BEC Sheriff's Office
Comprehensive Local Water Management Plan	Yes	BEC Water Management Plan 2017-2026
Watershed Plan (One Watershed, One Plan)	Yes	BEC is involved in multiple 1W1P's: Minnesota River-Mankato 1W1P, Middle Minnesota River-Mankato 1W1P, Blue Earth River 1W1P
Wellhead Protection Plan	Yes	Municipal level plans are done in coordination with MDH
Forest Management Plan	No	BEC does participate in Class 2c Managed Forest Land program
Community Wildfire Protection Plan (CWPP)	No	
Participation in MN DNR Firewise Program	No	
Database of Dry Hydrants/Well Access	No	
<i>Other (please describe)</i>		

LOCAL POLICY / PROGRAM CAPABILITIES	Yes/No	Comments
Land Use, Planning, & Zoning Ordinance	Yes	BEC Ordinances. BEC administers land use ordinances.
Subdivision Ordinance	Yes	Chapter 24, Zoning (BEC Ordinances)
MN State Building Code Enforcement	No	
Participation in the National Flood Insurance Program (NFIP)	Yes	Date of entry 11/24/1972
Adoption of Digital Flood Insurance Rate Maps	Yes	Current effective map date 2/22/2024

Floodplain Ordinance	Yes	Chapter 8, Floodplain (BEC Ordinances)
Shoreland Ordinance	Yes	Chapter 14, Shoreland Zoning (BEC Ordinances)
Minnesota Buffer Law / Soil Erosion Ordinance	Yes	Article VIII Buffer Ordinance (BEC Ordinances). BEC SWCD oversees compliance tracking
Home Buyouts for flood or erosion mitigation	Yes	The County has purchased home buyouts in the past. Future buyouts are anticipated with DR-4797 in 2025 or 2026.
Other natural hazard specific ordinances (i.e., stormwater, steep slope, wildfire)	No	
Maintenance programs to reduce risk	Yes	Highway Dept. ROW maintenance and drainage systems
<i>Other (please describe)</i>		

ADMINISTRATIVE/TECHNICAL CAPABILITIES	Yes/No	Comments
Emergency Management Director	Yes	Full-time EMD
Sheriff/Police Department	Yes	BEC Sheriff's Dept.
Floodplain Management Administrator	Yes	BEC Planning & Zoning
Chief Building Official	Yes	BEC Planning & Zoning
Highway Engineer	Yes	BEC Public Works Director
Mapping Specialist (GIS)	Yes	BEC Planning & Zoning
Public Health Coordinator/Department	Yes	BEC PH Director
Planning Commission	Yes	BEC Planning Commission
Coordination with Soil and Water Conservation District	Yes	BEC SWCD
Coordination with Minnesota Department of Natural Resources	Yes	
Mitigation Planning Committee	Yes	2025 HMP Update Planning Team of Stakeholders
Mutual Aid Agreements in place	Yes	Regional; Tri-County MAA (Blue Earth, LeSueur, Nicollet) for all county/city services

		including law enforcement, fire, EMS, public works, etc.
<i>Other (please describe)</i>		

EDUCATION & OUTREACH CAPABILITIES	<i>Yes/No</i>	<i>Comments</i>
SKYWARN Program Training with NWS (annual training)	Yes	Held in coordination with the NWS
National Weather Service – Severe Weather Awareness Weeks	Yes	Emergency Management participates in coordination with HSEM and NWS each November and April
Promotion of NOAA Weather Radios	Yes	During NWS Severe Weather Weeks and Ongoing
<i>Other (please describe)</i>		

Appendix E – Past Mitigation Action Review Status Report

Blue Earth County

Past Mitigation Action Review Status Report

Following is a report on the status of mitigation actions related to natural hazards included in the Blue Earth County **2020** Hazard Mitigation Plan. This report covers the mitigation actions that were listed for implementation by Blue Earth County and by city jurisdictions or partner agencies, as applicable. The status of mitigation actions is defined as the following:

Completed – The action was a defined activity or project completed since the last plan update.

Ongoing – The action is continually being implemented and moving forward. Ongoing mitigation actions will be reviewed and revised as necessary for inclusion in the plan update.

Deleted – The action is deemed as not necessary and is not considered for inclusion in the plan update.

#	Hazard	Mitigation Action	2025 Status	Comments
1	All-Hazards	Conduct public outreach to increase public awareness of the County's CodeRED Emergency Notification System, and continue to promote additional outreach delivery systems that are in place.	Ongoing	
2	All-Hazards	Work to increase social media following by Blue Earth County residents to support delivery of emergency information and notifications.	Ongoing	
3	All-Hazards	Develop protocol on when to implement the use of the Integrated Public Alert and Warning System (IPAWS) for major emergency events.	Delete	Not a necessary mitigation action. Falls under BEC EM emergency response planning.
4	All-Hazards	Continue to adequately fund emergency Response staff and ensure there is county disaster relief funding in place.	Delete	Not a necessary mitigation action. Falls under BEC EM emergency response planning.
5	All-Hazards	Continue to build strong partnerships and provide outreach & education to key partners and local governments regarding disaster preparedness.	Delete	Not a necessary mitigation action. Falls under BEC EM emergency response planning.

#	Hazard	Mitigation Action	2025 Status	Comments
6	All-Hazards	Ensure evacuation and mass care sheltering plans & facilities are in place to care for residents at-risk due to a severe weather or other emergency event that poses risk to life safety.	Ongoing	
7	All-Hazards	Provide continual training for emergency response personnel that are likely to be involved with the immediate effects of a hazard event.	Delete	Not a necessary mitigation action. Falls under BEC EM emergency response planning.
8	All-Hazards	Continue to update the Blue Earth County Emergency Operations Plan (EOP) to ensure it adequately details the needed steps to respond to all potential hazards.	Ongoing	This plan is reviewed and updated annually.
9	All-Hazards	Encourage all county departments to evaluate their exposure to a cyber-attack and plan data backups appropriately.	Delete	Not a necessary mitigation action. Falls under BEC EM emergency response planning.
10	All-Hazards	Conduct an annual review of security measures at government buildings throughout Blue Earth County to ensure current practices are adequate.	Delete	Not a necessary mitigation action. Falls under BEC EM emergency response planning.
11	All-Hazards	Develop increased protection measures for residential water supplies and systems throughout Blue Earth County.	Delete	Not a necessary mitigation action. Falls under BEC EM emergency response planning.
12	All-Hazards	Provide health education to public and private businesses where the risks of infectious diseases are a concern.	Delete	Not a necessary mitigation action. Falls under BEC Public Health emergency response planning.
13	All-Hazards	Continue collaborating with health systems to encourage participation in vaccination programs for all Blue Earth County residents.	Delete	Not a necessary mitigation action. Falls under BEC Public Health emergency response planning.
14	All-Hazards	Work to prevent and be prepared for a disease outbreak concerning livestock.	Delete	Not a necessary mitigation action. Falls under BEC EM emergency response planning and MN State Dept. of Ag.

#	Hazard	Mitigation Action	2025 Status	Comments
15	Severe Winter & Summer Storms	Provide education and awareness on severe winter, spring and summer storms to residents and visitors and promote personal and family emergency preparedness.	Ongoing	BECEM participates in the NWS severe weather awareness weeks. Winter weather talks are provided for all 3 rd graders in the county. A robust distribution list exists for governmental and nongovernmental agencies and severe weather information is shared routinely.
16	Severe Winter & Summer Storms	Continue to ensure placement of severe weather radios in schools and county buildings and promote their use by local residents.	Ongoing	
17	Severe Winter & Summer Storms	Work with rural & municipal electrical coops to identify where it is feasible and cost effective to bury or strengthen powerlines to mitigate against power line failure and implement measures.	Ongoing	Rural and municipal electric utilities continue to provide oversight on the identification and implementation of risk reduction measures for power failures. Each year utilities have replacement schedules.
18	Severe Summer Storms / Tornado	Continue to offer bi-annual SKYWARN training to first responders and the public and utilize our BEC storm spotter network.	Ongoing	
19	Severe Summer Storms / Tornado	Install new warning sirens within the Blue Earth County parks system and continue to update & maintain existing warning sirens throughout the county.	Ongoing	2 new sirens were added in county parks during 2024. One additional siren was added in Mapleton and one was replaced in Amboy in 2025. In 2025 a comprehensive assessment of all county-wide sirens will take place.
20	Severe Summer Storms / Tornado	Encourage mobile home park operators to meet MDH requirements for evacuation plans and storm shelters.	Delete	This is a responsibility of MDH and city governments with MHPs within their city limits.
21	Severe Summer Storms / Tornado	Construct new storm shelter facilities or tornado safe rooms in Blue Earth County parks and campgrounds where they are needed and are feasible.	Ongoing	BECEM will work county parks as needed and funding allows.

#	Hazard	Mitigation Action	2025 Status	Comments
22	Extreme Temps	Provide outreach & education to vulnerable populations in the community (i.e., senior citizens, young adults) on personal safety measures to take during periods of extreme heat / cold.	Ongoing	BECEM and local jurisdictions continue to share information from NWS during periods of extreme heat or cold with the entire population using social media and local media.
23	Flood	Continue to administer the County's participation in the NFIP and encourage property owners to learn about and purchase NFIP insurance.	Ongoing	
24	Flood	Adopt the preliminary FEMA Flood Insurance Rate Maps when they are approved by FEMA and revise the county floodplain ordinance to conform to FEMA/MNDNR standards.	Completed	Current effective map date 2/22/2024
25	Flood	Conduct geospatial analysis of high-risk areas in the county to help identify infrastructure, homes and property deemed at high-risk to flooding.	Completed	BEC uses the most current effective DFIRM maps 2/22/2024.
26	Flood	Maintain or replace levees, storm water drains or other flood reduction structures to prevent damage to structures/utilities due to flooding.	Ongoing	Work with local units of government as funding is available.
27	Flood	Increase culvert size and road height in locations across the county where repetitive water overtopping and erosion damages occur.	Ongoing	Work with local units of government as funding is available.
28	Flood	Identify and acquire repetitive flood properties or properties in highly erodible areas through a buyout process and convert them to open space.	Ongoing	This is currently a priority focus for BEC and will be applying for 7 property acquisitions.
29	Flood	Maintain the existing water storage capacity in the floodplain by preventing further development and fill from being added to the floodplain.	Delete	The BEC floodplain management ordinance establishes development regulations for any proposed development within mapped floodplain areas.

#	Hazard	Mitigation Action	2025 Status	Comments
30	Flood	Increase the water storage capacity at or below 100-year flood elevations and in areas with known flood inundation to help minimize the severity and frequency of flooding and high water by targeting wetland restorations and water storage in wetland areas.	Ongoing	Work with local units of government as funding is available.
31	Flood	Increase water storage to enhance stormwater storage within and draining to developed areas by restoring wetlands and developing green infrastructure to increase water storage in watersheds with developed/developing land use.	Ongoing	Work with local units of government as funding is available.
32	Flood / Erosion	Restore channelized stream corridors to provide flood water storage and attenuation, wildlife habitat and nutrient assimilation functions.	Ongoing	Work with local units of government as funding is available.
33	Flood/ Erosion	Ensure township roads throughout the county are resistant to over-the-road flooding and erosion.	Ongoing	Addressed under Blue Earth County Public Works – 5-Year Transportation Improvement Plan (2024-2028)
34	Erosion	Increase zoning requirements for dwelling set-backs from bluffs to decrease development impacts and reduce risk of slope failure.	Complete	Ordinance Amendment – January 2023. Defined “Actively Eroding Bluff” and increased setbacks.
35	Erosion	Evaluate the need for use of elevated and ground LIDAR data to help determine rates of erosion and change along the river valleys, bluffs, ravines and steep slopes in the county.	Ongoing	Projects reviewed for erosion and newly adopted standards for “Actively Eroding Bluff”

#	Hazard	Mitigation Action	2025 Status	Comments
36	Erosion	Restore wetlands and construct water storage practices in areas contributing runoff directly to bluffs streambanks, bluff and ravines.	Ongoing	Water storage and wetland restorations are priorities in the County Water Plan and the One Watershed One Plans that for the watersheds completed for in the area. County Drainage management will consider applying for external funding for water storage practices within the county to help reduce flows, flooding and downstream erosion.
37	Erosion	Review and revise stormwater management and land use ordinances and policies to decrease surface runoff and subsurface tile drainage water discharges directed to streambanks, bluffs and ravines to reduce erosion with stormwater management practices.	Ongoing	Stormwater management is a part of County land use planning and permit reviews. Currently, assessing the need for ordinance amendment for standards for permanent stormwater best management practices.
38	Erosion	Seek funds and develop funding mechanisms to provide technical information for landowners about preventing and managing ravine erosion. Also provide outreach and assistance to farmers on soil conservation best practices to reduce agricultural soil losses due to flooding that can affect nearby streams and rivers.	Delete	This is a service that that Soil and Water Conservation District provides. It is also a priority in the One Watershed One Plan processes that have been completed and the ones in the County that are being developed.
39	Dam Failure	Maintain an updated Emergency Action Plan (EAP) for the Rapidan Dam and the adjacent Park/Campground.	Ongoing	Since the Rapidan Dam partial breach in June 2024, BEC continues to work with regulatory agencies on the recovery including any emergency actions.
40	Dam Failure	Inspect all Blue Earth County dams and reservoirs to ensure structural integrity and safety.	Ongoing	Since the Rapidan Dam partial breach in June 2024, BEC continues to work with regulatory agencies on the recovery including any emergency actions.

Appendix F – Planning Team Meetings

Blue Earth County HMP Planning Team Meeting #1

7/9/25 Meeting Summary & Documentation

Synopsis: On July 9, 2025 Blue Earth County Emergency Management convened key county, city, and township representatives, as well as neighboring jurisdictions and other stakeholders to participate in the 1st Planning Team Meeting for the update of the Blue Earth County Hazard Mitigation Plan (HMP). The meeting was held via Zoom webinar video conference and was facilitated by Stacey Stark and Bonnie Hundrieser of the U-Spatial@UMD project team.

The purpose of the meeting was to present on the update of the Blue Earth County HMP update and gather stakeholder feedback on several key discussion items, including:

- 1) Prioritization of the natural hazards to be profiled in the plan,
- 2) Identification of local vulnerabilities (i.e., infrastructure and populations),
- 3) Ideas for local mitigation actions for implementation, and
- 4) Review of FEMA Hazard Mitigation Assistance grant funding opportunities.

Stakeholder Invitations: Blue Earth County Emergency Management invited all stakeholders included on the county's HMP Update Jurisdictional Contact List, which includes the key County Contacts, City Contacts, Township Contacts, Other Stakeholder Contacts, and Neighboring Jurisdiction Contacts identified to be invited to participate in the plan update process. Contacts were encouraged to engage additional staff or to send someone in their stead if they could not attend.

Presentation Overview: The Power Point presentation covered the following items:

- Welcome & Introductions
- Meeting Purpose & Agenda
- Overview of HMP Key Points
- Overview of Plan Content (Hazard Identification, Risk Assessment, Vulnerability Analysis, Update of Hazard Prioritization)
- Overview of Mitigation Actions and FEMA Grants
- Overview of Mitigation Strategies for the development of mitigation actions
- Discussion of ideas for local mitigation ideas
- Overview of Next Steps following Planning Team Meeting #1

Materials: The following meeting summary includes documentation of the stakeholders that participated in the meeting, poll results, and questions or comments provided during the meeting. A list of stakeholders invited to participate is also included. A copy of the meeting invitation and a handout of the Power Point presentation slides accompany this meeting summary.

To submit comments or questions regarding this meeting summary, please contact:

Eric Weller, Blue Earth County Emergency Management Director

Eric.Weller@blueearthcountymn.gov

Meeting Participants

Following is a list of representatives that participated in Planning Team Meeting #1. These individuals will be considered as part the formal planning team recorded in Table 1. Hazard Mitigation (HMP) Team of the Blue Earth County HMP Update.

Name	Organization	Job Title
Eric Weller	Blue Earth County Emergency Management	Emergency Management Director
Brenda Olmscheid	Blue Earth County Emergency Management	EM Office Coordinator
Paul Barta	Blue Earth County Sheriff's Office	Captain
Joshua Milow	Blue Earth County	Deputy County Administrator
Karri Harvey	Blue Earth County	IT Director
Michael Stalberger	Blue Earth County Dept. of Property and Environmental Resources	Director
Mark Manderfeld	Blue Earth County Dept. of Property and Environmental Resources	Deputy Director
Tim Edwards	Blue Earth County	Facilities Director
Ryan Thilges	Blue Earth County	County Engineer / Public Works Director
Phil Claussen	Blue Earth County Human Services	Director
Patty Oconnor	Blue Earth County	Commissioner
Chad Wilde	Blue Earth County Public Works	Assistant Public Works Director
Josh Downey	Blue Earth County Parks Dept.	Supervisor
John Considine	Blue Earth County	Zoning Administrator
Noelle Bruender	Blue Earth County Human Services Department	Clerical Specialist III
Besiem Yemiru	Blue Earth County	GIS Coord
Kelley Haeder	Blue Earth County Public Health	Supervisor - Public Health
Chelsea Hunstad	Blue Earth County Public Health	Public Health Nurse
Scott Salisbury	Blue Earth County	Land Use Planner
Patty Smith	City of Amboy	Administrator, Clerk-Treasurer
Jennifer Bromeland	City of Eagle Lake	City Administrator
Andrew Hartman	City of Eagle Lake	Public Works Director
Sue Petty	City of Good Thunder	Clerk/Treasurer
David Paul	Lake Crystal fire dept	Chief
Liz Wille	City of Madison Lake	City Administrator
Justin Neumann	City of Mankato	Commander
Jeff Bengtson	Mankato Public Safety	Assistant Director
Ryan Thormodson	City Of Mankato	Senior Facilities Technician
Jeremy Clifton	Mankato Public Safety	Chief/Director
Sarah Moore	City of Mapleton	City Clerk/Treasurer
Benjamin Honsey	Mapleton Police Department	Chief of Police
	City of Minnesota Lake (not present)	
Ross Gullickson	City of North Mankato	Chief of Police
Kevin McCann	City of North Mankato	City administrator

James Zwaschka	North Mankato Fire Department	Fire Chief
Kathy Grinnell	City of Pemberton	City Clerk
Stefanie Janike	City of St. Clair	Clerk/Treasurer
Deb McCollum	City of St. Clair	Public Works Employee
Thad Baker	City of St. Clair	Public Works Supervisor
	City of Skyline (not present)	
	City of Vernon Center (not present)	
DJ Williams	Rapidan Township	Clerk Treasurer
Gail Jaeger	Mapleton Township	Clerk/Treasurer
Dan Rotchadl	Mankato Township	Chairman
Kim Krengel	Beauford Township	Clerk
Gloria Mack	Shelby Township	Clerk
Liz Thiesse	Garden City Township	Clerk
Justin Samuelson	South Bend Township	Public works manager
Cindy Juberian	South bend township	Board
Joe Barnard	Lyra Township	Chairman
Allen Marble	Decoria Township	Chairperson
Scott Kaminski	Mankato Area Public Schools	Director of Facilities and Safety
Tim Collins	St. Clair School District	Superintendent
chandler holland	Minnesota State University at Mankato	Dir. EHS & Risk Management
Michael Peterson	HSEM	Regional Program Coordinator
Joe Reinemann	American Red Cross	Volunteer
Scott Meadows	CenterPoint Energy	Supervisor Field Operations
Anna Thill	Xcel Energy	Community Relations Manager
Brandon Brehmer	River Hills Ag- Pioneer seed Agency	Seed Seller, Farmer
Andy Wilke	Greater Mankato Growth	Executive Vice President
Dan Hart	Mankato Clinic	Director
Shawn Stoermann	Brown County Emergency Management	Emergency Management Director
Tammy Stewig	Le Sueur County Emergency Management	Emergency Management Director
Benjamin Johnson	Martin County Emergency Management	Emergency Management Director

Discussion Polls

The presentation included several polling questions to generate discussion and gather specific feedback from participants that would be used to support public outreach, identify local vulnerabilities, and determine the updated prioritization of hazards for inclusion in the plan. Following are the polling questions and participant responses.

POLL #1 (Plan Content – Vulnerability Analysis)

Question 1 - Are there any factors in your community that may have increased the community's vulnerability? (e.g. new development, increasing unhoused population, recent wildfire, loss of a major employer, recent drought, aging infrastructure)

Kathy Grinnell	No. Same as previous years.	City of Pemberton
Jeremy Clifton	Aging downtown building structures and increasing unhoused population	City of Mankato
Kelley Haeder	There is no 24/365 shelter for unhoused individuals, flooding	Blue Earth County/Mankato/rural areas
Kevin McCann	Minimal for Blue Earth County	North Mankato
Gail Jaeger	Agricultural owners/outdoor workers	Mapleton Township
Noelle Bruender	Increasing # of residents who do not speak English.	Blue Earth County
Phil Claussen	1. Homelessness resources are being reduced. 2. Risk of staring disease in community	Blue Earth County
DJ Williams	unknown... I don't know of any factors (besides climate change) that have increased the vulnerability in the last decade.	Rapidan Township
Kim Krengel	No	Beauford Township
Scott Salisbury	extreme rainfall events & River/bluff erosion	
David Paul	Wildland fires, new developments, empty buildings, highway construction.	City of Lake Crystal
Justin Neumann	Yes, increased unhoused population	City of Mankato
Dan Rotchadl	Recent flooding	Mankato Township
Ryan Thilges	Increased rainfall runoff volumes due to more severe events and increased impervious areas. Aging infrastructure due to underfunding of road and bridge resources.	Blue Earth County
City of St. Clair Minnesota	In the process of updating our oldest infrastucture	City of St. Clair, MN
Shawn Stoermann	None known	
Patty Oconnor	High frequency of severe weather ie: flooding, tornados, hail, lightening, etc.	
Joe Barnard	Blue Earth and Maple Rivers	Lyra Township
Joe Reinemann	Increase in multi-family housing units and higher density	Countywide
Patty Smith	Aging infrastructure	City of Amboy
Allen Marble	Increase in new housing in or near floodplain	townships
Stefanie Janike	The increase of field tiling east of town. Aging fire department, nearly half could retire today and we have a large fire district.	City of St. Clair
Jennifer Bromeland	With multi-family developments, we are vulnerable in the event that there would be a fire or other large-scale disaster in which persons living in the development would be displaced.	City of Eagle Lake
Sue Petty	No	
Brandon Brehmer	Yes, More pop. Not enough Emergency Resources	

Jeff Bengtson	some increase in unhoused population	City of Mankato
Liz Wille	New development and aging infrastructure	City of Madison Lake

Question 2 - Are there specific areas of concern in your community that you would consider to be more highly vulnerable to damages or danger resulting from future natural hazard events? Consider local critical infrastructure, systems, community assets, new development, or populations.

Kathy Grinnell	We have several senior citizens and do need a backup generator for emergencies.	City of Pemberton
Jeremy Clifton	downtown, closest to the river, aging building structures. mobile home and apartment housing have increased, making residents somewhat vulnerable to high winds/tornados	City of Mankato
Kelley Haeder	flooding, especially when it impacts lower income individuals/families who do not have the resources to mitigate the damage in a timely manner. The vulnerability of the aging population.	Blue Earth County/Mankato/rural areas
John Considine	Developed parcel adjacent to riverways are impacted by erosion.	
Kevin McCann	Minimal for Blue Earth County	City of North Mankato
Gail Jaeger	Local roads/flooding, fire station, school	Mapleton Township
Noelle Bruender	Populations at local nursing homes or group homes.	
Phil Claussen	Vulnerable populations	Blue Earth County
DJ Williams	Older population	Rapidan Township
Kim Kregel	Roads that have water/rivers near them	Beauford Township
Scott Salsbury	Blue Earth River & Le Sueur River - Roads, powerlines - houses, etc.	
David Paul	Single point of failure for ingress electricity as was an issue with the flooding last year.	City of Lake Crystal
Dan Rotchadl	Ravine and river adjacent properties and infrastructure.	Mankato Township
Ryan Thilges	Bridges and roads along or crossing Blue Earth or Le Sueur River. County Parks adjacent to rivers.	Blue Earth County
City of St. Clair Minnesota	Homes and businesses along the river	City of St. Clair, MN
Benjamin Honsey	Maple River K-12 School, Mapleton Community Home (nursing home), The Beacon (nursing/assisted living), Fire Station, Police Station, Wastewater Lift Station, Water Plant and water tower.	City of Mapleton
Joe Barnard	Erosion, flooding, and new houses increase that chance of issues	Lyra Township
Joe Reinemann	Ravines and tributaries to the Minnesota and Blue Earth Rivers are more at risk for flash flooding due to changes in weather patterns.	

Patty Smith	Not at this time	City of Amboy
Joshua Milow	Highly erodable river banks	countywide
Allen Marble	Landslides on rivers	townships
Stefanie Janike	Any home or business along the LeSueur River up to Main St. County bridge on the river. The fire dept effects a large area of BEC.	City of St. Clair.
Jennifer Bromeland	Eagle Lake is vulnerable due to flooding impacts and aging infrastructure.	City of Eagle Lake
Sue Petty	No	
Brandon Brehmer	All Ag farm places with Ag chemicals in their sheds.	
Jeff Bengtson	Large nursing home on Mound Ave (pathstone) in flood zone near water treatment plant	City of Mankato
Liz Wille	Yes - area of Sarah Circle has flooding risk. Homes were built too low and the more development we have, the flows increase to that area. We also have aging infrastructure in close proximity to lake	City of Madison Lake

POLL #2 (Slide 17) Blue Earth County 2025 Update of Hazard Prioritization

Meeting participants ranked each of the natural hazards listed below as what they felt was a high, moderate, or low hazard priority to include in the plan update.

Hazard Count Analysis

This table shows the frequency of each hazard type in the HIGH and LOW columns from the CSV data

HAZARD NAME	COUNT HIGH	COUNT LOW
Dam/Levee Failure	8	11
Drought	2	15
Extreme Cold	11	5
Extreme Heat	8	12
Flooding	43	0
Hail Storms	6	9
Land Subsidence (karst, sinkholes)	1	20
Landslides (slope failure that threatens structures or people)	19	4
Lightning	1	19
Tornadoes	34	0
Wildfire (or Wildland Fire)	2	23
Windstorms	19	3
Winter Storms	36	2

Summary Statistics

- Total unique hazards: 13
- Total HIGH entries: 190

- Total LOW entries: 123
- Most common HIGH hazard: Flooding (43 occurrences)
- Most common LOW hazard: Wildfire (23 occurrences)

Key Observations:

- Flooding and Tornadoes appear exclusively in the HIGH column
- Wildfire, Lightning, and Land Subsidence are predominantly LOW hazards
- Winter Storms in the second most common HIGH hazard but rarely appears as LOW.
- Drought appears much more frequently as a LOW hazard than HIGH

2025 Blue Earth County Prioritization of Hazards

The chart below reflects the planning team's updated prioritization of hazards that will be included in the Blue Earth County 2025 HMP Update.

HAZARD	Blue Earth County 2025
Flooding	High
Winter Storms	High
Windstorms	High
Tornadoes	High
Landslides	High
Hail	Moderate
Extreme Cold	Moderate
Extreme Heat	Moderate
Drought	Moderate
Land Subsidence	Moderate
Dam/Levee Failure	Moderate
Lightning	Low
Wildfire	Low

Other Comments or Questions

Following are additional comments or questions addressed during the planning team meeting and responses from meeting presenters:

- Joe Reinemann - Extreme heat needs to be higher when there are power outages. You should not look at heat in itself. Stacey Stark feedback: We do look at cascading effects of a hazard; if power outages are happening with extreme heat or is the concern, then it is addressed with associated mitigation actions. Extreme heat is profiled in the plan and as an independent hazard Blue Earth County considers it of moderate concern, based on frequency of events and impacts.
- Liz Thiesse - Garden City Township, Landslides
- Dan Hart – Are Cybersecurity and infrastructure failures covered by this plan? Stacey Stark response: The HMP does not cover cybersecurity except in the event of damage to a facility due to a natural hazard. Infrastructure failures are addressed within the realm of localized vulnerabilities

to natural hazards, such as power line failure due to heavy snow or wind storms; or dam failure due to flooding.

FEMA HMA Grant Funding:

As part of the planning team meeting, participants were informed that having a FEMA-approved Hazard Mitigation Plan in place is a requirement in order to apply for FEMA Hazard Mitigation Assistance Grant Programs. Examples of eligible projects were reviewed for participants to consider for potential inclusion in their local mitigation action charts, as applicable. It was noted that representatives from the county, local governments, and other stakeholder agencies/organizations must have documented participation in the planning process in order to formally adopt the plan and be eligible to apply for future FEMA HMA grants.

BLUE EARTH COUNTY HMP JURISDICTIONAL CONTACT LIST

Following is a list of the stakeholders that received an invitation to participate in Planning Team Mtg. #1 and will receive the meeting summary.

To submit suggested additions to this contact list, please contact Blue Earth County Emergency Management and provide the name of the jurisdiction, agency, or organization along with the person's full name, work title, and email address.

REPRESENTATION	NAME	TITLE
Blue Earth County Emergency Management	Eric Weller	Emergency Management Director
Blue Earth County Emergency Management	Paul Barta	Captain
Blue Earth County Emergency Management	Brenda Olmscheid	Office Coordinator
Blue Earth County Sheriff's Office	Jessica Busch	Office Coordinator
Blue Earth County Sheriff's Office	Jeff Wersal	Sheriff
Blue Earth County Sheriff's Office	Jeremy Brennan	Chief Deputy
Blue Earth County Administration	Robert W. Meyer	County Administrator
Blue Earth County Administration	Josh Milow	Deputy County Administrator
Blue Earth County Administration	Jessie Anderson	Communications Manager
Blue Earth County Facilities Management	Tim Edwards	Facilities Management Director
Blue Earth County Information Technology	Karri Harvey	Information Technology Director
Blue Earth County Property & Environmental Resources	Michael Stalberger	Property & Environmental Resources Director
Blue Earth County Property & Environmental Resources	Mark Manderfeld	Deputy Director
Blue Earth County Drainage Management	Craig Austinson	Drainage Management Coordinator
Blue Earth County Drainage Management	Ryan Hiniker	Drainage Management Coordinator
Blue Earth County Mapping & Data	David Sieberg	Mapping & Recording Records Specialist

Blue Earth County Mapping & Data	Besiem Yemiru	GIS and Technology Coordinator
Blue Earth County Planning & Zoning	John Considine	Zoning Administrator
Blue Earth County Assessor	Ryan Short	County Assessor
Blue Earth County Water Resources	Dane Lynch	Environmental Health Specialist - Wetlands
Blue Earth County Water Resources	Scott Salisbury	Land Use Planner - GIS Specialist
Blue Earth County Public Works / Parks	Ryan Thilges	Public Works Director
Blue Earth County Public Works / Parks	Chad Wilde	Assistant Public Works Director
Blue Earth County Public Works / Parks	Josh Downey	Parks Supervisor
Blue Earth County Public Health	Kelley Haeder	Public Health Supervisor
Blue Earth County Public Health	Chelsea Hunstad	Public Health Emergency Preparedness Coordinator
Blue Earth County Human Services	Phil Claussen	Human Services Director
Blue Earth County Board of Commissioners	Patty O'Connor	District 1 Commissioner
Blue Earth County Board of Commissioners	Vance Stuehrenberg	District 2 Commissioner
Blue Earth County Board of Commissioners	Mark Piepho	District 3 Commissioner
Blue Earth County Board of Commissioners	Kevin Paap	District 4 Commissioner /Chair
Blue Earth County Board of Commissioners	Kip Bruender	District 5 Commissioner / Vice Chair
City of Amboy (pop 535)	Patty Smith	City Administrator/Clerk-Treasurer
	Dave Witucki	Mayor
	Manuel Sanders	Fire Chief
	Don Wolters	Public Works
City of Eagle Lake (pop 3,278)	Jennifer Bromeland	City Administrator
	Garrett Steinberg	Council Member
	John Whittington	Mayor
	Vern Simpson II	Fire Chief
	Andrew Hartman	Public Works Director
City of Good Thunder (pop 560)	Sue Petty	City Clerk-Treasurer
	Robert Anderson	Mayor
	Phil Klammer	Fire Chief
City of Lake Crystal (pop 2,539)	Angela Grafstrom	City Administrator
	Todd Wiens	Mayor
	David Paul	Fire Chief
	Matthew Gangelhoff	Police Officer - Emergency Manager
	Dean Tibbetts	Public Works
City of Madison Lake (pop 1,247)	Liz Wille	City Administrator

	Al Dorn	Mayor
	Matthew Lee	Fire Chief
	Phil Wills	Police Chief
	Adam Fennell	Public Works
City of Mankato (pop 44,488)	Susan Arntz	City Manager
	Najwa Massad	Mayor
	Jeremy Clifton	Director of Public Safety
	Justin Neumann	Commander
	Jeff Bengtson	Associate Director of Public Safety
	Jeff Johnson	Public Works Director
	Jim Tatge	Facilities Project Manager
	Karl Keel	Interim Public Works Director
	Joe Grabianowski	Public Works Operations Superintendent
	Alex Petez	Interim City Engineer
	Tony Talamantez	Infrastructure Superintendent
City of Mapleton (pop 1,247)	Sarah Moore	Interim City Clerk
	Jeff Annis	Mayor
	Ben Honsey	Police Chief
	Ben Froehlich	Fire Chief
	Hunter Chaffee	Public Works
City of Minnesota Lake (pop 656) <i>partially in Faribault County</i>	Dawn Whitehead	City Clerk
	Jeff Ramsley	Mayor
	Ben Stendal	Police Chief
	Michael Bammert	Public Works Supervisor
City of North Mankato (pop 14,275) <i>partially in Nicollet County</i>	Kevin McCann	City Administrator
	Scott Carlson	Mayor
	Jim Zwaschka	Fire Chief
	Luke Arnold	Public Works Director
	Ross Gullickson	Police Chief/North Mankato EM
City of Pemberton (pop 224)	Kathy	Grinnell
	Ken Spielman	Mayor
	David Lau	Fire Chief
	Randy Gillette	Public Works
City of Saint Clair (pop 750)	Stefanie Janike	City Clerk

	Marvin More	Mayor
	Bill Fitzloff	Fire Chief
	Thad Baker	Public Works
City of Skyline (pop 288)	Samantha Erickson	City Clerk
	Paige Attarian	Mayor
City of Vernon Center (pop 328)	Kara Hansen	City Clerk
	Dana Ziegler	Mayor
	Jesse Kietzer	Fire Chief
	Mark Willette	Public Works
Beauford Township	Kim Kregnel	Clerk/Treasurer
Beauford Township	Dennis Johnson	Chair
Butternut Valley Township	Adam Jones	Clerk
Cambria Township	Mary Randall	Clerk
Cambria Township	Joel Fischer	Chair
Ceresco Township	Tammy Sonnabend	Clerk/Treasurer
Danville Township	Laurie Stenzel	Clerk
Decoria Township	Valerie Levos	Clerk
Decoria Township	Allan Marble	Supervisor
Garden City Township	Liz Thiesse	Clerk
Garden City Township	Josh Sargent	Chair
Jamestown Township	Ava Adams-Morris	Clerk
Judson Township	Jeff Davis	Clerk
Le Ray Township	Jordan Richardson	Clerk
Lime Township	Jill Hilgers	Clerk
Lime Township	Cody Hilgers	Chair
Lincoln Township	Tammy Petterson	Clerk
Lyra Township	Peggy L. Anderson	Clerk
Mankato Township	Dan Fogal	Clerk
Mapleton Township	Gail Jaeger	Clerk/Treasurer
McPherson Township	Lynda Kruse	Clerk
Medo Township	Jennifer Jaeger	Clerk
Pleasant Mound Township	Pam Shouts	Clerk
Rapidan Township	Dulcelina (D.J.) Williams	Clerk/Treasurer
Rapidan Township	Mike Krosch	Chair
Shelby Township	Gloria Mack	Clerk
South Bend Township	Jamie Malvin	Clerk/Treasurer
South Bend Township	June Lonnquist	Chair
South Bend Township	Justin Samuelson	Public Works
Sterling Township	Barb Lake	Clerk
Vernon Center Township	Melisa Rothenberger	Clerk/Treasurer

LOCAL & REGIONAL AGENCIES INVOLVED IN HAZARD MITIGATION		
MN HSEM	Mike Peterson	Region 1 Regional Program Coordinator
MnDOT	Greg Ous	District Engineer
DNR Ecological and Water Resources Division	Erynn Jenzen	Area Hydrologist
MN DNR Dam Safety Engineer	Jason Boyle	State Dam Safety Engineer
Blue Earth Soil & Water Conservation District	Jerad Bach	District Manager
South Central Technical Service Area	Ryan Jones	Engineer
Greater Blue Earth River Basis Alliance	Kay Gross	Administrative Coordinator
Natural Resources Conservation Service (NRCS)	Ciara Ahrens	District Conservationist, Mankato Field Office
BUSINESSES, ACADEMIA, AND OTHER PRIVATE ORGS.		
Center Point Energy	Scott Meadows	Supervisor Field Operations
Benco Electric Cooperative	Tim Braulick	Operations Manager
Xcel Energy	Anna Thill	Community Relations Manager
Janesville-Waldorf-Pemberton Public Schools	Jeremy Erler	Superintendent
Lake Crystal - Wellcome Memorial School District	Brett Benson	Superintendent
Mankato Area Public Schools	Paul Peterson	Superintendent
Mankato Area Public Schools	Scott Kaminski	Facilities
Maple River Schools	Dan Anderson	Superintendent
St. Clair School	Tim Collins	Superintendent
Minnesota State University Mankato	Chandler Holland	Director of Environmental Health, Safety & Risk Management
Mankato Clinic	Dan Hart	Director Operations
Ag	Brandon Brehmer	Farmer & Seeds Sales
Greater Mankato Growth	Andy Wilke	Executive Vice President
NONPROFIT ORGS/COMMUNITY-BASED ORGS THAT WORK WITH UNDERSERVED COMMUNITIES AND SOCIALLY VULNERABLE POPULATIONS		
American Red Cross	Sean Farley-Cowdin	Senior Community Disaster Program Manager
American Red Cross	Joe Reinemann	
Salvation Army	Marie Lewis	Major
Salvation Army	Leslie Johnson	Business Administrator
NEIGHBORING JURISDICTIONS		
Nicollet County Emergency Management	Justin Block	Emergency Management Director
Faribault County Emergency Management	Sue Jahnke	Emergency Manager
Waseca County Emergency Management	Denise Wright	Emergency Manager
Watonwan County Emergency Management	Ryan Visher	Emergency Manager

Martin County Emergency Management	Ben Johnson	Emergency Management Director
Le Sueur County Emergency Management	Tammy Stewig	Emergency Management Director
Brown County Emergency Management	Shawn Stoermann	Deputy Emergency Management Director

From: [Eric Weller](#)
Subject: Meeting Invitation - Blue Earth County Hazard Mitigation Plan Meeting # 1
Date: Thursday, May 29, 2025 9:41:11 AM
Attachments: [image001.png](#)
[image002.png](#)

BLUE EARTH COUNTY

HAZARD MITIGATION PLAN UPDATE – MEETING INVITATION

Greetings,

Your presence is requested at a Planning Team Meeting for the update of the **Blue Earth County Hazard Mitigation Plan**. You are requested to participate in this meeting because you have a position of administrative or departmental responsibility within the county, a municipal government, or are a key stakeholder related to the planning process. Emergency Managers from neighboring jurisdictions are also encouraged to attend so we may strengthen our shared mitigation efforts.

We will be holding the meeting virtually using Zoom conferencing.

Date: Wednesday, July 9, 2025

Time: 9:00 – 10:30 A.M.

RSVP: https://umn-private.zoom.us/webinar/register/WN_en5RuGbTRleAhLX43NMUiA

(Ctrl+Click to follow link)

When you register, you will be placed on an RSVP list and will be sent an email confirmation. If you are not able to attend, please seek to send another representative in your stead.

About the Hazard Mitigation Plan

In order to maintain eligibility for FEMA Hazard Mitigation Assistance (HMA) Grant Program funding, the county's hazard mitigation plan must be updated every 5 years. Our last plan is due for an update and our planning is currently underway. The plan addresses the natural hazards that face Blue Earth County and will result in the identification of mitigation actions that will help to reduce or eliminate the impact of future hazard events.

Meeting Information

This meeting will be facilitated by personnel from U-Spatial at the University of MN Duluth and Hundrieser Consulting LLC who are working closely with us on this project. The purpose of this meeting is to present on the update of the Blue Earth County HMP update and gather stakeholder feedback on several key discussion items, including:

- 1) Prioritization of the natural hazards to be profiled in the plan,
- 2) Identification of local vulnerabilities (i.e., infrastructure and populations),
- 3) Ideas for local mitigation actions for implementation, and
- 4) Review of FEMA Hazard Mitigation Assistance grant funding opportunities.

Please note that representatives from Blue Earth County, local governments, and other stakeholder agencies/organizations **must** have documented participation in the planning process in order to formally adopt the plan and be eligible to apply for future FEMA HMA grants.

We look forward to you joining us for this important meeting.

Thank you!

Eric Weller #2755 | Emergency Management Director

Blue Earth County

Sheriff's Office

Desk: 507-304-4797 | Cell: 507-714-5258

401 Carver Road | Mankato, MN

www.blueearthcountymn.gov



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Blue Earth County Hazard Mitigation Plan Update 2025 Planning Team Meeting #1

JULY 9, 2025



U-SPATIAL
UNIVERSITY OF MINNESOTA DULUTH
Driven to Discover

Welcome & Introductions

U-Spatial@UMD Project Leads



Stacey Stark
Project Manager
U-Spatial@UMD



Bonnie Hundrieser
HM Planning Specialist
Hundrieser Consulting LLC

Blue Earth County Project Lead

• Eric Weller, Blue Earth County
Emergency Management Director



Please type your name and representation in the CHAT – so others know who is here

PRESENTER: STACEY STARK

Meeting Participation

To make a comment or ask a question, please use the chat or raise your hand to speak.

PLEASE REMAIN MUTED AND VIDEO OFF SO EVERYONE CAN HAVE THE BEST EXPERIENCE.

USE CHAT:

- To send a message to everyone
- To send a message to individuals or the presenters
- To send a message to host to ask for help or ask a question that isn't for the whole group. The host is Stacey Stark.

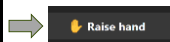


Chat

ASK TO SPEAK:



React



Raise hand

PRESENTER: STACEY STARK

Meeting Purpose & Agenda

The purpose of this meeting is to formally convene the **Blue Earth County HMP Planning Team** for a presentation on the plan update and to discuss key items required for the plan update.

Agenda

- Overview of HMP Key Points
- Review of Past Plan Hazard Risk Priorities, Hazard Profiles, and Current Hazard Prioritization
- Overview of Mitigation Strategies
- Overview of FEMA HMA grant program
- Discuss local mitigation ideas
- Overview of Next Steps



PRESENTER: STACEY STARK

Overview of HMP Key Points

BLUE EARTH COUNTY 2025 HMP UPDATE

PRESENTER: BONNIE HUNDRIESER

Plan Requirement

The Hazard Mitigation Plan (HMP) is a requirement of the Federal Disaster Mitigation Act of 2000 (DMA 2000).

- The development of a local government plan is required to maintain eligibility for FEMA HMA grant programs.
- Plans must be updated every 5 years.
- Must address all jurisdictions and engage key stakeholders + the public
- Must be approved by FEMA for meeting all federal requirements.

Blue Earth County HMP Update 2025

- Last plan was adopted in 2020.
- The updated plan will cover a 5-year window for implementation and grant program eligibility (**2026-2031**)
- Participating jurisdictions must have documented engagement in the planning process and adopt the final plan.



PRESENTER: BONNIE HUNDRIESER

Plan Purpose



The purpose of the HMP is to:

- **Conduct risk assessment** (history, future probability, impacts of natural hazards)
- **Conduct vulnerability assessment** (at-risk critical infrastructure and populations)
- **Conduct capabilities assessment** (plans, programs, policies, partnerships, funding, etc in place or that are lacking)
- **Develop plan of action** (strategies and mitigation actions for implementation).

PRESENTER: BONNIE HUNDRIESER

Who the Plan Covers

This is a **multi-jurisdictional plan** that covers Blue Earth County, including all cities and townships within the county.



The plan also takes into consideration the needs and concerns of other stakeholders such as schools, watershed districts, and agencies or organizations involved in mitigation or services to vulnerable populations within the county.

PRESENTER: BONNIE HUNDRIESER

Who Participates



Key Stakeholders

Local government as well as related non-governmental agencies & organizations must participate.

- 2 planning team meetings
- Public outreach
- Provision of local information (LMS forms, other data)
- Mitigation Action Charts
- Final plan review

The Public

The public must have an opportunity to learn about and provide input to the plan update.

- Use of news releases, social media, local bulletin boards, and public meetings or events.
- Must document local-level concerns and mitigation ideas
- Consider how to engage with underserved communities and vulnerable populations.

PRESENTER: BONNIE HUNDRIESER

Overview of Plan Content

BLUE EARTH COUNTY 2025 HMP UPDATE

PRESENTER: STACEY STARK

Plan Content

Hazard Identification

- The HMP addresses the **natural hazards** that pose risk to the county and its jurisdictions.
- Manmade hazards are not required to be addressed (per the DMA 2000).
- Hazards that are deemed to be of low risk may be omitted from the plan.
- Hazard risk may differ in cities and the county overall.

Flooding	Hail	Drought
Dam/Levee Failure	Lightning	Extreme Heat
Wildfire	Winter Storms	Extreme Cold
Windstorms	Landslides	Earthquakes
Tornadoes	Sinkholes & Karst	Coastal Erosion

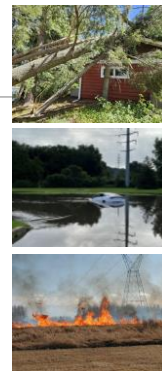
Natural hazard categories as per the State Hazard Mitigation Plan

PRESENTER: STACEY STARK

Plan Content

Risk Assessment

- History of events
- Probability of occurrence
- Severity
- Climate Change
- Identify if and how risk priorities have changed since the last plan. (Increased / Decreased)



PRESENTER: STACEY STARK

Plan Content

Vulnerability Analysis

- Inventory of critical infrastructure.
- Identify specific, local-level impacts and vulnerabilities.
- Includes local-level capabilities assessment that supports mitigation or identifies gaps
- Identify any factors (i.e., new development) that may increase the community's vulnerability.
- Review social vulnerability factors.



POLL #1

PRESENTER: STACEY STARK

Timeframe for development & Plan Format

Timeframe:

The planning process generally occurs over the course of 14-18 months from start to finish.

- The Blue Earth County Plan will be completed in 2025.

Format:

- PDF document (paper version)
- Interactive website companion
- Developed and hosted by U-Spatial at UMD



Example HMP website

PRESENTER: STACEY STARK

Hazard Prioritization

REVIEW OF THE HAZARD RISK PRIORITIES FOR
BLUE EARTH COUNTY

PRESENTER: STACEY STARK

Blue Earth County Past Prioritization of Hazards

This is at a
county level

HAZARD	Blue Earth 2020
Flooding	High
Winter Storms	High
Windstorms	High
Tornadoes	High
Hail	High
Lightning	High
Extreme Cold	Moderate
Extreme Heat	Moderate
Drought	Low
Wildfire	Low
Landslides	High
Land Subsidence	n/a
Dam/Levee Failure	Low

PRESENTER: STACEY STARK

Blue Earth County 2025 Update of Hazard Prioritization

Considerations:

- Increase/Decrease of events
- New development or change in environment
- demographic changes

HAZARD	Blue Earth 2025 for discussion
Flooding	high
Winter Storms	high
Windstorms	high
Tornadoes	high
Hail	moderate
Landslides	high
Extreme Cold	moderate
Extreme Heat	moderate
Drought	moderate
Wildfire	low
Lightning	low
Land Subsidence	moderate ?
Dam/Levee Failure	moderate

POLL #2

PRESENTER: STACEY STARK

Hazard Prioritization Poll results and discussion

Do any of these countywide hazards NOT
apply in a city?

PRESENTER: STACEY STARK

Comments or Questions?

Overview of Mitigation Actions & FEMA grants

DEVELOPMENT OF MITIGATION ACTIONS AND
ACTIVITIES ELIGIBLE FOR FEMA HAZARD
MITIGATION ASSISTANCE GRANT FUNDING

PRESENTER: STACEY STARK

PRESENTER: BONNIE HUNDRIESER

Mitigation Action Charts



MACs reflect each jurisdiction's plan of action to reduce the impacts of future natural hazard events. They are based on the information gathered from each community during the planning process.

- **Must** address hazards of moderate to high priority.
- **Must** address identified local vulnerabilities.
- **Must** identify priority, status, timeframe, responsibility, how incorporation/implementation will occur, and possible funding.

★ Eligible FEMA HMA grant activities **must** be identified in the risk assessment and plan of action.

PRESENTER: BONNIE HUNDRIESER

CITY OF BALATON				Mitigation Action Chart			
#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
5	Extreme Cold	Education & Awareness Programs	Conduct outreach to property owners on how to avoid freezing pipes during periods of extreme cold.	Existing High 2025-2030	City Admin / City EM	We do this as part of our outreach during periods of extreme cold. We remind homeowners to run a stream of hot water to avoid frozen pipes during periods of extreme cold.	City Funding
6	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Obtain a portable generator for our City Hall and Community Center that serves as our local shelter if people are displaced from a severe storm event or extended power outage.	New High 2025-2030	City EM / City Public Works	The city will work to purchase a generator as funding is available. If necessary, we will seek possible outside grant funding.	City Funding, FEMA 5% Initiative Grant Funding
7	Severe Summer Storms	Structure & Infrastructure Projects	Work with the local mobile home park owner to construct a storm shelter or tornado safe room.	New High 2025-2030	City EM, Public Works	The city will work with our local mobile home park operator to evaluate possible shelter solutions, or to establish an alternate facility location for residents to take shelter. The city would work with Leon County Emergency Management to seek potential FEMA grant funding for a tornado safe room.	City Funding, FEMA BRAC grant funding
8	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish and enforce watering use restrictions when in periods of severe drought and raise public awareness of water conservation measures.	New Moderate 2025-2030	City Admin	The city will enforce emergency water use restrictions as per direction from the MSF DWR. The city will also do outreach to help make residents aware of limitations on non-essential water use. We recently developed a new lawn irrigation ordinances.	City Funding
9	Flooding	Structure & Infrastructure Projects	Implement new storm sewer upgrades as construction projects and purchase additional pumps in the event of flooding.	Existing Moderate 2025-2030	City Public Works	Our public works staff monitors and addresses any stormwater infrastructure upgrades and equipment as needed.	City Funding

PRESENTER: BONNIE HUNDRIESER

FEMA HMA Grant Funding



FEMA

Example eligible grant activities:

- All applicants **must** be covered by an approved HMP and have formally adopted the plan.
- Projects **must** be addressed in the risk assessment and be identified in the plan of action.
- Several different grant programs
- State Hazard Mitigation Officer is the main POC for questions
- Property Acquisition
- Tornado Safe Rooms
- Burying Powerlines
- Wildfire Mitigation
- Soil Stabilization
- Minor Localized Flood Reduction
- Green Infrastructure
- "5% Initiative" (i.e., warning systems, generators, public awareness/education campaigns)

PRESENTER: BONNIE HUNDRIESER

Overview of Mitigation Strategies

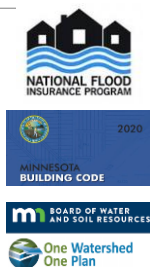
THE FOLLOWING STRATEGIES ARE RECOMMENDED GUIDANCE IN THE DEVELOPMENT OF LOCAL MITIGATION ACTIONS

PRESENTER: BONNIE HUNDRIESER

LOCAL PLANNING & REGULATIONS

These actions include policies or codes that influence the way land is developed and structures are built, and also incorporate mitigation into other plans.

- Enforce floodplain and shoreland ordinances to regulate development in flood risk areas.
- Adopt and enforce building codes
- Improve stormwater management planning
- Incorporate mitigation into comp plans
- Enforce watering / burning restrictions during periods of drought



PRESENTER: BONNIE HUNDRIESER

STRUCTURE & INFRASTRUCTURE PROJECTS

These actions protect structures and infrastructure by changing them or removing them from danger.

- Construction of tornado safe rooms.
- Burying powerlines
- Property buyouts for properties at risk to repetitive flooding or failure to landslides
- Removal of the Rapidan Dam
- Reconstruction of the CR9 bridge (2026-2027)
- Upsizing culverts, raising roads

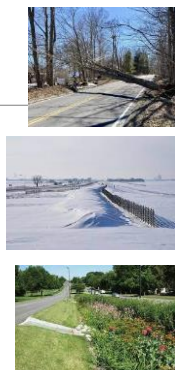


PRESENTER: BONNIE HUNDRIESER

NATURAL SYSTEMS PROTECTION

These actions use a natural systems approach to minimize damage and losses from natural hazard events.

- Tree management near roads & powerlines
- Floodplain and stream restoration
- Soil stabilization on at-risk slopes
- River restoration following removal of the Rapidan Dam
- Living snow fences to reduce drifting
- Rain gardens to slow impacts of rain events



PRESENTER: BONNIE HUNDRIESER

EDUCATION & AWARENESS PROGRAMS

These actions inform and educate the community to raise awareness of hazards and ways to mitigate risk.

- Promoting sign up for CodeRED etc.
- Sharing information on severe weather awareness
- Promoting personal preparedness
- Tornado season education
- Outreach to vulnerable populations
- Wildfire safety (creation of defensible space, burning restrictions)

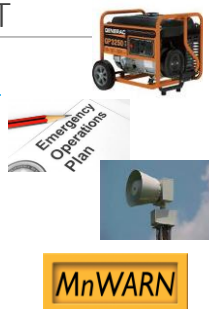


PRESENTER: BONNIE HUNDRIESER

MITIGATION PREPAREDNESS & RESPONSE SUPPORT

These actions are typically not considered mitigation, but support reduction of the effects of damaging natural hazard events.

- Flood fight plans and equipment
- Installing generator backup power
- Development of EOPs
- Shelter planning and training
- Working with facilities that care for vulnerable populations (i.e., schools, nursing homes)
- Installation of outdoor warning sirens.
- Joining MnWARN for utility disaster mutual aid



PRESENTER: BONNIE HUNDRIESER

Comments or Questions?

Do you have any ideas for specific mitigation activities for implementation?

PRESENTER: BONNIE HUNDRIESER



Following Planning Team Meeting #1

1. HMP News Release #1

Blue Earth County and local jurisdictions will receive a news release to post locally via websites, social media, bulletin boards etc and report on where it was shared with the public.

2. Local Mitigation Survey Form

Representatives from Blue Earth County and each city* jurisdiction will participate in filling out an online "LMS" form. The form is used to collect local information that is required for the plan update. (*Minnesota Lake and North Mankato are completed)

PRESENTER: BONNIE HUNDRIESER

Questions?

What questions do you have for
U-Spatial@UMD about development of the
HMP or next steps?

PRESENTER: STACEY STARK

Contact Information

Stacey Stark, MS, GISP

U-Spatial@UMD

slstark@d.umn.edu

218-726-7438

Bonnie Hundrieser, HM Planner

Hundrieser Consulting LLC

hundrieserconsulting@outlook.com

218-343-3468

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Driven to Discover


**HUNDRIESER
CONSULTING LLC**

PRESENTER: STACEY STARK

Blue Earth County HMP Planning Team Meeting #2

9/24/25 Meeting Summary & Documentation

Summary: On September 24, 2025, Blue Earth County Emergency Management convened key county, city, and township representatives, as well as neighboring jurisdictions and other stakeholders to participate in the 2nd and final Planning Team Meeting for the update of the Blue Earth County Hazard Mitigation Plan (HMP). The purpose of the meeting was to formally convene the Blue Earth County HMP Planning Team for a presentation on the draft plan and discussion of key items prior to public review and submission of the plan to HSEM and FEMA. The meeting was held via Zoom webinar video conference and was facilitated by Stacey Stark and Bonnie Hundrieser of the U-Spatial@UMD project team.

Stakeholder Invitations: Blue Earth County Emergency Management invited all stakeholders included on the county's HMP Update Jurisdictional Contact List (JCL), which includes the key County Contacts, City Contacts, Township Contacts, Other Stakeholder Contacts, and Neighboring Jurisdiction Contacts identified to be invited to participate in the plan update process. Contacts were encouraged to engage additional staff or to send someone in their stead if they could not attend. A copy of the county's Jurisdictional Contact List is included with this meeting summary.

Meeting Participants: A total of **48** people attended the meeting. Representation included elected officials and departmental staff from Blue Earth County and the cities of Amboy, Eagle Lake, Good Thunder, Lake Crystal, Madison Lake, Mankato, Mapleton, North Mankato, St. Clair, and Vernon Center. The cities of Minnesota Lake and Skyline were not available to participate and were not in attendance. Other stakeholders, including neighboring jurisdictions, participated in the meeting. A participant list is provided below:

- 1 Eric Weller, Blue Earth County Sheriff's Office, Emergency Management Director
- 2 Jeremy Brennan, Blue Earth County Sheriff's Office, Chief Deputy
- 3 Paul Barta, Blue Earth County Sheriff's Office, Captain
- 4 Jessica Anderson, Blue Earth County, Communications Manager
- 5 Kelley Haeder, Blue Earth County Public Health, Supervisor
- 6 Josh Milow, Blue Earth County, Deputy County Administrator
- 7 Tim Edwards, Blue Earth County, Facilities Director
- 8 David Sieberg, Blue Earth County, Mapping and Property Records Specialist
- 9 Ryan Thilges, Blue Earth County Public Works, County Engineer
- 10 Stefan Gantert, Blue Earth County Public Works, Assistant County Engineer
- 11 Chelsea Hunstad, Blue Earth County Public Health, Public Health Nurse
- 12 Craig Austinson, Blue Earth County, County Drainage Systems Coordinator
- 13 Patty Smith, City of Amboy, Administrator, Clerk-Treasurer
- 14 Andrew Hartman, City of Eagle Lake, Public Works Director
- 15 Vern Simpson II, City of Eagle Lake Volunteer Fire Dept., Fire Chief
- 16 Jennifer Bromeland, City of Eagle Lake, City Administrator
- 17 Sue Petty, City of Good Thunder, Clerk/Treasurer

- 18 Todd Wiens, City of Lake Crystal, Mayor
- 19 David Paul, City of Lake Crystal FD, Chief
- 20 Matthew Gangelhoff, City of Lake Crystal Police Dept., Sergeant
- 21 Liz Wille, City of Madison Lake, City Administrator
- 22 Susan Arntz, City of Mankato, City Manager
- 23 Joe Grabianowski, City of Mankato, Public Works Operations Superintendent
- 24 Justin Neumann, City of Mankato Dept. of Public Safety, Commander
- 25 Ryan Thormodson, City of Mankato, Senior Facilities Technician
- 26 Sarah Moore, City of Mapleton, City Clerk/Treasurer
- 27 Benjamin Honsey, City of Mapleton Police Dept., Chief of Police
- 28 Ross Gullickson, City of North Mankato, Chief of Police
- 29 Stefanie Janike, City of St. Clair, Clerk/Treasurer
- 30 City of St. Clair, City of St. Clair, Public Works
- 31 Kara Hansen, City of Vernon Center, Clerk-Treasurer
- 32 Kim Krengel, Beauford Township, Clerk
- 33 Valerie Levos, Decoria Township, Clerk
- 34 Joe Barnard, Lyra Township, Chairman
- 35 Dan Rotchadl, Mankato Township, Chairman
- 36 Gail Jaeger, Mapleton Township, Clerk/Treasurer
- 37 Steve More, McPherson Township, Treasurer
- 38 DJ Williams, Rapidan Township, Clerk Treasurer
- 39 Scott Kaminski, Mankato Area Public School, Director of Facilities and Safety
- 40 Tim Collins, St. Clair Public School District, Superintendent St. Clair Schools
- 41 Chandler Holland, Minnesota State Mankato, Dir. EHS & Risk Management
- 42 Dan Hart, Mankato Clinic, Director
- 43 Anna Thill, Xcel Energy, Community Relations Manager
- 44 Scott Morgan, MnDOT, Maintenance Engineer
- 45 Leslie Johnson, The Salvation Army, Mankato, Business Administrator
- 46 Shawn Stoermann, Brown County Emergency Management, Emergency Management Director
- 47 Tammy Stewig, Le Sueur County, Director of Emergency Management
- 48 Ryan Visher, Watonwan County Emergency Management, Director

Presentation Overview: The PowerPoint presentation covered the following items about the process and content of the plan update. A PDF of the presentation slides is included with this meeting summary.

- Meeting Purpose and Agenda
- About the Project Team
- Overview of Plan Update
- Who the Plan Covers
- Who Needs to Participate

- Overview of the Structure of the HMP (Website and PDF)
- Prioritization of Natural Hazards
- Review of Risk Assessment Factors and Hazard Profiles
- Overview of Mitigation Action Charts and FEMA HMA Grant Funding
- Review of Mitigation Strategies and Actions
- Open Discussion (Comments and Questions)
- Discussion of Next Steps & answer your questions

The opening PowerPoint presentation covered a re-cap of key points about the plan update, a review of the Risk Assessment & Vulnerability Analysis, an overview of FEMA Hazard Mitigation Assistance (HMA) grant funding; an overview of how mitigation actions are developed and an overview of the jurisdictional Mitigation Action Charts (MACs). Following the presentation, participants were provided with an opportunity to review and discuss the county and local mitigation action charts. This discussion period offered a facilitated opportunity for participants to consider any changes or new additions to the MACs prior to completion of the draft plan for public review.

BLUE EARTH COUNTY HMP PLANNING TEAM MEETING #2 DISCUSSION NOTES

- Eric Weller, BEC Emergency Management: If we have any corrections on critical infrastructure information on the HMP website maps, how do we get that corrected? / Stacey Stark: You can send any corrections to me and we will make the updates.
- Susan Arntz, City of Mankato: Noted a name change from Mankato State University to Minnesota State University – Mankato. Also noted that the city of Mankato has a ravine project that she would like to make sure is included (Highland Park Ravine Project). / Bonnie Hundrieser noted she will follow up after the meeting.

Meeting Conclusion: The meeting concluded with an overview and timeline of the upcoming next steps for public review and submission of the draft plan to HSEM and FEMA for final review and approval.

Included with this meeting summary are the following:

- Blue Earth County HMP Jurisdictional Contact List
- Meeting Invitation to Stakeholders
- PowerPoint Presentation Slides

Meeting Summary Prepared By: Bonnie Hundrieser, U-Spatial@UMD Project Team

BLUE EARTH COUNTY HMP JURISDICTIONAL CONTACT LIST

Following is a list of the stakeholders that received an invitation to participate in Planning Team Mtg. #2 and will receive the meeting summary.

REPRESENTATION	NAME	TITLE
Blue Earth County Emergency Management	Eric Weller	Emergency Management Director
Blue Earth County Emergency Management	Paul Barta	Captain
Blue Earth County Sheriff's Office	Jessica Busch	Office Coordinator
Blue Earth County Sheriff's Office	Jeff Wersal	Sheriff
Blue Earth County Sheriff's Office	Jeremy Brennan	Chief Deputy
Blue Earth County Administration	Robert W. Meyer	County Administrator
Blue Earth County Administration	Josh Milow	Deputy County Administrator
Blue Earth County Administration	Jessie Anderson	Communications Manager
Blue Earth County Facilities Management	Tim Edwards	Facilities Management Director
Blue Earth County Information Technology	Karri Harvey	Information Technology Director
Blue Earth County Property & Environmental Resources	Michael Stalberger	Property & Environmental Resources Director
Blue Earth County Property & Environmental Resources	Mark Manderfeld	Deputy Director
Blue Earth County Drainage Management	Craig Austinson	Drainage Management Coordinator
Blue Earth County Drainage Management	Ryan Hiniker	Drainage Management Coordinator
Blue Earth County Mapping & Data	David Sieberg	Mapping & Recording Records Specialist
Blue Earth County Mapping & Data	Besiem Yemiru	GIS and Technology Coordinator
Blue Earth County Planning & Zoning	John Considine	Zoning Administrator
Blue Earth County Assessor	Ryan Short	County Assessor
Blue Earth County Water Resources	Dane Lynch	Environmental Health Specialist - Wetlands
Blue Earth County Water Resources	Scott Salsbury	Land Use Planner - GIS Specialist
Blue Earth County Public Works / Parks	Ryan Thilges	Public Works Director
Blue Earth County Public Works / Parks	Chad Wilde	Assistant Public Works Director
Blue Earth County Public Works / Parks	Josh Downey	Parks Supervisor
Blue Earth County Public Health	Kelley Haeder	Public Health Supervisor
Blue Earth County Public Health	Chelsea Hunstad	Public Health Emergency Preparedness Coordinator
Blue Earth County Human Services	Phil Claussen	Human Services Director

Blue Earth County Board of Commissioners	Patty O'Connor	District 1 Commissioner/Vice Chair
Blue Earth County Board of Commissioners	Vance Stuehrenberg	District 2 Commissioner
Blue Earth County Board of Commissioners	Mark Piepho	District 3 Commissioner
Blue Earth County Board of Commissioners	Kevin Paap	District 4 Commissioner
Blue Earth County Board of Commissioners	Kip Bruender	District 5 Commissioner / Chair
City of Amboy (pop 535)	Patty Smith	City Administrator/Clerk-Treasurer
	Mike Sevcik	Mayor
	Manuel Sanders	Fire Chief
	Don Wolters	Public Works
City of Eagle Lake (pop 3,278)	Jennifer Bromeland	City Administrator
	Garrett Steinberg	Council Member
	John Whittington	Mayor
	Vern Simpson II	Fire Chief
	Andrew Hartman	Public Works Director
City of Good Thunder (pop 560)	Sue Petty	City Clerk-Treasurer
	Robert Anderson	Mayor
	Phil Klammer	Fire Chief
City of Lake Crystal (pop 2,539)	Angela Grafstrom	City Administrator
	Todd Wiens	Mayor
	David Paul	Fire Chief
	Matthew Gangelhoff	Police Officer - Emergency Manager
	Dean Tibbetts	Public Works
City of Madison Lake (pop 1,247)	Liz Wille	City Administrator
	Al Dorn	Mayor
	Matthew Lee	Fire Chief
	Phil Wills	Police Chief
	Adam Fennell	Public Works
City of Mankato (pop 44,488)	Susan Arntz	City Manager
	Najwa Massad	Mayor
	Jeremy Clifton	Director of Public Safety
	Justin Neumann	Commander
	Jeff Bengtson	Associate Director of Public Safety
	Jeff Johnson	Public Works Director
	Jim Tatge	Facilities Project Manager
	Karl Keel	Interim Public Works Director

	Joe Grabianowski	Public Works Operations Superintendent
	Alex Petez	Interim City Engineer
	Tony Talamantez	Infrastructure Superintendent
City of Mapleton (pop 1,247)	Sarah Moore	Interim City Clerk
	Jeff Annis	Mayor
	Ben Honsey	Police Chief
	Ben Froehlich	Fire Chief
	Jake Thompson	Public Works
City of Minnesota Lake (pop 656) <i>partially in Faribault County</i>	Dawn Whitehead	City Clerk
	Jeff Ramsley	Mayor
	Ben Stendal	Police Chief
	Michael Bammert	Public Works Supervisor
City of North Mankato (pop 14,275) <i>partially in Nicollet County</i>	Kevin McCann	City Administrator
	Scott Carlson	Mayor
	Jim Zwaschka	Fire Chief
	Luke Arnold	Public Works Director
	Ross Gullickson	Police Chief/North Mankato EM
City of Pemberton (pop 224)	Kathy	Grinnell
	Ken Spielman	Mayor
	David Lau	Fire Chief
	Randy Gillette	Public Works
City of Saint Clair (pop 750)	Stefanie Janike	City Clerk
	Marvin More	Mayor
	Bill Fitzloff	Fire Chief
	Thad Baker	Public Works
City of Skyline (pop 288)	Samantha Erickson	City Clerk
	Joanne Boettcher	Public Safety Representative

From: [Eric Weller](#)
Subject: Meeting Invitation - Hazard Mitigation Planning Team Update - Meeting # 2 (final)
Date: Wednesday, August 13, 2025 7:17:34 AM
Attachments: [image001.png](#)
[image002.png](#)

BLUE EARTH COUNTY

HAZARD MITIGATION PLAN UPDATE – MEETING INVITATION

Greetings,

Your presence is requested at the **2nd Planning Team Meeting** for the update of the **Blue Earth County Hazard Mitigation Plan (HMP)**. You are requested to participate in this vital meeting because you have a position of administrative or departmental responsibility within either the county, a municipal government, or are a key stakeholder related to the planning process. **Emergency Managers** from neighboring jurisdictions are also encouraged to attend so we may strengthen our shared mitigation efforts. This meeting will be the final planning meeting for the HMP update process.

We will be holding the meeting virtually using Zoom webinar:

Date: Wednesday, September 24, 2025
Time: 9:00 a.m. – 10:30 a.m.
Register: [Control+Click here to follow to link to register for the meeting](#)

The purpose of this meeting is to provide an overview of the plan and interactive website, including a review of the updated risk assessment for natural hazards that affect the county. We will also discuss the Mitigation Action Charts that will be specific to Blue Earth County and each city, as well as funding opportunities available under the FEMA Hazard Mitigation Assistance grant programs.

Your participation in this meeting and feedback on the draft plan is important to us. The draft Blue Earth County HMP is nearing completion and will be ready for review by planning team members and the public in the coming weeks.

When you register, you will automatically be placed on an RSVP list. If you are not able to attend, please consider sending another representative in your stead.

Thank you,

Eric Weller #2755 | Emergency Management Director

Blue Earth County

Sheriff's Office

Desk: 507-304-4797 | Cell: 507-714-5258

401 Carver Road | Mankato, MN

www.blueearthcountymn.gov



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Blue Earth County Hazard Mitigation Plan Update 2025 Planning Team Meeting #2

September 24, 2025



U-SPATIAL
UNIVERSITY OF MINNESOTA DULUTH
Driven to Discover

Welcome & Introductions

U-Spatial@UMD Project Leads



Stacey Stark
Project Manager
U-Spatial@UMD



Bonnie Hundrieser
HMP Planning Specialist
Hundrieser Consulting LLC

Blue Earth County Project Lead

- Eric Weller, Blue Earth County
Emergency Management Director



Please type your name and representation in the CHAT – so others know who is here

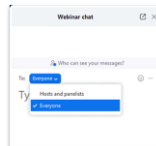
PRESENTER: STACEY STARK

Zoom Logistics

PLEASE REMAIN MUTED AND VIDEO OFF SO EVERYONE CAN HAVE THE BEST EXPERIENCE.

USE CHAT:

- Send a message to everyone
- Send a message to individuals or
- Send a message to host to ask for help or ask a question that isn't for the whole group. The host is Stacey Stark



ASK TO SPEAK:



PRESENTER: STACEY STARK

Meeting Purpose & Agenda



This meeting formally convenes the **Blue Earth County HMP Planning Team** for a presentation on the draft plan and discussion of key items prior to public review and submission of the plan to HSEM and FEMA.

Agenda

- Recap of Key HMP Points
- Preview of Deliverables
- Review of Risk Assessment & Vulnerability Analysis in Website
- Overview of FEMA HMA Funding and Mitigation Action Charts
- Review & Feedback
- Next Steps

PRESENTER: STACEY STARK

Overview of Plan Update

Blue Earth County is updating its **Hazard Mitigation Plan (HMP)** to fulfill a state & federal requirement. The plan must be updated every 5 years. The last plan was adopted in 2020.

The purpose of the plan is to identify & assess natural hazards that pose risk to the county and its jurisdictions and **develop long-term strategies and mitigation actions** that will help to reduce or eliminate the impact of future hazard or disaster events.



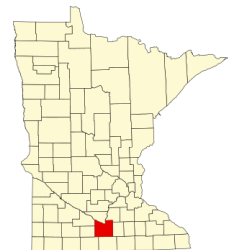
Hazard Mitigation is any action taken to reduce or eliminate long term risk to people and property from natural disasters.

PRESENTER: BONNIE HUNDRIESER

Who the Plan Covers

This is a **multi-jurisdictional plan** that covers Blue Earth County, including all cities and townships within the county.

The plan also takes into consideration the needs and concerns of other stakeholders such as schools, watershed districts, and agencies or organizations involved in mitigation or services to vulnerable populations within the county.



PRESENTER: BONNIE HUNDRIESER

Stakeholder Involvement



Planning Team

- County and local government, neighboring jurisdictions, and related agencies or organizations.
- Participation in planning team meetings, public outreach, local mitigation survey, provision of spatial or other data, and review of draft plan.

The Public

- Opportunity to learn about the plan and provide feedback on local-level concerns, mitigation ideas, and review of draft plan.

PRESENTER: BONNIE HUNDRIESER

PDF document:

- All FEMA required elements
- Limited figures & images
- Integrated links to website
- Local mitigation surveys
- Plans & programs in place
- Past mitigation action review
- Planning team meetings
- Outreach & engagement documentation



- Risk and vulnerability of each hazard
- Mitigation actions!

Both formats

Deliverables



Website companion:

- Links to PDF components
- Interactive maps and context
- Critical infrastructure and assets
- Simple, concise explanations
- Public input form on site

PRESENTER: STACEY STARK

Prioritization of Hazards for Blue Earth County

NATURAL HAZARDS

- Probability and Severity of natural hazard events (risk)
- Observed increase or decrease in risk since last plan
- Jurisdictional variations in risk (i.e., local vulnerabilities, changes in development)

Natural Hazards	Current Priority
Flooding	High
Winter Storms	High
Windstorms	High
Tornadoes	High
Landslides	High
Hailstorms	Moderate
Extreme Cold	Moderate
Extreme Heat	Moderate
Drought	Moderate
Land Subsidence	Moderate
Dam Failure	Moderate
Lightning	Low
Wildfire	Low

PRESENTER: STACEY STARK

Hazards Risk Assessment

- Validates the prioritization of hazards
- Provides probability and severity of future events as possible
- Identifies vulnerable populations and structures at risk as possible
- Considers variable geographic vulnerability
- Informs Mitigation Actions in the HMP



PRESENTER: STACEY STARK

Website Demo

z.umn.edu/BlueEarthHMP

Comments and Questions?

Overview of Mitigation Action Charts



Mitigation Action Charts are the end product of the HMP.

They demonstrate a community's 5-year plan to:

- Reduce future risk to natural hazard events.
- Address local vulnerabilities through targeted activities.
- Utilize local capabilities to implement actions.



Eligible FEMA HMA grant activities **must** be identified in the plan of action.

PRESENTER: BONNIE HUNDRIESER

BLUE EARTH COUNTY					Mitigation Action Chart	
#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Possible Funding
33	Flooding / Landslide	Structure & Infrastructure Projects / Natural Systems Protection	PROPERTY BUYOUTS Conduct buyouts of 6 properties along the Blue Earth River that are at risk of landslide failure due to the area serves flooding event.	In Progress High 2020-2023	RECEM in coordination with HSECM	Internal: REC SO, ERM External: FEMA HMA, ERM, Private property owner cost share
34	Flooding / Dam Failure	Structure & Infrastructure Projects / Natural Systems Protection	RAFFMAN DAM REMOVAL Remove the Raffman Dam and address river restoration following dam removal.	In Progress High 2020-2023	REC PW in coordination with RECM	Internal: REC PW External: FEMA HMA, ERM, Private property owner cost share

"Previous Integration of HMP"



In addition to jurisdictional review of local mitigation action charts:

- Participating jurisdictions (county and cities) must provide a description of how the past HMP was integrated into other planning mechanisms.
- If information from the prior HMP was **not** integrated, this just be stated (and if possible, why).

What are "Planning Mechanisms"?

- Plans, Policies, Ordinances
- Public Education & Outreach
- Implementation of projects (i.e., warning sirens, flood mitigation, installation of generators)
- Other EM related programs or projects (i.e., shelter planning)
- County and partner coordination

CITY OF EAGLE LAKE					Mitigation Action Chart	
#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Possible Funding
10	Extreme Temperatures Heat/Cold	Mitigation Preparedness & Response Support	Be prepared to provide emergency sheltering to vulnerable residents during periods of extreme heat or cold temperatures.	Existing High 2008-2023	City Admin, City ERM	Internal: City Gen. Operating Budget
11	Flooding	Structure & Infrastructure Projects	Work to implement recommended activities in the city's Stormwater and Community Resiliency Plan to address flood mitigation measures that help the city to handle future high rate events.	Existing High 2008-2023	City Public Works Dept.	Internal: City PW Budget External: MDT FFA, FEMA, HMA, ERM, Private property owner cost share

FEMA Mitigation Grant Funding



FEMA

Example Section 404 activities:

- Property Acquisition
- Tornado Safe Rooms
- Bury Overhead Powerlines
- Wildfire Mitigation
- Soil Stabilization
- Flood Risk Reduction
- Green Infrastructure
- Other projects difficult to conduct a standard BCA (i.e., tornado warning sirens, generators for critical facilities)

Section 406

Available after a disaster occurs. Focuses on mitigation measures for facilities that have actually been damaged in a particular disaster.

Section 404

Requires an approved & adopted HMP. Funds mitigation projects for both damaged and non-damaged facilities. Several different grant programs.

PRESENTER: BONNIE HUNDRIESER

Strategy #1 - Local Planning & Regulations



Blue Earth County Examples:

- Participation in NFIP and enforcement of ordinances that reduce impacts of high rain events (Floodplain, Shoreland)
- Participation in regional watershed planning with SWCD and area WD's (1W1P).
- Implementation of watering restrictions during periods of extreme drought.
- Enforcement of state or local regulations for new development.



PRESENTER: BONNIE HUNDRIESER

Strategy #2 - Structure & Infrastructure Projects

Blue Earth County Examples:

- Installation of new outdoor warning sirens
- Construction of tornado safe rooms
- Burying powerlines to reduce power failure
- Conduct buyouts of 6 properties along the Blue Earth River that are at risk of landslide failure due to the 2024 severe flooding event.
- Rapidan Dam Removal + river restoration, CR9 Bridge Replacement
- Local stormwater management improvement projects to manage future high-rain events



PRESENTER: BONNIE HUNDRIESER

Strategy #3 - Natural Systems Protection

Blue Earth County Examples:

- Vegetation management along roads to reduce the risk of downed trees and branches resulting from heavy snow, ice, or high winds.
- Flash Flooding – Stormwater Storage to reduce ravine erosion (BEC PER + South Bend Twp, Mankato Twp, and City of Mankato)
- Mankato State University – Restoration and mitigation plans to address ravine erosion and campus flooding
- Other examples:
 - Planting Living Snow Fences to reduce snow drifting
 - Installing Rain Gardens to reduce impacts of high rain events



PRESENTER: BONNIE HUNDRIESER

Strategy #4 - Education & Awareness Programs



Blue Earth County Examples:

- Promoting sign-up for the county's emergency notification system.
- Encouraging residents to be aware of and prepared for severe weather events, extreme temperatures, tornado risk, and extended power outages.
- Sharing information across platforms – county and city websites & social media, community bulletin boards, local newspapers, public meetings, or other in-person events.



PRESENTER: BONNIE HUNDRIESER

Strategy #5 - Mitigation Preparedness & Response Support

Blue Earth County Examples:

- Obtaining generators for backup power
- Update of county EOP / Convening BEC Emergency Preparedness Group
- Shelter Plans / Warming, Cooling Centers
- Planning assistance to schools and LTC Facilities for vulnerable populations
- 2026 BEC Comprehensive Assessment of county-wide sirens.
- Participation in regional EM planning, training, and exercising



PRESENTER: BONNIE HUNDRIESER

Comments and Questions?



Review of Draft Plan and Public Review & Comment Period



Sept - Oct, 2025

Following Planning Team Mtg. #2

- Completion of City MAC reviews + description of "Previous Integration of Past HMP"
- County review of draft plan
- Public review & comment period (News Release #2) – documentation of local postings

PRESENTER: BONNIE HUNDRIESER



Oct - Nov, 2025

Draft Plan Submission to HSEM & FEMA, Plan Approval, and Collection of Adopting Resolutions

- Draft plan will be submitted first to HSEM and then to FEMA for approval for meeting all Federal requirements.
- Typically requires 1-2 months.
- APA letter
- EM coordination of adopting resolutions from each city.
- Final approval letter

PRESENTER: BONNIE HUNDRIESER

Questions?

What questions do you have for U-Spatial@UMD about the draft HMP or next steps ?

PRESENTER: STACEY STARK

Contact Information

Stacey Stark, MS, GISP

U-Spatial@UMD

slstark@d.umn.edu

218-726-7438

U-SPATIAL
UNIVERSITY OF MINNESOTA DULUTH
Driven to Discover

Bonnie Hundrieser, HM Planner

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**HUNDRIESER
CONSULTING LLC**

PRESENTER: STACEY STARK

Appendix G – Public Outreach & Engagement Documentation

Blue Earth County MHMP News Release #1

Record of Public Input & Incorporation

Overview: On July 14, 2025 Blue Earth County Emergency Management put out a news release titled “Public Input Wanted as Blue Earth County Updates Multi-Hazard Mitigation Plan” to announce the start of the county’s Hazard Mitigation Plan. The news release provided information on the purpose and content of the plan, who the plan covers, stakeholders involved in the plan update and examples of hazard mitigation activities. Blue Earth County used the news release to gather feedback from residents and businesses from across the county to incorporate into the plan, inviting feedback to the following:

- **What are the natural hazards you feel pose the greatest risk to your community?**
- **Are there specific populations or assets in your community that you feel are more vulnerable to future storm events?**
- **What concerns do you have, and what sorts of actions do you feel would help to reduce damages of future hazard events in your community or the county as a whole?**

The public was encouraged to submit comments online via a online public comment form on the Blue Earth County website to be incorporated into the plan update process. Public responses were collected and are included below.

Distribution: The news release was sent via email to the county’s HMP Jurisdictional Contact List, which includes the names, titles, phone numbers, and email addresses of key stakeholders to be engaged in the HMP update, including county, city, and township contacts; other related agency and organizational stakeholder contacts, and neighboring jurisdiction contacts. (A copy of the Jurisdictional Contact List can be found in Appendix F). The news release was additionally sent to local media contacts with a request to carry the news release.

Postings: Attached is documentation of the news release postings by Blue Earth County, participating jurisdictions, local media, and other stakeholders. Cities and townships were encouraged to help share the news release locally by posting it on their websites, social media, or community bulletin boards.

Public Input & Incorporation:

Following is a record of public responses that were received via the Blue Earth County public comment form:

Response #1: Jody Swanson, Lime Township

What are the natural hazards you feel pose the greatest risk to your community?

Climate change including heat, air quality, extreme drought, fire risk, sediment-chemical run off into rivers-lakes & rain events.

Have you experienced a previous disaster event? If yes, please explain.

Yes, MN of 2025 eco system much degraded from 1960s.

What concerns do you have, and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for your personal property, your community, or the County as a whole?

Blue Earth County can lead positive change by doing comprehensive Climate Action assessment & planning, including mitigation & adaptation.

Do you have other comments, concerns, or questions regarding natural disasters and potential mitigation actions you'd like to see included into the plan update process?

Set up a citizen committee representation of the diverse conservation groups & other stakeholders active in BE Co for direction & continued encouragement.

Response #2: Andrea Bentlet, City of Lake Crystal

What are the natural hazards you feel pose the greatest risk to your community?

Tornadoes and blizzards

Have you experienced a previous disaster event? If yes, please explain.

No

What concerns do you have, and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for your personal property, your community, or the County as a whole?

Power outages are frequent. I'd love to see the town generators operate appropriately.

Do you have other comments, concerns, or questions regarding natural disasters and potential mitigation actions you'd like to see included into the plan update process?

No response

Response #3: Brian Riewe, Pleasant Mound Township

What are the natural hazards you feel pose the greatest risk to your community?

Flooding

Have you experienced a previous disaster event? If yes, please explain.

Yes, washed out roads impassable when flooded.

What concerns do you have, and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for your personal property, your community, or the County as a whole?

Raising some of the roads and bigger culverts.

Do you have other comments, concerns, or questions regarding natural disasters and potential mitigation actions you'd like to see included into the plan update process?

Maybe more riprap along some roads by drainage ditches.

Response #4: Sandra Loerts, City of Mankato

What are the natural hazards you feel pose the greatest risk to your community?

Flash flooding, heavy rains, and high winds are happening more frequently impacting property and utilities. Climate changes ARE happening impacting health and activity negatively, i.e. air quality, high temperatures and food supplies.

Have you experienced a previous disaster event? If yes, please explain.

Many years ago, there was flooding due to heavy rain (7 inch downpour in 5 hours) that flooded the basement. This was minor compared to so many others.

What concerns do you have, and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for your personal property, your community, or the County as a whole?

The county needs to routinely ensure that culverts, bridges, roads, etc. are capable of withstanding volumes of water and keeping drinking water safe and available. The weather alert systems must be functional. Building codes need to ensure that structures are built to withstand the weather. The communities need disaster preparation education/instruction. And, all the cities/towns need to work together sharing resources. The City of Mankato should be a key player in the plan and held accountable. Region 9 is very good in coordination of such efforts.

Do you have other comments, concerns, or questions regarding natural disasters and potential mitigation actions you'd like to see included into the plan update process?

Please keep the residents of Blue Earth informed of plans, concerns, and needs through a variety of communication avenues as the mitigation plan is updated and developed to encompass new climate change concerns.

Response #5: Tim Auringer, City of Eagle Lake

What are the natural hazards you feel pose the greatest risk to your community?

Flooding from surface drainage from the west. Also flooding at the Regency mobile home community on the south side of the city.

Have you experienced a previous disaster event? If yes, please explain.

Eagle Lake has had some flooding as a result of rainfall in the past decade or so.

What concerns do you have, and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for your personal property, your community, or the County as a whole?

A proposal to create a wetland bank on the west side of the community would be a great protection to create a collection point from the agricultural fields on the west side with a wier dam regulating flow into our storm water system. The flooding at the Regency mobile home park would need to be a complete reconstruction of the storm system in that property and proper outletting into the storm system. There are some very dangerous collection points at culverts that transfer water under CH27 which could result in small children being sucked into the culvert and drowning.

Do you have other comments, concerns, or questions regarding natural disasters and potential mitigation actions you'd like to see included into the plan update process?

I have witnessed water flooding into the storm shelter at the Regency mobile home park since the safe room is below grade. The entire storm shelter should be reconstructed to be safer and more accessible.

Response #6: Kerry Rausch, City of Eagle Lake

What are the natural hazards you feel pose the greatest risk to your community?

Tornado and small stream flooding

Have you experienced a previous disaster event? If yes, please explain.

No

What concerns do you have, and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for your personal property, your community, or the County as a whole?

Ensure creek flows unobstructed. Ensure cleanup effort plans from natural disasters are pre-established.

Do you have other comments, concerns, or questions regarding natural disasters and potential mitigation actions you'd like to see included into the plan update process?

No response

Response #7: Dennis Terrell, Le Ray Township

What are the natural hazards you feel pose the greatest risk to your community?

Tornadoes

Have you experienced a previous disaster event? If yes, please explain.

Yes, tornado in 1998

What concerns do you have, and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for your personal property, your community, or the County as a whole?

You cannot control a tornado. But there should be a plan where you can take your trees, sheds, and anything else that has been destroyed. The county should have a fund set up to help people get rid of this stuff. A lot goes into this such as cat work, backhoe work, trucks for hauling things away. It gets real spendy doing this on your own and insurance companies are getting worse to work with.

Do you have other comments, concerns, or questions regarding natural disasters and potential mitigation actions you'd like to see included into the plan update process?

Fire Departments should be set up to know what to look for when someone is hit with a tornado. In our case I was not home and the fire department responded to the farm and then left. Well, there was 300 gallons of gas on the ground , a 1000-gallon LP tank (it was full) got a

valve busted off and that kept going until empty. I got home probably 20 minutes after it hit and I had to call the power company, have the fire department come back out to take care of the fuel and things. This should be a plan in every fire department on what to do. They also had grants out for the March 28th tornado that hit St Peter. On that tornado if your farm was over something like 40 or 50% destroyed you would receive a zero percent loan up to \$100,000 for I believe 10 years. I went down to apply and things were going good until they asked if this was from the March 29th tornado, no I said we were hit May 15th and they said we did not qualify for anything. I asked what the difference was if we were destroyed over 50%. Wrong day, there's your government in a nut shell. But I do think a low-interest fund would help someone that gets hit that bad. We lost 2 machine sheds, 3 grain bins, a brand-new holding bin, a hog barn, a loafing barn for the steers, our whole wind break, a silo coupe, a lot of damage to our barn, all the windows in the house plus broke 3 rafters in the attic and a whole bunch of other trees. Other than that we were fine.

Response #8: Sally Comfort, City of Eagle Lake

What are the natural hazards you feel pose the greatest risk to your community?

Flooding and tornadoes

Have you experienced a previous disaster event? If yes, please explain.

Yes. Just this week our basement flooded -- all 1,700 sq feet had standing water, about 3 inches deep. Our area sustained too much rain (6" or more in some areas) and our two sump pumps could not keep up. Our part of town appears to have a higher-than-average water table as it is and when these soaking rains pile up, we hold our breath. This time we were so unlucky.

What concerns do you have, and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for your personal property, your community, or the County as a whole?

I would love to learn more about what options we have for mitigating our risk of flooding. Our property bears the burden of water coming down to us from higher properties as well as from the city park next to us. We have done a fair amount of landscaping work and as I mentioned, we have two fully operational sump pumps, but we need a solution outside of our home to help alleviate this high-water table/hydrostatic pressure to force the water away from us.

Do you have other comments, concerns, or questions regarding natural disasters and potential mitigation actions you'd like to see included into the plan update process?

We would love city/county support in this process -- perhaps this isn't what this survey is intended for and I'm not trying to be selfish. We are just feeling so defeated and wonder how resources like this could help us.

Response #9: Craig Rosfjord, City of Eagle Lake

What are the natural hazards you feel pose the greatest risk to your community?

Severe summer time weather and tornadoes. The unknown effects of global warming and significant shifts in weather patterns, such as rainfall, flooding, and extreme heat, pose unknown risks.

Have you experienced a previous disaster event? If yes, please explain.

No

What concerns do you have, and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for your personal property, your community, or the County as a whole?

Conduct combined emergency management tabletop exercises with Blue Earth County law enforcement agencies, fire departments, ambulance services, and municipalities. Once completed, create county wide emergency response plans and conduct a large full-scale exercise.

Do you have other comments, concerns, or questions regarding natural disasters and potential mitigation actions you'd like to see included into the plan update process?

Set a goal of how to educate the public regarding country-wide emergency management response plans and their role if an emergency occurs.

Response #10: Sabri Fair, City of Mankato

What are the natural hazards you feel pose the greatest risk to your community?

Extreme heat, Extreme Cold, Flooding, Wind and Ice storms impacting electricity and access to critical services.

Have you experienced a previous disaster event? If yes, please explain.

Flooding last summer was very scary with a very long period of time when no one knew if it was safe to be outside or the dam was going to bust. It was basically 8 hours of a lack of information and misinformation about what could occur.

What concerns do you have, and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for your personal property, your community, or the County as a whole?

Better water storage and management systems. Reduce tiling of farm land. Reduce paving of large parking lots or allow impervious parking lots. Local renewable energy and battery backup systems that can be used off grid. Heating and cooling stations across the county at public buildings where people can be safe during extreme heat and cold events.

Do you have other comments, concerns, or questions regarding natural disasters and potential mitigation actions you'd like to see included into the plan update process?

We should be mitigating and reducing our impacts on climate change as we spend more to recover from these disaster impacts. We should be doing more as a community to reduce greenhouse gas emissions otherwise things will only get worse.

Response #11: Mary Dowd, City of Skyline

What are the natural hazards you feel pose the greatest risk to your community?

Having only one road in and out of Skyline; residential burning in and next to ravines; overhead lines that should be buried; rusty, smelly water at times; and water runoff.

Have you experienced a previous disaster event? If yes, please explain.

No

What concerns do you have, and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for your personal property, your community, or the County as a whole?

Communication of Skyline's emergency management plans

Do you have other comments, concerns, or questions regarding natural disasters and potential mitigation actions you'd like to see included into the plan update process?

Annual report on mitigation measures

Response #12: Eric Manske, City of Skyline

What are the natural hazards you feel pose the greatest risk to your community?

Rainwater/ storm drainage flooding

Have you experienced a previous disaster event? If yes, please explain.

Personally no. But our city's stormwater drainage tile needs repair or replacement. Help from the County is greatly needed.

What concerns do you have, and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for your personal property, your community, or the County as a whole?

Stormwater drainage tile line replacement

Do you have other comments, concerns, or questions regarding natural disasters and potential mitigation actions you'd like to see included into the plan update process?

No response

Response #13: Renae Miller, Lime Valley Township

What are the natural hazards you feel pose the greatest risk to your community?

Emerald Ash Borer Infested Trees

Have you experienced a previous disaster event? If yes, please explain.

No

What concerns do you have, and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for your personal property, your community, or the County as a whole?

Large trees falling and damaging property structures or falling on the road. Funding for the removal (and replacement) of infested trees prior to them falling over in a natural disaster. I believe the tree removal is necessary to restore the ecological balance of a community or area. Planting new trees or taking other actions to restore the environment. Our property alone has over 75 infested trees at this time; we do not have the resources to treat or remove them all.

Property/Home insurance is an after the fact, and in most cases wouldn't cover the cost due to the tree was known to be infested.

Do you have other comments, concerns, or questions regarding natural disasters and potential mitigation actions you'd like to see included into the plan update process?

No

Incorporation:

The public comments gathered will be reviewed and incorporated into the county-level and local jurisdictional considerations as applicable for the natural hazards included in the plan update and the development of associated mitigation actions. Mitigation actions will be considered under the strategies of Local Planning & Regulations, Public Education & Awareness, Structure & Infrastructure Projects, Natural Systems Protection, and Mitigation Preparedness & Response Support.

From: [Eric Weller](#)
To: [beaufordtownship@gmail.com](#); [dennis.g.johnson50@gmail.com](#); [jone0602@gmail.com](#); [cambriatwp.clerk@gmail.com](#); [fischij@newulmtel.net](#); [tsonna@mytvwireless.com](#); [lauriehstenzel@gmail.com](#); [decoriatownship@gmail.com](#); [almarble@hickorytech.net](#); [lizb@hickorytech.net](#); [jsargen11@yahoo.com](#); [jamestownmn@gmail.com](#); [judson.township@gmail.com](#); [leraytownship@gmail.com](#); [limets.clerk@gmail.com](#); [limets.cjh@gmail.com](#); [tntpett@gmail.com](#); [lyratownship@gmail.com](#); [danfogal@hotmail.com](#); [gjjaeger56@yahoo.com](#); [lyndakmcpersonstwnsp@gmail.com](#); [jenniferajaeger@hotmail.com](#); [pmtambo@yahoo.com](#); [rapidantownshipmn@gmail.com](#); [mikekrosch@rocketmail.com](#); [jenemack@aol.com](#); [southbendtownship@gmail.com](#); [june.lonnquist@yahoo.com](#); [sbpublicworks@gmail.com](#); [tonkabrat@gmail.com](#); [vernoncentertownship@gmail.com](#)
Cc: [Bonnie K. Hundrieser](#)
Subject: FOR IMMEDIATE RELEASE: Public Input Wanted as Blue Earth County
Date: Monday, July 14, 2025 4:05:31 PM
Attachments: [image005.png](#)
[image006.png](#)
[Flyer.pdf](#)
[July news release.docx](#)

Good Afternoon Township Clerks/Officials,

As promised, I am sharing a media release that Blue Earth County sent out this morning. Many of you were on the virtual call regarding the BEC Hazard Mitigation Plan last week where this was discussed. Please post and share this information with your other township officials and residents.

Included in the email:

- News Release – attached to email, include in newsletter, post, etc.
- Flyer to print, post, etc.
- Link to BEC Sheriff's Office Facebook page to share: <https://www.facebook.com/profile.php?id=100064623102511>
- Link to BEC website to share: <https://www.blueearthcountymn.gov/376/Hazard-Mitigation-Information>

Anyone (township officials & residents) wanting to provide input for consideration in the BEC Hazard Mitigation Plan should go to the website and follow the directions to provide input.

Please reach out to me if you have any questions. Thank you, Eric.

Eric Weller #2755 | Emergency Management Director

Blue Earth County

Sheriff's Office

Desk: 507-304-4797 | Cell: 507-714-5258

401 Carver Road | Mankato, MN

www.blueearthcountymn.gov



News Release:

07/14/2025

Contact:

Eric Weller

Emergency Management Director

Blue Earth County Sheriff's Office

(507) 304-4797

**Public Input Wanted as Blue Earth County
Updates Hazard Mitigation Plan**

The Federal Disaster Mitigation Act of 2000 (DMA 2000) requires counties to update their plan every 5 years to maintain eligibility for FEMA's Hazard Mitigation Assistance (HMA) grant programs. The Blue Earth County Emergency Management Office is working with U-Spatial at the University of Minnesota Duluth to update the county's Hazard Mitigation Plan (HMP).

Blue Earth County residents, community leaders, business owners, area agencies and organizations now have an opportunity to share how severe weather events impact their property and lives. There is also an opportunity to share mitigation ideas on how to reduce future disaster impacts.

The plan assesses the natural hazards that pose risk to the county, such as tornadoes, straight line winds, ice storms, blizzards, wildfire, flooding, and extreme temperatures and identifies ways to minimize the damage of future events. As the county works to update the plan, it wants to hear from the public.

"Hazard mitigation planning is a central part of our emergency management program," said Eric Weller, Blue Earth County Emergency Management Director. "Understanding the natural hazards that can cause serious impact to our communities and taking action to reduce or eliminate the impact of future disasters makes us more resilient."

Public input is an essential part of the plan update. As part of the planning process, Blue Earth County is seeking feedback from residents and businesses to incorporate into the plan. Residents are urged to visit the Blue Earth County website to learn more about what is covered in the plan and provide comments, concerns, and questions regarding natural disasters and ideas for mitigation projects. www.blueearthcountymn.gov/hazardmitigation Comments will be accepted through August 15, 2025.

For more information, contact Blue Earth County Emergency Management at (507) 304-4797.

-End-

PROVIDE INPUT ON THE BLUE EARTH COUNTY HAZARD MITIGATION PLAN



**SCAN
CODE TO
LEARN
MORE &
PROVIDE
FEEDBACK**



Blue Earth County HMP News Release #1 (7-14-25)
Chart Documentation of News Release Postings

Jurisdiction or Agency	Posting Representative (name and title)	Date & Location of News Release Posting
Blue Earth County	Eric Weller, EMD Jessie Anderson, Communications Director	7/14/25, Posted to the Blue Earth County Website, BEC Sheriff's Office Facebook Page, BEC Government Facebook Page
City of Amboy	Patty Smith, City Administrator/Clerk- Treasurer	7/15/25, posted news release flyer at City Hall & Post Office. New release also posted to amboymn.com with link to BEC website survey.
City of Eagle Lake	Jennifer Bromeland, City Administrator	7/25/25, posted to City Hall bulletin board, sent to residents via City's notification app and email, plus posted to City website.
City of Good Thunder	Sue Petty, City Clerk- Treasurer	7/14, posted to Facebook & flyer posted to Post Office, Red Iron Mercantile, and City Hall.
City of Lake Crystal	Kenzie Doering, Payroll & HR Assistant	7/15 posted to Facebook. 7/16 posted to city website.
City of Madison Lake	Liz Wille, City Administrator	7/15 posted to Facebook. 7/16 posted to city website, and City Hall till August 14 th .
City of Mankato	Justin Neumann, Commander	7/24 posted to Facebook – on Mankato Police/Fire and shared on 7/23 City of Mankato FB.
City of Mapleton	Sarah Moore, Interim City Clerk	7/18 posted flyer to bulletin boards at City Hall, Pioneer Bank, and Post Office. Also posted to city webpage, with an email blast to residents.
City of Minnesota Lake	Dawn Whitehead, City Clerk	7/22 posted to Facebook and City Hall.
City of North Mankato	Ross Gullickson, Chief of Police/EM Director	7/15 Per Ross passing it along. Decision not to publish to avoid confusion with Nicollet County. We are participating in both county plans.
City of Pemberton	Kathy Grinnell, City Clerk	8/21 posted to city website and Facebook page.
City of St. Clair	Stefanie Janike, City Clerk	-Facebook 7/14/2025 -City Website 7/14/2025-8/15/2025 -Flyer Postings at City Hall, BP Gas Station, Post Office and St. Clair State Bank on 7/15/2025- 8/15/2025
City of Skyline	Samantha Erickson, City Clerk	8/19 posted to city Facebook and website.
City of Veron Center	Kara Hansen, City Clerk	7/31 posted to Facebook & website
Lime Township	Jill Hilgers	7/16 post to Facebook

Blue Earth County HMP News Release #2

Record of Public Input & Incorporation

Overview: On October 17, 2025 Blue Earth County Emergency Management put out a news release titled **“Public Comment Sought for County’s Hazard Mitigation Plan”** to announce the completion of the draft Blue Earth County Hazard Mitigation Plan and invitation for public review and comment. The news release informed jurisdictional stakeholders and the public that a copy of the draft plan, interactive website, and comment form for public feedback was available online with a website link. The public review period for the draft plan was open from 10/17/25 to 10/31/25 for a total of 15 days.

Distribution: The news release was sent via email to the county’s HMP Jurisdictional Contact List, which includes the names, titles, phone numbers, and email addresses of key stakeholders to be engaged in the HMP update, including County Contacts, City Contacts, Township Contacts, Other Stakeholder Contacts, and Neighboring Jurisdiction Contacts. The news release was additionally sent to local media contacts such as area newspapers, radio and television channels with a request to carry the news release.

Postings: Attached is documentation of the news release postings by Blue Earth County, participating jurisdictions, and local media. Cities and townships were encouraged to help share the news release locally by posting it on their websites, social media, or community bulletin boards.

Public Input & Incorporation:

Following is a record of public responses to the Blue Earth County news release and how the input will be incorporated into the plan update, and if not relevant to be addressed, why.

- **There were 3 public comments submitted via the Blue Earth County HMP website, however, all submissions noted “No feedback.”**
- **No public feedback was received directly by Blue Earth County Emergency Management or local jurisdictions.**

From: [Jessie Anderson](#)
Subject: FOR IMMEDIATE RELEASE: Public Comment Sought for Hazard Mitigation Plan
Date: Thursday, October 16, 2025 2:08:52 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

News Release:
10/16/2025

Contact:
Eric Weller
Emergency Management Director
Blue Earth County Sheriff's Office
(507) 304-4797

Public Comment Sought for Blue Earth County's Hazard Mitigation Plan

Blue Earth County has completed an updated draft of its Hazard Mitigation Plan (HMP) and is again seeking public feedback. Like all Minnesota counties, Blue Earth County is vulnerable to a variety of natural hazards such as tornadoes, windstorms, severe winter storms, flooding, drought, and extreme temperatures, which can threaten the loss of life and property in the county. Planning for natural disasters minimizes the impact of events that can cause vast economic loss and personal hardship.

All county residents, as well as other interested agency or organizational stakeholders are strongly encouraged to review and offer feedback on the interactive website, PDF of the draft plan, and proposed local mitigation actions. The review and comment period is open for a period of 15 days through October 31, 2025. The public can access the plan using the following hyperlinks:

[Blue Earth County HMP Website Homepage \(feedback form at the bottom of page\)](#) and [Blue Earth County Goals & Implementation \(feedback form at the bottom of page\)](#)

The Blue Earth County HMP is a multi-jurisdictional plan that covers Blue Earth County, including all cities and townships within the county. The Blue Earth County HMP also incorporates the concerns and needs of other key stakeholders such as school districts and related agencies, organizations, or businesses participating in the planning process.

Update of the plan has been under direction of Blue Earth County Emergency Management in cooperation with U-Spatial at the University of Minnesota Duluth and representatives from county departments, city and township governments and other participating stakeholders. Together, the planning team worked to identify cost-effective and sustainable actions to reduce or eliminate the long-term risk to human life or property from natural hazards. Examples include conducting property buyouts

for homes impacted by repetitive flooding or at risk to landslides, construction of safe rooms in areas where residents and visitors are vulnerable to tornadoes and severe storm events; burying powerlines that may fail due to heavy snow, ice, or wind storms; ensuring timely emergency communication to the public through warning sirens and mass notification systems; and conducting outreach to increase public awareness of severe weather and personal preparedness.

“Hazard mitigation planning helps Blue Earth County and other jurisdictions protect their residents,” said Eric Weller, Blue Earth County Emergency Management Director. “Working with local communities through the process helps identify vulnerabilities and develop strategies to reduce or eliminate the effects of a potential hazard. Increasing public awareness of natural disasters and encouraging personal preparedness helps create a community that is resilient to disaster and breaks the cycle of response and recovery. Updating the plan also ensures that Blue Earth County and its jurisdictions remain eligible to apply for future FEMA Hazard Mitigation Assistance grant funding for projects that reduce or eliminate the impacts of future natural hazard events.”

Community feedback is vital to the success of the plan. Blue Earth County invites public review and feedback of the draft plan prior to submitting it to the State of Minnesota and the Federal Emergency Management Agency (FEMA) for review. Feedback may be provided via the online comment forms or directly to Blue Earth County Emergency Management at info@blueearthcountymn.gov.

-End-

You may also scan the following QR code to go directly to the Blue Earth County Hazard Mitigation Plan interactive website:



Jessica Anderson | COMMUNICATIONS MANAGER & BUSINESS ANALYST

Blue Earth County

Administration

Desk: 507-304-4284 | Cell: 507-995-1278

204 South Fifth Street | PO Box 168 | Mankato, MN

www.blueearthcountymn.gov



From: [Eric Weller](#)
To: [Patty Smith](#); [Jennifer Bromeland](#); [Good Thunder - Sue Petty](#); [City Admin](#); [Liz Wille](#); [Justin Neumann](#); [Mapleton - Sarah Moore](#); [Kathy Grinnell](#); [Stephanie Jahnke](#); [Skyline - Samantha Erickson](#); [Vernon Center - Kara Hansen](#); [joanneboettcher.cityofskyline@gmail.com](#); [dawn@minnesotalakemn.gov](#)
Cc: [Bonnie K Hundrieser](#); [Jessie Anderson](#)
Subject: ACTION ITEM
Date: Friday, October 17, 2025 9:03:49 AM
Attachments: [image001.png](#)
[image002.png](#)
[HMP News Release # 2.docx](#)
[Blue Earth County - Public Review Flyer.docx](#)

Greetings,

The public review and comment period is now open for the Blue Earth County Hazard Mitigation Plan from Friday, October 17th to Friday, October 31st. This public review period is required prior to the plan being sent to FEMA for review. Your assistance is requested in sharing this information with the public. The **cities of Amboy, Eagle Lake, Good Thunder, Lake Crystal, Madison Lake, Mankato, Mapleton, Minnesota Lake, North Mankato, Pemberton, St. Clair, Skyline, and Vernon Center** are requested to please post this locally. Townships and other related stakeholders involved in the plan update are also encouraged to share the news release. As this is a 15 day review period, we ask that you attend to posting the release promptly.

Attached to this email are the following:

- Blue Earth County News Release
- Public information flyer

Instructions:

- Please post the news release & flyer to the locations where you share information with the public (i.e., websites, social media, bulletin boards)
- Please email me to let me know the date and location(s) of where the news release was posted.

If you have not already reviewed the plan during the government review period, you are strongly encouraged to do so. There are website links as well as a QR code in the news release & flyer that will take you to PDF of the plan, interactive website, and mitigation action charts. There is an online feedback form to provide any comments, questions, or other feedback.

Your prompt attention to this is appreciated. Please respond no later than October 31st.

Thank you for your assistance. Please let me know if you have any questions.

Thank you,

Eric Weller #2755 | Emergency Management Director
Blue Earth County
Sheriff's Office

Desk: 507-304-4797 | Cell: 507-714-5258

401 Carver Road | Mankato, MN

www.blueearthcountymn.gov



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YOUR INPUT IS WANTED:
**THE PUBLIC REVIEW & COMMENT
PERIOD IS NOW OPEN FOR THE
DRAFT 2025 BLUE EARTH COUNTY
HAZARD MITIGATION PLAN**



Review Period: October 17 – October 31, 2025

**SCAN CODE TO
REVIEW THE
PLAN & PROVIDE
FEEDBACK USING
AN ONLINE
FEEDBACK FORM**



Blue Earth County HMP News Release #2 (10-17-25)
Chart Documentation of News Release Postings

Jurisdiction or Agency	Posting Representative (name and title)	Date & Location of News Release Posting
Blue Earth County	Eric Weller, EM Director and Jessie Anderson, Communications Director	10/16/2025, Posted to the Blue Earth County Website, BEC Sheriff's Office Facebook Page, and BEC Government Facebook Page
City of Amboy	Patty Smith, City Clerk	10/20/2025 News release & flyer were posted at city hall and post office.
City of Eagle Lake	Jennifer Bromeland, City Administrator	10/23/2025 Posted to City Website, Facebook and bulletin board
City of Good Thunder	Sue Petty, City Clerk	10/23/2025. Facebook, City Hall, Post Office and Mercantile.
City of Lake Crystal	Angie Grafstrom, City Administrator	10/23/2025 Post to Facebook, website, and City Hall.
City of Madison Lake	Liz Wille, City Administrator	10/16/2025 Posted to Facebook, City Website, and from door of City Hall.
City of Mankato	Paul David, Engagement & Communications Director	10/17/2025 Shared BEC post to social sites, flyer posted at IGC.
City of Mapleton	Sarah Moore, City Clerk	10/17/2025 posted to City website, shared BEC post to Facebook page, sent email/text blast to residents, flyer posted at city hall, Post Office, and the bank.
City of Minnesota Lake	Dawn Whitehead, City Clerk	10/17/2025 Posted on City bulletin board.
City of Pemberton	Kathy Grinnell, City Clerk	10/22/2025 Posted on City Facebook page.
City of St. Clair	Stefanie Janike, City Clerk	10/22/2025 Posted at City Hall, Gas Station, Post Office, Bank, Facebook and City website.
City of Skyline	Samantha Erickson, City Clerk	10/23/2025 Posted to Facebook and City Website
City of Vernon Center	Kara Hansen, City Clerk	10/20/2025 Posted City Hall and Post Office.

Appendix H – Mitigation Actions by Jurisdiction

City of Amboy

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events, periods of extreme temperatures, and extended power outages.	Existing High 2026-2031	City Admin / City EM	We use our city website to share information with the public. We also send out notices to residents with our quarterly newsletter. We will seek to work with Blue Earth County Emergency Management to help us participate locally in sharing information during the NWS severe weather awareness weeks.	Internal: General City Op. Budget
2	All-Hazards	Education & Awareness Programs	Encourage residents to sign up for the county's emergency notification system to receive alerts on severe weather events.	Existing High 2026-2031	City Admin / City EM	The city website has a link to Blue Earth County where residents can sign up for Code Red.	Internal: General City Op. Budget
3	All-Hazards	Local Planning & Regulations	Enforce city regulations that help to reduce the risk of storm damages to new development.	Existing High 2026-2031	City Admin	The city's Planning Commission and City Council review and approve building permits. No permits are required for roofing, siding, windows or inside work. Permits are needed for fences, decks, stairs, garages, additions and anything that would change the "footprint" of a current structure. All contractors are expected to follow MN State Building codes. If someone appears to build something not up to code, our City Council can request a building inspection.	Internal: General City Op. Budget
4	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and new development.	Existing Moderate 2026-2031	City Admin / City EM	The city addresses Point of Sale with MPCA and conducts a sewer connection check. The Planning Commission reviews zoning permit applications. The city's Code Enforcement Division enforces the city code. The city also has an Emergency Operations Plan in place and continues to keep it updated.	Internal: General City Op. Budget

City of Amboy Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
5	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Ensure the city has emergency generator backup power for city services and buildings.	Existing High 2026-2031	City PW / City EM	The city has a generator for our water tower with a grant from the MDH. The generator will also power our city offices and provide a shelter location for our residents.	Internal: General City Op. Funding External: MDH (previous)
6	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Trim trees near power lines and work with our local utility to convert overhead power lines to underground to reduce the risk of power outages from severe storms.	Existing Moderate 2026-2031	City Public Works Dept., BENCO	BENCO Electric Cooperative has the authority to determine projects for OH to UG conversion projects as they see are necessary. The city's Public Works department works to maintain trees in the ROW of city streets to reduce risk of downed limbs.	Internal: General City Op. Funding External: BENCO Electric
7	Severe Summer Storms	Mitigation Preparedness & Response Support	Ensure that the city's outdoor warning siren is maintained and functioning.	Existing High 2026-2031	City EM	The city replaced the tornado siren with a new siren in 2025 and relocated it to the fire station, which is more centrally located than the water tower. We continue to keep the siren tested and maintained.	Internal: General City Op. Funding
8	Severe Summer Storms	Education & Awareness Programs	Actively promote education to residents in areas of new development without basements on tornado awareness and shelter in place planning.	Existing High 2026-2031	City Admin / City EM	The city will seek to work with Blue Earth County to promote tornado awareness and safety during the NWS Severe Weather Awareness week each April.	Internal: General City Op. Funding
9	Extreme Temperatures Heat/Cold	Mitigation Preparedness & Response Support	Be prepared to provide emergency sheltering to vulnerable residents during periods of extreme heat or cold temperatures.	Existing High 2026-2031	City Admin, City EM	The city has an emergency generator to utilize and will use our city office building to temporarily provide shelter if needed.	Internal: General City Op. Funding

City of Amboy

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
10	Flooding	Structure & Infrastructure Projects	Complete the televising of the city sewer system to help with Inflow & Infiltration (I&I).	Existing High 2026-2031	City Public Works Dept.	The city continues work to complete the televising of the city sewer system to help with Inflow & Infiltration (I&I). Excessive I&I may cause sanitary sewer overflows during high rain events. We are doing a section each year. 2024 - SE side of town, 2025 - SW, 2026 - NW, 2027 - NE. Will repair as needed.	Internal: City PW Budget
11	Flooding	Structure & Infrastructure Projects	Reduce the risk of flood damage in areas of new development.	In-Progress High 2025-2026	City Public Works Dept.	New areas of development that being addressed are South Street Extension and Grover Transport expansion (to be completed in 2030). Storm ponds will be included in both areas to help with excessive rainwater. We are awaiting a preliminary report from engineers for comprehensive infrastructure. The city will look for future state bonding requests to help fund these projects.	Internal: City PW Budget External: Future State bonding requests
12	Flooding	Local Planning & Regulations	Continue to enforce the city's updated Floodplain Ordinance.	Existing High 2026-2031	City Admin.	On 9/3/19 the city held a public hearing to adopt the ordinance. The city will continue to enforce this ordinance under city code.	Internal: General City Op. Funding
13	Drought	Local Planning & Regulations / Education & Awareness Programs	During periods of drought establish water use restrictions and conduct public outreach on water conservation measures.	New Moderate 2026-2031	City Admin	During periods of severe drought, the city will establish watering restrictions as per MN DNR guidance. We will also work to promote awareness to residents of the restrictions and water conservation measures.	Internal: General City Op. Funding
	Land Subsidence		N/A. Not a local hazard.				
	Landslides		N/A. Not a local hazard.				
	Dam Failure		N/A. Not a local hazard.				

City of Eagle Lake

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events, periods of extreme temperatures, and extended power outages.	Existing High 2026-2031	City Admin / City EM	The city shares information from Blue Earth County's Facebook page and website during Severe Weather Awareness Week and Winter Hazard Awareness Week with our community members. GoGOV, a notification app, has also been set up and in place to help alert community members of important information in the event of an emergency.	Internal: City Gen. Operating Budget
2	All-Hazards	Education & Awareness Programs	Encourage residents to sign up for the county's emergency notification system to receive alerts on severe weather events.	Existing High 2026-2031	City Admin / City EM	In recent years, Eagle Lake has included information about the Code Red system in quarterly newsletters and periodic communications. A link to sign up for Blue Earth County's CodeRED system could be added under the "Resident" section of the city's website.	Internal: City Gen. Operating Budget
3	All-Hazards	Local Planning & Regulations	Enforce city regulations that help to reduce the risk of storm damages to new development.	Existing High 2026-2031	City Admin	The City of Eagle Lake has adopted the MN State Building Code and contracts with licensed building officials. City staff review and approve all zoning permits while the building official approves all permits and inspections as required by the code.	Internal: City Gen. Operating Budget

City of Eagle Lake Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
4	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and new development.	Existing Moderate 2026-2031	City Admin	The City of Eagle Lake enforces our City Code. The city also enforces an Erosion and Sediment Control Permit. The city also has a new floodplain ordinance, adopted 2/5/2024 and made effective 2/8/2024. This ordinance regulates development in the flood hazard areas of the City of Eagle Lake and helps fulfill the City's compliance to participate in the NFIP.	Internal: City Gen. Operating Budget
5	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Ensure the city has emergency generator backup power for city services and buildings.	New High 2026-2031	City PW / City EM	Over the last several years the city has worked to obtain generator backup power for the city's main infrastructure. City Admin and our Public Works Dept. are still working to obtain additional backup generators for city use. We will purchase generators as funding is available under our general operating budget, or if there is outside funding available to assist. Depending on our need, FEMA HMGP grant funding may be a possible source to apply to.	Internal: City Gen. Operating Budget External: FEMA HMGP
6	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Trim trees near power lines and work with our local utility to convert overhead power lines to underground to reduce the risk of power outages from severe storms.	Existing Moderate 2026-2031	City Public Works Dept.	The city's public works department continues to trim trees within the city to avoid falling branches. Xcel Energy also maintains trees near power lines. Xcel has authority in determining where vulnerable power lines may exist and the opportunities to convert overhead lines to underground. The city will work with Xcel on such efforts.	Internal: City PW Budget External: Xcel Energy

City of Eagle Lake

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
7	Severe Summer Storms	Mitigation Preparedness & Response Support	Ensure that the city's outdoor warning sirens are maintained and functioning.	Existing High 2026-2031	City EM	The city has 3 outdoor warning sirens which we test monthly in coordination with the Blue Earth County Sheriff's Office and maintained as needed.	Internal: City Gen. Operating Budget
8	Severe Summer Storms	Local Planning & Regulations / Structure & Infrastructure Projects	Work with the city's mobile home park to address evacuation and shelter planning, as well as other areas where residents are more vulnerable. Plan for construction of a new tornado shelter or alternate site evacuation facility.	Existing High 2026-2031	City EM	The city has a mobile home park, slab-on-grade housing, and large multi-family housing complexes that could be vulnerable during high-wind or tornado events despite having designated storm shelters on site. City Hall does not have an area designated as a storm shelter or safe room for community members and staff in the event of a windstorm or tornado. We will work with Blue Earth County Emergency Management to address how to improve public education on tornado awareness and local sheltering options. The city would seek FEMA HMGP grant funding for any potential tornado safe room projects.	Internal: City Gen. Operating Budget External: FEMA HMGP safe room grant
9	Severe Summer Storms	Education & Awareness Programs	Encourage residents to be aware of tornadic weather and have plans to shelter-in-place.	Existing High 2026-2031	City Admin / City EM	The city will work with Blue Earth County Emergency Management to help us participate locally in sharing information during the NWS severe weather awareness week.	Internal: City Gen. Operating Budget

City of Eagle Lake

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
10	Extreme Temperatures Heat/Cold	Mitigation Preparedness & Response Support	Be prepared to provide emergency sheltering to vulnerable residents during periods of extreme heat or cold temperatures.	Existing High 2026-2031	City Admin, City EM	In the event of an extreme temperature event coupled with an extended power outage, the city will work with our fire department and Blue Earth County Emergency Management to address assistance such as evacuation or temporary sheltering for the elderly or other vulnerable residents.	Internal: City Gen. Operating Budget
11	Flooding	Structure & Infrastructure Projects	Work to implement recommended solutions in the city's Stormwater and Community Resilience Plan to address flood mitigation measures that help the city to handle future high rain events.	Existing High 2026-2031	City Public Works Dept.	The city of Eagle Lake is seeking funding to be able to implement the following top three flood reduction solutions: 1) Restoration of a wetland west of the city which would result in the storage of runoff and could substantially reduce flash flows in the western portion of the city. 2) Raise County Road 27 as this would help to reduce overtopping and be less vulnerable to increased precipitation trends. 3) Construction of a meandered stream through the wetland area on the south end of the city. The city will be researching possible state and federal funding sources, which may possibly include FEMA HMGP or FMA grant funding. The city's Public Works Dept. has a regular schedule of monitoring and maintenance on the city's system of catch basins to ensure they are functioning properly.	Internal: City PW Budget External: MN PFA, FEMA HMGP or FMA grant

City of Eagle Lake

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
12	Flooding	Structure & Infrastructure Projects	Continue dredge-maintenance of the creek along 598 th to promote free-flow of water.	Existing Moderate 2026-2031	City Public Works Dept.	The public works department will monitor annually and recommend dredging on an as needed basis. The creek was most recently dredged in 2018.	Internal: City PW Budget
13	Drought	Local Planning & Regulations / Education & Awareness Programs	During periods of drought establish water use restrictions and conduct public outreach on water conservation measures.	New Moderate 2026-2031	City Admin	During periods of severe drought, the city will establish watering restrictions as per MN DNR guidance. We will also work to promote awareness to residents of the restrictions and water conservation measures.	Internal: City Gen. Operating Budget
	Land Subsidence		N/A. Not a local hazard.				
	Landslides		N/A. Not a local hazard.				
	Dam Failure		N/A. Not a local hazard.				

City of Good Thunder

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events, periods of extreme temperatures, and extended power outages.	Existing High 2026-2031	City Admin / City EM	The city shares information with the public by posting information on our city website and city Facebook page. We will work with Blue Earth County Emergency Management to help us participate locally in sharing information during the NWS severe weather awareness weeks. The city offers a city alert system where residents can sign up for news and alerts via email or SMS.	Internal: City Gen. Operating Budget
2	All-Hazards	Education & Awareness Programs	Encourage residents to sign up for the county's emergency notification system to receive alerts on severe weather events.	Existing High 2026-2031	City Admin / City EM	The city will work with Blue Earth County Emergency Management to help us put information and a link on the city's website for residents to sign up for CodeRED.	Internal: City Gen. Operating Budget
3	All-Hazards	Local Planning & Regulations	Enforce city regulations that help to reduce the risk of storm damages to new development.	Existing High 2026-2031	City Admin	The city's Maintenance Supervisor reviews zoning permits and follows up if there are questions. We require permits for additions, garages, decks, anything that changes the outside appearance or footprint. If there is a question regarding a building, the council reviews and requests an inspection if needed.	Internal: City Gen. Operating Budget
4	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and new development.	Existing Moderate 2026-2031	City Admin	The city has Land Use Zoning ordinances in place that we continue to enforce.	Internal: City Gen. Operating Budget

City of Good Thunder

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
5	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Trim trees near power lines and work with our local utility to convert overhead power lines to underground to reduce the risk of power outages from severe storms.	Existing Moderate 2026-2031	City Public Works Dept.	The city's public works department continues to trim trees within the city to avoid falling branches. Xcel Energy also maintains trees near power lines. Xcel has authority in determining where vulnerable power lines may exist and the opportunities to convert overhead lines to underground. The city will work with Xcel on such efforts.	Internal: City PW Budget External: Xcel Energy
6	Severe Summer Storms	Mitigation Preparedness & Response Support	Ensure that the city's outdoor warning sirens are maintained and functioning.	Existing High 2026-2031	City EM	The city has 1 outdoor warning siren that was updated in 2012. We test the siren monthly in coordination with the Blue Earth County Sheriff's Office and maintained as needed.	Internal: City Gen. Operating Budget
7	Severe Summer Storms	Education & Awareness Programs	Encourage residents to be aware of tornadic weather and have plans to shelter-in-place.	Existing High 2026-2031	City Admin / City EM	The city will work with Blue Earth County Emergency Management to help us participate locally in sharing information during the NWS severe weather awareness week.	Internal: City Gen. Operating Budget
8	Extreme Temperatures Heat/Cold	Mitigation Preparedness & Response Support	Be prepared to provide emergency sheltering to vulnerable residents during periods of extreme heat or cold temperatures.	Existing High 2026-2031	City Admin, City EM	In the event of an extreme temperature event coupled with an extended power outage, the city will work with our fire department and Blue Earth County Emergency Management to address assistance such as evacuation or temporary sheltering for the elderly or other vulnerable residents.	Internal: City Gen. Operating Budget

City of Good Thunder

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
9	Flooding	Structure & Infrastructure Projects	Work to address flood mitigation measures that help the city to handle future high rain events.	Existing High 2026-2031	City Public Works Dept.	The city is working on reducing I and I, increasing storm sewer capacity with bonding bill, and constructing a water retention pond. We are working with new engineers on needs assessment for infrastructure. The city also continues to work to address roads and alleys that are in need of improvement due to washouts after high rain events.	Internal: External: MN State Bonding Bill
10	Flooding	Structure & Infrastructure Projects	Research and implement water control & drainage improvement measures to reduce flooding and erosion at the ballfield and near the tennis courts.	Existing High 2026-2031	City Admin, City Maint. Dept., City Water & Sewer Dept.	The city is continuing work to identify and implement mitigation measures for these areas to reduce impacts due to high rain events.	Internal: City Gen. Operating Budget External: MN DNR FHM grant funding
11	Drought	Local Planning & Regulations / Education & Awareness Programs	During periods of drought establish water use restrictions and conduct public outreach on water conservation measures.	New Moderate 2026-2031	City Admin	During periods of severe drought, the city will establish watering restrictions as per MN DNR guidance. We will also work to promote awareness to residents of the restrictions and water conservation measures.	Internal: City Gen. Operating Budget
	Land Subsidence		N/A. Not a local hazard.				
	Landslides		N/A. Not a local hazard.				
	Dam Failure		N/A. Not a local hazard.				

City of Lake Crystal

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events, periods of extreme temperatures, and extended power outages.	Existing High 2026-2031	City Admin / City EM	The city shares information with our residents using our city website and city Facebook page. We try and include preventative and safety information in our monthly newsletter.	Internal: City Gen. Operating Budget
2	All-Hazards	Education & Awareness Programs	Encourage residents to sign up for the county's emergency notification system to receive alerts on severe weather events.	Existing High 2026-2031	City Admin / City EM	The city will work with BEC Emergency Management to help us get a link to sign up posted on our city website and city Facebook page.	Internal: City Gen. Operating Budget
3	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and new development.	Existing Moderate 2026-2031	City Admin	The city has actively participated in the 1W1P process and have included a stormwater pond expansion in the city's funding plan. We require building permits and have a contracted building official to inspect new development. The city continues to enforce our shoreland provisions and floodplain ordinance as per City Code.	Internal: City Gen. Operating Budget

City of Lake Crystal

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
4	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Address planning and implementation of projects that increase redundancies in the electrical grid and reduce the city's vulnerability to extended power outages.	In-Progress Moderate 2026-2031	City PW	The city is in the process of putting in a substation for electrical redundancy in 2027-2028. The city has identified a need to have a second transmission line into town. Redundancy was eliminated when substation at Radipan Dam was taken off line in 2024. We will work with Xcel Energy on this project. In 2025 the City of Lake Crystal has received a grant from the University of MN through the Empowering Small Minnesota Communities (ESMC) program to develop a Lake Crystal Energy Plan 2040. The plan will include strategies, goals, and timetables for maintaining and upgrading existing equipment and facilities while also planning for future contracts, equipment, and system improvements.	Internal: PW Dept. Budget External: Xcel Energy, ESMC Grant
5	Severe Winter & Summer Storms	Structure & Infrastructure Projects	Identify "at-risk" powerlines and bury them underground.	Existing Moderate 2026-2031	Lake Crystal Municipal Utilities Commission	Since 2013 the city has moved some overline power lines to underground. The Lake Crystal Municipal Utilities Commission oversees the Electric Utility Department. OH to UG conversion projects are planned as the PUC deems as feasible and necessary.	Internal: LCMUC funding

City of Lake Crystal

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
6	Severe Summer Storms	Education & Awareness Programs	Actively promote education to residents in areas of new development without basements on tornado awareness and shelter in place planning.	New High 2026-2031	City Admin / City EM	Within the last 5 years the city has added 36 new housing units, with many being constructed without basements. There are not localized shelter alternatives in these areas of the community. The city will use our outreach methods (website, FB, monthly newsletter) to encourage residents to be aware of tornado conditions (weather apps) and to be prepared to shelter in place under severe weather conditions. We will work with Blue Earth County Emergency Management to get out information during Severe Weather Awareness Week.	Internal: City Gen. Operating Budget
7	Flooding	Structure & Infrastructure Projects	Work to address flood mitigation measures that help the city to handle future high rain events.	In-Progress High 2026-2031	City Public Works Dept.	The city continues to add stormwater drains to the community as we plan for new development. We have plans to expand another stormwater pond near Jones Park for greater capacity to manage high rain events. All city projects include addressing the city's stormwater system to handle high rain events.	Internal: PW Dept. Budget

City of Lake Crystal

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
8	Flooding	Local Planning & Regulations	Continue to enforce the city's Shoreland Ordinance to prevent erosion resulting from high rain events and wave action, and seek grants to implement shoreline stabilization projects.	Existing Moderate 2026-2031	City Planning & Zoning Dept.	Chapter 154 of the City Code (Shoreland Provisions) is updated and enforced by the city's Planning and Zoning Dept. As projects are identified we will seek funding to assist with implementation.	Internal: City Gen. Operating Budget External: SWCD Cost Share Program, MnDNR, Crystal Waters Project (CWP)
9	Extreme Temperatures Heat/Cold	Mitigation Preparedness & Response Support	Be prepared to provide emergency sheltering to vulnerable residents during periods of extreme heat or cold temperatures.	Existing High 2026-2031	City Admin, City EM	In the event of an extreme temperature event coupled with an extended power outage, the city will work with our fire department and Blue Earth County Emergency Management to address assistance such as evacuation or temporary sheltering for the elderly or other vulnerable residents.	Internal: City Gen. Operating Budget
10	Drought	Local Planning & Regulations / Education & Awareness Programs	During periods of drought enforce water use restrictions and conduct public outreach on water conservation measures.	New Moderate 2026-2031	City Admin	During periods of severe drought, the city will enforce watering restrictions as per MN DNR guidance. We will also work to promote awareness to residents of the restrictions and water conservation measures.	Internal: City Gen. Operating Budget
	Land Subsidence		N/A. Not a local hazard.				
	Landslides		N/A. Not a local hazard.				

City of Madison Lake

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events, periods of extreme temperatures, and extended power outages.	Existing High 2026-2031	City Admin / City EM	The city communicates severe weather announcements via our city Facebook page and text alerts. Our snow emergency notifications are sent out via our website, Facebook, text alerts, local radio and television stations. We will work with Blue Earth County Emergency Management to help us participate locally in sharing information during the NWS severe weather awareness weeks.	Internal: City Gen. Operating Budget
2	All-Hazards	Education & Awareness Programs	Encourage residents to sign up for the county's emergency notification system to receive alerts on severe weather events.	Existing High 2026-2031	City Admin / City EM	The city website has a link to Blue Earth County for residents to sign up for Code Red. We can also promote sign up via Facebook and text alert.	Internal: City Gen. Operating Budget
3	All-Hazards	Local Planning & Regulations	Enforce city regulations that help to reduce the risk of storm damages to new development.	Existing High 2026-2031	City Admin	The City of Madison Lake has adopted the MN State Building Code which is enforced by our Building Official/Building Inspector. Additionally, the city has adopted City Code zoning requirements for new development which are enforced by Building Inspectors and the City's Zoning Administrator.	Internal: City Gen. Operating Budget
4	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and new development.	Existing Moderate 2026-2031	City Admin	The city of Madison Lake has multiple plans and policies in place that support mitigation against natural hazards: • Comprehensive Plan • Floodplain Ordinance • Stormwater Management Plan • Wellhead Protection Plan • Emergency Operations Plan • Capital Improvement Plan • Participation in watershed partnerships	Internal: City Gen. Operating Budget

City of Madison Lake

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
5	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Ensure the city has emergency generator backup power for city services and buildings.	New High 2026-2031	City PW / City EM	The city will be working to replace the City Hall/Fire Hall generator as it also serves as our EOC. We also plan to replace aging lift station generators as well as purchase new generators for lift stations that do not currently have them. The city will purchase generators as funding is available under our general operating budget. We may seek FEMA grant funding for a generator to support our efforts.	Internal: City Gen. Operating Budget External: FEMA HMGP grant
6	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Trim trees near power lines and work with our local utility to convert overhead power lines to underground to reduce the risk of power outages from severe storms.	Existing Moderate 2026-2031	City Public Works Dept.	The city will work with our electric provider Xcel Energy to get more electricity lines underground when possible. The city and Xcel Energy continue to trim trees near overhead power lines to reduce the risk of failure during severe storm events.	Internal: City PW Budget External: Xcel Energy
7	Severe Summer Storms	Mitigation Preparedness & Response Support	Ensure that the city's outdoor warning sirens are maintained and functioning.	Existing High 2026-2031	City EM	The city has an updated siren system for the city. A new siren was installed at Bray Park in 2024. The sirens are tested monthly in coordination with the Blue Earth County Sheriff's Office and maintained as needed.	Internal: City Gen. Operating Budget

City of Madison Lake

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
8	Severe Summer Storms	Local Planning & Regulations / Structure & Infrastructure Projects	Address evacuation and shelter planning for the city's mobile home park and municipal campground.	Existing High 2026-2031	City EM	We have a large mobile home park and a campground that are susceptible to high winds and tornadic events. We will work to assess the possibility of construction of storm shelter or tornado safe room facilities for these locations, as well as to develop alternative off-site shelter solutions that could be used. FEMA HMGP grant funding would be of interest to the city to apply for if we seek to construct tornado safe rooms.	Internal: City Gen. Operating Budget External: FEMA HMGP safe room grant
9	Severe Summer Storms	Education & Awareness Programs	Encourage residents to be aware of tornadic weather and have plans to shelter-in-place.	Existing High 2026-2031	City Admin / City EM	The city will work with Blue Earth County Emergency Management to help us participate locally in sharing information during the NWS severe weather awareness week. We also seek to work directly with the mobile home park operator in the city to ensure evacuation and sheltering plans are updated.	Internal: City Gen. Operating Budget
10	Severe Summer Storms	Mitigation Preparedness & Response Support	Participate in annual National Weather Service SkyWarn training for local storm spotters.	Existing High 2026-2031	City EM in coord with BEC Emergency Mgmt.	The city's Police Department has officers that participate each year to be trained storm spotters. This is a part of the city's emergency preparedness activities.	Internal: City Gen. Operating Budget External: NWS

City of Madison Lake

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
11	Extreme Temperatures Heat/Cold	Mitigation Preparedness & Response Support	Be prepared to provide emergency sheltering to vulnerable residents during periods of extreme heat or cold temperatures.	Existing High 2026-2031	City Admin, City EM	In the event of an extreme temperature event coupled with an extended power outage, the city will work with our fire department and Blue Earth County Emergency Management to address assistance such as evacuation or temporary sheltering for the elderly or other vulnerable residents.	Internal: City Gen. Operating Budget
12	Flooding	Structure & Infrastructure Projects	Work to address flood mitigation measures that help the city to handle future high rain events.	Existing High 2026-2031	City Public Works Dept.	During the next 5 years the city will be working to replace aging infrastructure and enhance storm sewer systems with new projects. We have identified I&I issues but need funding to implement projects. The city will seek outside state or federal funding to assist in these efforts.	Internal: City PW Budget External: MN DNR FHM grant, MN PFA, FEMA HMGP
13	Drought	Local Planning & Regulations / Education & Awareness Programs	During periods of drought establish water use restrictions and conduct public outreach on water conservation measures.	New Moderate 2026-2031	City Admin	During periods of severe drought, the city will establish watering restrictions as per MN DNR guidance. We will also work to promote awareness to residents of the restrictions and water conservation measures.	Internal: City Gen. Operating Budget
	Land Subsidence		N/A. Not a local hazard.				
	Landslides		N/A. Not a local hazard.				
	Dam Failure		N/A. Not a local hazard.				

City of Mankato**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events, periods of extreme temperatures, and extended power outages.	Existing High 2026-2031	City Admin / City EM, City Communications & Engagement Team	The City of Mankato uses a layered, multi-platform approach to share information about severe weather events and promote personal preparedness among residents, including using the city website, social media platforms, email newsletters, traditional local media (radio & TV), and public outreach at events. Mankato actively participates in Minnesota's Severe Weather Awareness Week (April) and Winter Hazard Awareness Week (November), sharing multilingual materials to ensure messages reach our diverse community. Public outreach efforts are coordinated in part by the city's Communications and Engagement team, who work across departments to ensure consistent, timely, and inclusive messaging.	Internal: City Gen. Operating Budget

City of Mankato

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
2	All-Hazards	Education & Awareness Programs	Encourage residents to sign up for the county's emergency notification system to receive alerts on severe weather events.	Existing High 2026-2031	City Admin / City EM	The City of Mankato actively promotes and utilizes the Blue Earth County CodeRED system to deliver emergency notifications to residents, businesses, and visitors. The city encourages sign-ups through utility bill inserts, social media campaigns, e-newsletters, and in-person outreach at community events. Recognizing the importance of reaching transient and vulnerable populations, the City coordinates with Minnesota State University, area landlords, and major employers to encourage enrollment in CodeRED among students and seasonal workers.	Internal: City Gen. Operating Budget
3	All-Hazards	Local Planning & Regulations	Enforce city regulations that help to reduce the risk of storm damages to new development.	Existing High 2026-2031	City Admin	Mankato has adopted and enforces the Minnesota State Building Code. The City's Building Inspections Division reviews all new development, additions, and significant remodels to ensure compliance with both state code and local zoning, including floodplain elevation standards. In addition to permitting and inspections, proposed developments are reviewed by the city's Site Plan Review Committee, which evaluates projects for safety, infrastructure impact, and hazard mitigation considerations. Enforcement is maintained through a formal approval and inspection process, with penalties for non-compliance.	Internal: City Gen. Operating Budget

City of Mankato

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
4	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and new development.	Existing Moderate 2026-2031	City Admin	Mankato has multiple plans and policies in place that support mitigation against natural hazards: • Comprehensive Plan • Floodplain Ordinance • Stormwater Management Plan • Wellhead Protection Plan s • Emergency Operations Plan • Climate Action Plan • Capital Improvement Plan • Participation in watershed partnership planning (1W1P's) • Dedicated environmental staff, including an Environmental Sustainability Coordinator and Environmental Compliance Specialist, who support hazard mitigation through MS4 stormwater compliance and sustainability initiatives.	Internal: City Gen. Operating Budget
5	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Ensure the city has emergency generator backup power for city services and buildings.	New High 2026-2031	City PW / City EM	The city of Mankato is working to install additional backup power generators for critical infrastructure and flood control systems. The city will purchase generators as funding is available.	Internal: City Gen. Operating Budget
6	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Replace or relocate vulnerable utility lines, including efforts to bury overhead power lines to reduce outage risks.	Existing Moderate 2026-2031	City Public Works Dept.	The city will work with our utility providers BENCO and Xcel Energy on efforts to address power line conversion projects for areas of vulnerability or new development.	External: BENCO Electric Cooperative, Xcel Energy

City of Mankato

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
7	Severe Summer Storms	Mitigation Preparedness & Response Support	Ensure that the city's outdoor warning sirens are maintained and functioning.	Existing High 2026-2031	City EM	The city operates 12 outdoor warning sirens, which are tested monthly in coordination with Blue Earth County Dispatch. We are collaborating with regional partners to conduct a comprehensive assessment of the system to identify needed upgrades and enhance future capabilities, including alignment with modern polygon-based activation standards.	Internal: City Gen. Operating Budget, Grant Funding
8	Severe Summer Storms	Education & Awareness Programs	Encourage residents to be aware of tornadic weather and have plans to shelter-in-place.	Existing High 2026-2031	City Admin / City EM	The city continues to actively participate in and promote the annual NWS severe weather awareness week.	Internal: City Gen. Operating Budget
9	Extreme Temperatures Heat/Cold	Mitigation Preparedness & Response Support	Be prepared to provide emergency sheltering to vulnerable residents during periods of extreme heat or cold temperatures.	Existing High 2026-2031	City Admin, City EM	In the event of an extreme temperature event coupled with an extended power outage, the city will work with our fire department and Blue Earth County Emergency Management to address assistance such as evacuation or temporary sheltering for the elderly or other vulnerable residents.	Internal: City Gen. Operating Budget

City of Mankato Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
10	Flooding	Structure & Infrastructure Projects	Implement priority stormwater improvement projects to reduce the impacts of high rain events.	Existing High 2026-2031	City Public Works Dept.	The city has identified the following priority stormwater management projects: • Expansion and upgrading of storm sewer systems to better manage larger and more frequent rain events. • Construction of a new municipal well at Land of Memories Park, improving water system redundancy and capacity. • Address significant upgrades to wastewater lines, particularly in ravines and creek corridors, to enhance resilience, reduce infiltration/inflow, and prevent environmental contamination during extreme weather events. Obtaining outside funding is necessary for the city to implement these measures.	Internal: City Gen. Operating Budget External: State Bonding Funds, MN PFA, FEMA HMGP grant
11	Flooding	Education & Awareness Programs	Provide outreach & education to homeowners on the benefits of sump pump installation to improve drainage.	Existing High 2026-2031	City Admin.	The city's website offers residents practical guidance on personal preparedness and links to Ready.gov for hazard-specific information, including flood-risk awareness, protective actions, and recovery resources.	Internal: City Gen. Operating Budget
12	Drought	Local Planning & Regulations / Education & Awareness Programs	During periods of drought establish water use restrictions and conduct public outreach on water conservation measures.	New Moderate 2026-2031	City Admin	During periods of severe drought, the city will establish watering restrictions as per MN DNR guidance. We will also work to promote awareness to residents of the restrictions and water conservation measures.	Internal: City Gen. Operating Budget

City of Mankato

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
13	Landslides	Structure & Infrastructure Projects	Identify and address measures that will reduce the risk of landslides and damage to infrastructure due to erosion in sensitive areas.	New High 2026-2031	City Public Works	Numerous ravines throughout the city, such as Indian Creek, Viking Drive, Highland Park Ravine, and Thompson Ravine Road, have experienced slope instability and erosion—leading to damage of public infrastructure and private property. Heavy rainfall events increase this risk significantly, making landslides a moderate but growing hazard. The city will be working to identify and implement projects that address long-term stabilization and erosion control, especially for ravines, the riverbank, and areas of concern near bridges, parks, and public infrastructure.	Internal: City Gen. Operating Budget External: BEC SWCD, FEMA HMGP
14	Dam Failure	Local Planning & Regulations	Continue to work with Blue Earth County on emergency planning for potential future issues with the Rapidan Dam that may affect Mankato.	New Moderate 2026-2031	City Admin / City EM in coord with Blue Earth County	Mitigation work is underway following the 2024 partial breach of the Rapidan Dam. The city will continue to work with Blue Earth County to engage in emergency planning as needed.	Internal: City Gen. Operating Budget, External: BEC EM
	Land Subsidence		N/A. Not a local hazard.				

City of Mapleton

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events, periods of extreme temperatures, and extended power outages.	Existing High 2026-2031	City Admin / City EM	The City of Mapleton posts information on the city's social media page as well as on the Police Department social media page. We utilize our website to send email and text alerts. The city also participates in school Winter Weather talks. The city will work with Blue Earth County Emergency Management to help us participate locally in sharing information during the NWS severe weather awareness weeks.	Internal: City Gen. Operating Budget
2	All-Hazards	Education & Awareness Programs	Encourage residents to sign up for the county's emergency notification system to receive alerts on severe weather events.	Existing High 2026-2031	City Admin / City EM	The city will work with Blue Earth County Emergency Management to help us to provide information and a link to sign up for CodeRED that we can promote on our city website and social media pages.	Internal: City Gen. Operating Budget
3	All-Hazards	Local Planning & Regulations	Enforce city regulations that help to reduce the risk of storm damages to new development.	Existing High 2026-2031	City Admin	The City of Mapleton enforces the city's zoning ordinance and requires building permits for new construction. After the Zoning Board approves a permit, it must go to the City Council for approval. The Zoning Board and the Mapleton City Council approve building permits.	Internal: City Gen. Operating Budget
4	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and new development.	Existing Moderate 2026-2031	City Admin	The City of Mapleton has a Wellhead Protection Plan in place, zoning restrictions, as well as a Flood Plain Ordinance (adopted 7/23/2019).	Internal: City Gen. Operating Budget

City of Mapleton

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
5	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Ensure the city has emergency generator backup power for city services and buildings.	New High 2026-2031	City PW / City EM	The city has generators in place to run much of our city facilities, including City Hall/Police Station, Filter Plant and one of the wells, the Lift Station, and the Fire Station. We continue to maintain our generator backup power and will purchase new generators as needed.	Internal: City Gen. Operating Budget
6	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Trim trees near power lines and work with our local utility to convert overhead power lines to underground to reduce the risk of power outages from severe storms.	Existing Moderate 2026-2031	City Public Works Dept.	The city will work with our electric provider Xcel Energy to get more electricity lines underground when possible. The city and Xcel Energy continue to trim trees near overhead power lines to reduce the risk of failure during severe storm events.	Internal: City PW Budget External: Xcel Energy
7	Severe Summer Storms	Mitigation Preparedness & Response Support	Ensure that the city's outdoor warning sirens are maintained and functioning.	Existing High 2026-2031	City EM	In 2024 a new siren was installed at Daly Park by Blue Earth County and in 2025 a new siren was installed near the new school by the city. We test the sirens monthly in coordination with the Blue Earth County Sheriff's Office and maintained as needed.	Internal: City Gen. Operating Budget
8	Severe Summer Storms	Education & Awareness Programs	Encourage residents to be aware of tornadic weather and have plans to shelter-in-place.	Existing High 2026-2031	City Admin / City EM	The city will work with Blue Earth County Emergency Management to help us participate locally in sharing information during the NWS severe weather awareness week.	Internal: City Gen. Operating Budget

City of Mapleton

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
9	Extreme Temperatures Heat/Cold	Mitigation Preparedness & Response Support	Be prepared to provide emergency sheltering to vulnerable residents during periods of extreme heat or cold temperatures.	Existing High 2026-2031	City Admin, City EM	In the event of an extreme temperature event coupled with an extended power outage, the city will work with our fire department and Blue Earth County Emergency Management to address assistance such as evacuation or temporary sheltering for the elderly or other vulnerable residents.	Internal: City Gen. Operating Budget
10	Flooding	Structure & Infrastructure Projects	Work to address flood mitigation measures that help the city to handle future high rain events.	Existing High 2026-2031	City Public Works Dept.	The city continues to work on making improvement to our stormwater infrastructure. We are keeping up with the I&I plan in place and our lift station has excess capacity. The city is working to televise all remaining sanitary sewer and lines within the city. n 2014 2017, and 2022 we had street projects that included televising homes.	Internal: City Gen. Operating Budget External: MN PFA
11	Drought	Local Planning & Regulations / Education & Awareness Programs	During periods of drought establish water use restrictions and conduct public outreach on water conservation measures.	New Moderate 2026-2031	City Admin	During periods of severe drought, the city will establish watering restrictions as per MN DNR guidance. We will also work to promote awareness to residents of the restrictions and water conservation measures.	Internal: City Gen. Operating Budget
	Land Subsidence		N/A. Not a local hazard.				
	Landslides		N/A. Not a local hazard.				
	Dam Failure		N/A. Not a local hazard.				

City of Minnesota Lake

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events, periods of extreme temperatures, and extended power outages.	Existing High 2026-2031	City Admin / City EM	The city posts information on the city's social media page as well as on the Police Department social media page, as well as uses Email to share information with the public. We are also exploring a new text service for the community. We will seek to work with Blue Earth County Emergency Management to help us participate locally in sharing information during the NWS severe weather awareness weeks.	Internal: City Gen. Operating Budget
2	All-Hazards	Education & Awareness Programs	Encourage residents in our community to sign up for the county's emergency notification system.	Existing High 2026-2031	City Admin / City EM	We will encourage residents to sign up by adding information on CodeRED to our utility billing invoices and city webpage.	Internal: City Gen. Operating Budget
3	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and new development.	Existing Moderate 2026-2031	City Admin	The City of Minnesota Lake has a Wellhead Protection Plan in place, zoning restrictions, and follows guidance from our city engineer. We are working with engineers to develop an infrastructure plan. The city has a Comprehensive Plan for future growth. We enforce a permitting process for new development and have an oversight Planning Committee that reviews permits that fall outside of current city construction code.	Internal: City Gen. Operating Budget
4	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase and install generators for emergency backup power for the City Office and Public Works shop for when the power is down.	New High 2026-2031	City Admin, City EM	The city will purchase generators as funding is available. This is part of our efforts to be prepared for extended power outages. We previously installed a generator at the water plant in case of power outages. This was made possible through a matching grant through MN Dept of Health,	Internal: PW Dept. Budget External: MDH matching grant

City of Minnesota Lake

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
5	Flooding	Local Planning & Regulations	Work to address flood mitigation measures that help the city to handle future high rain events.	In-Progress High 2026-2031	City PW	We are currently working with an engineering firm to determine the best route of updating aging water/sewer/sanitary systems. Some systems are over 50 yrs old. We are continuing to work with a company to camera/flush sanitary lines, taking a different section of town for 5 years. We are working to address how to reduce the impact of flood events what overload the city's sanitary collection system. Minnesota Lake is a member of MNWARN and the MN Rural Water Association.	Internal: PW Dept. Budget External: MN PFA, MN DNR FHM grant program
6	Extreme Temperatures Heat/Cold	Mitigation Preparedness & Response Support	Be prepared to provide emergency sheltering to vulnerable residents during periods of extreme heat or cold temperatures.	Existing High 2026-2031	City Admin, City EM	In the event of an extreme temperature event coupled with an extended power outage, the city will work with our fire department and Blue Earth County and/or Faribault County Emergency Management to address assistance such as evacuation or temporary sheltering for the elderly or other vulnerable residents.	Internal: City Gen. Operating Budget External: Blue Earth / Faribault County Emergency Mgmt.
7	Drought	Local Planning & Regulations / Education & Awareness Programs	During periods of drought enforce water use restrictions and conduct public outreach on water conservation measures.	New Moderate 2026-2031	City Admin	During periods of severe drought, the city will enforce watering restrictions as per MN DNR guidance. We will also work to promote awareness to residents of the restrictions and water conservation measures.	Internal: City Gen. Operating Budget
	Land Subsidence		N/A. Not a local hazard.				
	Landslides		N/A. Not a local hazard.				

City of North Mankato

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events, periods of extreme temperatures, and extended power outages.	Existing High 2026-2031	City Admin / City EM	The city conducts proactive outreach to share information with the public to prepare for severe events as well as during severe weather events. Examples include participating in Severe Weather Awareness Week, sharing information and announcements through our weekly e-newsletter, monthly utility bill, social media posts (Facebook, Instagram, X), bi-annual print newsletter, and press releases.	Internal: General Fund
2	All-Hazards	Education & Awareness Programs	Encourage residents to sign up for the city's emergency notification system to receive various emergency alerts on severe weather events and other incidents.	Existing High 2026-2031	City Admin / City EM	The City of North Mankato continues to encourage residents to sign up for our emergency notification system, Nixle. For the last several years we have included information about our Nixle system and how to sign up through our weekly e-newsletter, monthly utility bill, social media posts (Facebook, Instagram, X), bi-annual print newsletter, press releases, flyers at City Hall, and on our website. We have recently begun discussions to migrate to a new notification system (TextMyGov) which would allow for several upgrades in notification/alerting capabilities. It will not require participants to "re-sign up" for notifications who are already NIXLE subscriber. Future press releases will be sent to the community advising of the new alerting system.	Internal: General Fund

City of North Mankato

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
3	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and new development.	Existing Moderate 2026-2031	City Admin	The city of North Mankato has adopted the MN State Building Code which is enforced by a Building Official and a Building Inspector. The city's Public Works Dept. and Community Development Dept. enforce our floodplain requirements and bluff/ravine land regulations. We have a 20-year Comprehensive Plan that guides the physical growth and development of our city. Our Public Works Dept. administers a Wellhead protection plan to prevent the water supply from being contaminated. The cities Climate Action Plan which establishes goals and provides a menu of detailed actions to increase climate resilience and reduce community-wide greenhouse gas emissions will be completed in 2025. This plan focuses on transportation and land usage, buildings and energy, waste management, water and wastewater, green space and trees, as well as economy. Lastly, upon sale of any residential dwelling within the city, Building Inspectors conduct an Inflow and Infiltration inspection to ensure sump pump water is being discharged properly.	Internal: General Fund

City of North Mankato

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
4	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Reduce the risk of downed power lines and extended power outages due to severe storm events. On-going evaluation of civil defense sirens	Existing Moderate 2026-2031	City PW/ City EM	The city continues to coordinate with / request Xcel Energy to identify/trim tree limbs that conflict with powerlines and to replace/move overhead power lines to underground when and where feasible.	Internal: PW Dept. Budget/CD Budget
5	Severe Summer Storms	Mitigation Preparedness & Response Support	Assess and implement improvements that can be made to the city's outdoor warning siren system.	New High 2026-2031	City EM in coord with Blue Earth County and City of Mankato	The city is currently working with Blue Earth County and City of Mankato to evaluate current capabilities of existing civil defense sirens to transition to a polygon activation model.	Internal: General Fund External: FEMA HMGP Grant funding for warning sirens, Blue Earth County & City of Mankato funding
6	Flooding	Local Planning & Regulations	Work to address flood mitigation measures that help the city to handle future high rain events.	In-Progress High 2026-2031	City PW	The city's Public Works Dept. is actively planning and seeking funding for rehab of stormwater lift stations, and to extend floodwall protection on the west end of the floodwall. Our utility budgets allow us to address flood related mitigation projects, such as the replacement of culverts, maintaining the lift stations, and doing stormwater repairs.	Internal: PW Dept. Budget

City of North Mankato

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
7	Flooding	Local Planning & Regulations	Implement specific city plans and policies that help to address flood risk reduction.	Existing High 2025-2030	City Admin, Planning & Zoning, Public Works	The City of North Mankato's Public Works Dept. and Community Development Dept/ enforce our floodplain requirements and bluff/ravine land regulations. The city is training an internal staff member to be a certified flood plain manager, providing in-house expertise on flood plain management and perform active inspections and reviews.	Internal: General Fund
8	Extreme Temperatures Heat/Cold	Mitigation Preparedness & Response Support	Be prepared to provide emergency sheltering to vulnerable residents during periods of extreme heat or cold temperatures.	Existing High 2026-2031	City Admin, City EM	In the event of an extreme temperature event coupled with an extended power outage, the city will work with Nicollet County Emergency Management, Blue Earth County Emergency Management (as needed), and local schools, business, etc. to address assistance such as evacuation or temporary sheltering for the elderly or other vulnerable residents. Nicollet County EM has identified sites in North Mankato that can be used for shelter, etc. and these agreements are renewed. In addition, the police annex has been used as emergency warming/cooling stations.	Internal: General Fund
9	Drought	Local Planning & Regulations / Education & Awareness Programs	During periods of drought enforce water use restrictions and conduct public outreach on water conservation measures.	New Moderate 2026-2031	City Admin, Public Works	During periods of severe drought, the city will enforce watering restrictions as per MN DNR guidance. We will also work to promote awareness to residents of the restrictions and water conservation measures.	Internal: General Fund

City of North Mankato**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
10	Landslides	Mitigation Preparedness & Response Support	Implement specific city plans and policies that help to address impacts of landslides	New Moderate 2026-2031	City Admin, Planning & Zoning, Public Works	City Ordinance requires new development to dedicate ravine hillsides and slopes of bluff lands to the city, who maintains the slopes against future landslides and other hazards. Development codes require setbacks from the top of ravines and bluffs.	Internal: General Fund

City of Pemberton

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events, periods of extreme temperatures, and extended power outages.	Existing High 2026-2031	City Admin / City EM	The City of Pemberton communicates to its residents through public postings, flyers/newsletters included with utility billings, online City website, and social media sites. The city work with Blue Earth County Emergency Management to help us participate locally in sharing information during the NWS severe weather awareness weeks.	Internal: City Gen. Operating Budget
2	All-Hazards	Education & Awareness Programs	Encourage residents to sign up for the county's emergency notification system to receive alerts on severe weather events.	Existing High 2026-2031	City Admin / City EM	The city maintains a link on the city website that directs residents to sign up for Blue Earth County Alerts and Waseca County Alerts.	Internal: City Gen. Operating Budget
3	All-Hazards	Local Planning & Regulations	Enforce city regulations that help to reduce the risk of storm damages to new development.	Existing High 2026-2031	City Admin	The City of Pemberton has adopted the MN State Building Code which is enforced by a Building Official and Building Inspector.	Internal: City Gen. Operating Budget
4	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and new development.	Existing Moderate 2026-2031	City Admin	The city enforces its Floodplain Ordinance, adopted in 2019. The city also has an Emergency Management Plan in place.	Internal: City Gen. Operating Budget
5	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Ensure the city has emergency generator backup power for city services and buildings.	New High 2026-2031	City PW / City EM	The city is working on the replacement of City Hall/Fire Hall generator. We also do not have a backup generator for the city's water tower or our lift station. Purchase of generators will be made by the city's Public Works Dept. as city funding is available. The city may also seek outside grant funding for a permanent generator for our water tower from outside sources, which may include FEMA HMGP.	Internal: City Gen. Operating Budget External: FEMA HMGP

City of Pemberton

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
6	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Trim trees near power lines and work with our local utility to convert overhead power lines to underground to reduce the risk of power outages from severe storms.	Existing Moderate 2026-2031	City Public Works Dept.	The city will work with our electric provider Xcel Energy to get more electricity lines underground when possible. The city and Xcel Energy continue to trim trees near overhead power lines to reduce the risk of failure during severe storm events.	Internal: City PW Budget External: Xcel Energy
7	Severe Summer Storms	Mitigation Preparedness & Response Support	Ensure that the city's outdoor warning sirens are maintained and functioning.	Existing High 2026-2031	City EM	The city has 1 outdoor warning siren which we test monthly in coordination with the Blue Earth County Sheriff's Office and maintained as needed.	Internal: City Gen. Operating Budget
8	Severe Summer Storms	Education & Awareness Programs	Encourage residents to be aware of tornadic weather and have plans to shelter-in-place.	Existing High 2026-2031	City Admin / City EM	The city will work with Blue Earth County Emergency Management to help us participate locally in sharing information during the NWS severe weather awareness week.	Internal: City Gen. Operating Budget
9	Extreme Temperatures Heat/Cold	Mitigation Preparedness & Response Support	Be prepared to provide emergency sheltering to vulnerable residents during periods of extreme heat or cold temperatures.	Existing High 2026-2031	City Admin, City EM	In the event of an extreme temperature event coupled with an extended power outage, the city will work with our fire department and Blue Earth County Emergency Management to address assistance such as evacuation or temporary sheltering for the elderly or other vulnerable residents.	Internal: City Gen. Operating Budget
10	Flooding	Structure & Infrastructure Projects	Work to address flood mitigation measures that help the city to handle future high rain events.	Existing High 2026-2031	City Public Works Dept.	Our city Public Works department is continuing to focus on efforts to improve our aging infrastructure and enhancing our storm sewer systems to have increased capacity to handle high rain events.	Internal: City PW Budget External: MN PFA

City of Pemberton**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
11	Drought	Local Planning & Regulations / Education & Awareness Programs	During periods of drought establish water use restrictions and conduct public outreach on water conservation measures.	New Moderate 2026-2031	City Admin	During periods of severe drought, the city will establish watering restrictions as per MN DNR guidance. We will also work to promote awareness to residents of the restrictions and water conservation measures.	Internal: City Gen. Operating Budget
	Land Subsidence		N/A. Not a local hazard.				
	Landslides		N/A. Not a local hazard.				
	Dam Failure		N/A. Not a local hazard.				

City of Skyline Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events, periods of extreme temperatures, and extended power outages.	Existing High 2026-2031	City Admin / Council	The city shares information with residents using our city website, emails, and we will be setting up a new city Facebook page. We will work with Blue Earth County Emergency Management to help us participate locally in sharing information during the NWS severe weather awareness weeks.	Internal: City Gen. Operating Budget
2	All-Hazards	Education & Awareness Programs	Encourage residents to sign up for the county's emergency notification system to receive alerts on severe weather events.	Existing High 2026-2031	City Admin / Council	We will work with Blue Earth County Emergency Management to help provide us with information and a link for residents to sign up for the county's CodeRED system. We will also work to start an awareness campaign on this using reminders in our city newsletter.	Internal: City Gen. Operating Budget
3	All-Hazards	Local Planning & Regulations	Enforce city regulations that help to reduce the risk of storm damages to new development.	Existing High 2026-2031	City Admin / Council	The City of Skyline has ordinances that provide general rules such as setbacks. We ask residents to provide information about projects prior to starting. We follow the MN State Electrical Permit.	Internal: City Gen. Operating Budget
4	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and new development.	Existing Moderate 2026-2031	City Admin / Council	The city has Land Use Zoning ordinances in place. We also would like to work on evacuation planning in coordination with first responders and Blue Earth County Emergency Management, as we have only one way in and out of Skyline.	Internal: City Gen. Operating Budget

City of Skyline Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
5	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Ensure the city has emergency generator backup power for city services and buildings.	New High 2026-2031	City Admin / Council	The city will be working to obtain backup generator power for the city's pump house, water tower, City Hall, and lift stations. We will purchase generators as funding is available under our general operating budget.	Internal: City Gen. Operating Budget
6	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Trim trees near power lines and work with our local utility to convert overhead power lines to underground to reduce the risk of power outages from severe storms.	Existing Moderate 2026-2031	City Admin / Council	The city will work with our electric provider Xcel Energy to get more electricity lines underground when possible. The city and Xcel Energy continue to trim trees near overhead power lines to reduce the risk of failure during severe storm events.	Internal: City PW Budget External: Xcel Energy
7	Severe Summer Storms	Mitigation Preparedness & Response Support	Ensure that the city's outdoor warning sirens are maintained and functioning.	Existing High 2026-2031	City Admin / Council	The city has 2 outdoor warning sirens which are tested monthly in coordination with the Blue Earth County Sheriff's Office and maintained as needed.	Internal: City Gen. Operating Budget
8	Severe Summer Storms	Education & Awareness Programs	Encourage residents to be aware of tornadic weather and have plans to shelter-in-place.	Existing High 2026-2031	City Admin	The city will work with Blue Earth County Emergency Management to help us participate locally in sharing information during the NWS severe weather awareness week.	Internal: City Gen. Operating Budget
9	Extreme Temperatures Heat/Cold	Mitigation Preparedness & Response Support	Be prepared to provide emergency sheltering to vulnerable residents during periods of extreme heat or cold temperatures.	Existing High 2026-2031	City Admin / Council	In the event of an extreme temperature event coupled with an extended power outage, the city will work with our fire department and Blue Earth County Emergency Management to address assistance such as evacuation or temporary sheltering for the elderly or other vulnerable residents.	Internal: City Gen. Operating Budget

City of Skyline

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
10	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Work to address flood mitigation measures that help the city to handle future high rain events.	Existing High 2026-2031	City Admin / Council	The city is working with ISG Engineering to create a proposal for a feasibility study to address flood related issues that impact the city's stormwater management, including undersized tile lines, residential basement flooding, street flooding. The city also has a new water drainage mitigation committee is being started with volunteers from community. We are working on a Green Plan for water mitigation to homeowners and starting a flooding mitigation committee.	Internal: City Gen. Operating Budget External: MN PFA, MPCA Climate Resiliency funding
11	Drought	Local Planning & Regulations / Education & Awareness Programs	During periods of drought establish water use restrictions and conduct public outreach on water conservation measures.	New Moderate 2026-2031	City Admin / Council	During periods of severe drought, the city will establish watering restrictions as per MN DNR guidance. We will also work to promote awareness to residents of the restrictions and water conservation measures.	Internal: City Gen. Operating Budget
	Land Subsidence		N/A. Not a local hazard.				
	Landslides		N/A. Not a local hazard.				
	Dam Failure		N/A. Not a local hazard.				

City of St. Clair

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events, periods of extreme temperatures, and extended power outages.	Existing High 2026-2031	City Admin / City EM	The city uses communication channels such as the city's website, monthly newsletter and Facebook page to convey this information to residents on an annual basis. We will work with Blue Earth County Emergency Management to help us participate locally in sharing information during the NWS severe weather awareness weeks.	Internal: City Gen. Operating Budget
2	All-Hazards	Education & Awareness Programs	Encourage residents to sign up for the county's emergency notification system to receive alerts on severe weather events.	Existing High 2026-2031	City Admin / City EM	The city has established a new link on the city's website homepage for residents to learn about and register for CodeRED.	Internal: City Gen. Operating Budget
3	All-Hazards	Local Planning & Regulations	Enforce city regulations that help to reduce the risk of storm damages to new development.	Existing High 2026-2031	City Admin	The City of St. Clair adopted the MN State Building Code in 2008. The city requires a Building Permit for almost all building and construction projects in the city. Inspections are conducted by the City's Building Official.	Internal: City Gen. Operating Budget
4	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and new development.	Existing Moderate 2026-2031	City Admin	The city enforces our updated floodplain ordinance, wellhead protection plan, and city zoning ordinance.	Internal: City Gen. Operating Budget
5	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Ensure the city has emergency generator backup power for city services and buildings.	New High 2026-2031	City PW / City EM	The city has generators for our water plant and sewer plant, but do not have back-up power for City Hall or the Fire Station. The city will work to purchase additional generators as funding is available under our general operating fund.	Internal: City Gen. Operating Budget

City of St. Clair

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
6	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Trim trees near power lines and work with our local utility to convert overhead power lines to underground to reduce the risk of power outages from severe storms.	Existing Moderate 2026-2031	Xcel Energy	We only have one electric line coming into the city. Our electric provider, Xcel Energy oversees management of trimming trees near the line. Xcel has the authority to deem if and where any section of overhead power line may be converted to underground.	External: Xcel Energy
7	Severe Summer Storms	Mitigation Preparedness & Response Support	Ensure that the city's outdoor warning sirens are maintained and functioning.	Existing High 2026-2031	City EM	The city has a warning siren that is old and need to be updated. We will work with Blue Earth County Emergency Management to help the city on replacement of our siren. We will need outside grant funding to purchase and install a new siren. FEMA HMGP grant funding may be an external source we may look to apply to in the future.	Internal: City Gen. Operating Budget External: FEMA HMGP
8	Severe Summer Storms	Education & Awareness Programs	Encourage residents to be aware of tornadic weather and have plans to shelter-in-place.	Existing High 2026-2031	City Admin / City EM	The city will work with Blue Earth County Emergency Management to help us participate locally in sharing information during the NWS severe weather awareness week.	Internal: City Gen. Operating Budget
9	Extreme Temperatures Heat/Cold	Mitigation Preparedness & Response Support	Be prepared to provide emergency sheltering to vulnerable residents during periods of extreme heat or cold temperatures.	Existing High 2026-2031	City Admin, City EM	In the event of an extreme temperature event coupled with an extended power outage, the city will work with our fire department and Blue Earth County Emergency Management to address assistance such as evacuation or temporary sheltering for the elderly or other vulnerable residents.	Internal: City Gen. Operating Budget

City of St. Clair

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
10	Flooding	Structure & Infrastructure Projects / Education & Awareness Programs	Work to address flood mitigation measures that help the city to handle future high rain events.	Existing High 2026-2031	City Public Works Dept.	The city is working to plan for and implement projects to reduce heavy I & I into our sanitary sewer system during heavy rain events. We have done mitigation projects on our WWTP and Lift Station, but residential flooding still remains a huge concern. We will encourage homeowners to maintain their basement sump pumps and have backup power.	Internal: City Gen. Operating Budget External: MN PFA, MPCA funding
11	Flooding	Structure & Infrastructure Projects	Construct a berm/structure at Fitzloff & Shallow areas to slow floodwaters on the LeSueur River upstream of the City of St. Clair.	Existing High 2026-2031	City Public Works Dept. in cord. with MN DNR	Our City Engineers are looking into installing a berm along the Le Sueur River in our most critical areas. The city will seek to work with the MN DNR to assess construction of holding area(s) to slow flood waters coming from upstream on the LeSueur River. External funding would be necessary as the costs for such a project exceed the financial capacity of the city.	Internal: City Gen. Operating Budget External: MN PFA, MPCA funding, FEMA HMGP grant
12	Flooding	Local Planning & Regulations	Update the city's Comprehensive Plan to better address land use planning for flood mitigation.	Existing High 2026-2031	City Admin	As the City Comprehensive Plan is updated flood planning and flood related information will be included.	Internal: City Gen. Operating Budget
13	Drought	Local Planning & Regulations / Education & Awareness Programs	During periods of drought establish water use restrictions and conduct public outreach on water conservation measures.	New Moderate 2026-2031	City Admin	During periods of severe drought, the city will establish watering restrictions as per MN DNR guidance. We will also work to promote awareness to residents of the restrictions and water conservation measures.	Internal: City Gen. Operating Budget
	Land Subsidence		N/A. Not a local hazard.				
	Landslides		N/A. Not a local hazard.				
	Dam Failure		N/A. Not a local hazard.				

City of Vernon Center Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events, periods of extreme temperatures, and extended power outages.	Existing High 2026-2031	City Admin / City EM	We use the city website, tornado siren, local TV & radio stations to share information with residents. We use the city website to encourage residents to sign up for updates. We will work with Blue Earth County Emergency Management to help us participate locally in sharing information during the NWS severe weather awareness weeks.	Internal: City Gen. Operating Budget
2	All-Hazards	Education & Awareness Programs	Encourage residents to sign up for the county's emergency notification system to receive alerts on severe weather events.	Existing High 2026-2031	City Admin / City EM	We have information on the county's CODERED system on our website and provide a link to the Blue Earth County website for people to sign up. We also encourage residents to sign up in the city newsletter.	Internal: City Gen. Operating Budget
3	All-Hazards	Local Planning & Regulations	Enforce city regulations that help to reduce the risk of storm damages to new development.	Existing High 2026-2031	City Admin	The city follows its own zoning ordinance. We have a city Building Permits and Inspections Department which is responsible for permitting all construction and conducting inspections of all construction-related permits as well as issuance of Certificates of Occupancy, Fire Prevention, and Special Events.	Internal: City Gen. Operating Budget
4	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and new development.	Existing Moderate 2026-2031	City Admin	The city has Zoning Ordinances in place that are enforced. The city is under an I/I compliance schedule from MPCA, financing is available for individuals needed to replace their sewer laterals.	Internal: City Gen. Operating Budget
5	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Ensure the city has emergency generator backup power for city services and buildings.	New High 2026-2031	City PW / City EM	The city purchased new generators for the city's water treatment plan, Fire Dept. and City Hall. We maintain the generators to ensure their operability.	Internal: City PW Budget

City of Vernon Center

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
6	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Trim trees near power lines and work with our local utility to convert overhead power lines to underground to reduce the risk of power outages from severe storms.	Existing Moderate 2026-2031	City Public Works Dept.	The city's public works department continues to trim trees within the city to avoid falling branches. BENCO also maintains trees near power lines. BENCO has authority in determining where vulnerable power lines may exist and the opportunities to convert overhead lines to underground. The city will work with BENCO on such efforts.	Internal: City PW Budget External: BENCO Electric Cooperative
7	Severe Summer Storms	Education & Awareness Programs	Encourage residents to be aware of tornadic weather and have plans to shelter-in-place.	Existing High 2026-2031	City Admin / City EM	The city will work with Blue Earth County Emergency Management to help us participate locally in sharing information during the NWS severe weather awareness week.	Internal: City Gen. Operating Budget
8	Extreme Temperatures Heat/Cold	Mitigation Preparedness & Response Support	Be prepared to provide emergency sheltering to vulnerable residents during periods of extreme heat or cold temperatures.	Existing High 2026-2031	City Admin, City EM	In the event of an extreme temperature event coupled with an extended power outage, the city will work with our fire department and Blue Earth County Emergency Management to address assistance such as evacuation or temporary sheltering for the elderly or other vulnerable residents.	Internal: City Gen. Operating Budget

City of Vernon Center

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
9	Flooding	Structure & Infrastructure Projects	Identify and implement measures to reduce the risk of flood-related erosion to the city's Wastewater Treatment Plant (WWTP).	Existing High 2026-2031	City Public Works Dept.	The city of Vernon Center has continued to experience flood-related erosion along the Blue Earth River that is posing future risk to the city's WWTP. Assistance from the USDA Natural Resources Conservation Service (NRCS) and Army Corps of Engineers are possible agencies to help identify and implement soil stabilization measures to reduce the impacts of river flooding and erosion. City funding will not be available as the City does not own the property. Will need to work with private property owners.	Internal: City Gen. Operating Budget External: USDA NRCS, ACOE, BEC SWCD, private property owners
10	Flooding	Local Planning & Regulations	Enforce the city's new ordinance requiring residents to upgrade any non-compliant sanitary sewer service lines on their property by 12/31/2025	Existing High 2026-2031	City Admin	This ordinance was put into place to help the city address Inflow & Infiltration problems due to privately owned, non-compliant sewer service lines. The ordinance will be enforced by the City of Vernon Center City Council.	Internal: City Gen. Operating Budget
11	Drought	Local Planning & Regulations / Education & Awareness Programs	During periods of drought establish water use restrictions and conduct public outreach on water conservation measures.	New Moderate 2026-2031	City Admin	During periods of severe drought, the city will establish watering restrictions as per MN DNR guidance. We will also work to promote awareness to residents of the restrictions and water conservation measures.	Internal: City Gen. Operating Budget
	Land Subsidence		N/A. Not a local hazard.				
	Landslides		N/A. Not a local hazard.				
	Dam Failure		N/A. Not a local hazard.				

Appendix I – Plan Maintenance & Monitoring Worksheets

During the five-year plan period, the Emergency Management Director (EMD) will require all relevant departments and jurisdictions to report on the status of their mitigation actions. This information will be used to track progress for the next plan update. Participating jurisdictions will use these worksheets to report on the mitigation activities listed in Appendix H.

Mitigation Action Tracking	
Name of Jurisdiction	
Reporting Period	
Describe the action or project.	
Who is responsible for the action?	
Project status:	☐ Complete ☐ In progress, anticipated completion date: _____ ☐ Not started ☐ Canceled
Progress Report	
Has there been any progress with this project so far?	
Are there any obstacles or challenges with this action so far?	
What steps do you need to take to complete this project?	
Other comments:	

Hazard Mitigation Plan Maintenance Schedule			
Plan Maintenance Step	When	How	Who
Monitoring	Twice per year.	Get status updates on jurisdictional mitigation actions, compile progress reports and identify any opportunities for improvement.	Emergency Management Director
Evaluating	Once a year or after a disaster event.	Use a standard form to review how the plan has been carried out so far and record lessons learned.	Emergency Management Director, Lead Jurisdiction Planning Department Manager
Updating	Every 5 years, or after a disaster event.	Review the plan and document necessary updates as necessary for the next plan update.	Emergency Management Director, Lead Jurisdiction Planning Department Manager

The EMD will also seek feedback from the Emergency Managers group on the following:

- Are there any new representatives from jurisdictions, agencies, or organizations that you feel should be included in our stakeholder outreach?
- Do you feel your community has any new vulnerabilities that may be impacted by hazard events? (critical infrastructure, systems, or populations)
- Has your community identified any new mitigation activities that would help reduce risk to future hazard events?
- Are there any funding opportunities or other resources that may be available to help implement local mitigation activities?
- How is your community integrating information from the mitigation plan into other planning mechanisms (such as plans, policies, or partnerships)?