Grant County 2024 Hazard Mitigation Plan

Grant County
Minnesota

Department of Public Safety | Division of Homeland Security and Emergency Management

Grant County Minnesota

2024 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. 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).

Grant 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:

- About HMP Planning
- County Profile
- Natural Hazard Profiles
- Climate Change
- Mitigation Actions

Grant County HMP Website

1.1.1 Scope

U-Spatial, University of Minnesota, was contracted by Minnesota Homeland Security and Emergency Management using FEMA Pre-Disaster Mitigation (PDM) grant funds to work with Grant County Emergency Management to facilitate an update to the 2017 Grant 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 Grant 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 Grant County, including the cities of Ashby, Barrett, Elbow Lake, Herman, and Hoffman. The cities of Norcross (population 52) and Wendell (population 166) were included in the planning process, but ultimately did not contribute as plan participants and are not seeking to adopt the plan. The Grant 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 Grant County after final approval by FEMA (see Appendix B).

Grant County has specified the following goals for this plan update:

- Include more recent data documenting the critical infrastructure and hazards faced by Grant 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 Grant 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 three mitigation grant programs that are administered by the State of Minnesota: the Hazard Mitigation Grant Program (HMGP), the Building Resilient Infrastructure and Communities (BRIC) program, and the Flood Mitigation Assistance (FMA) program. The HMGP, BRIC, and FMA programs are administered through the state of 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 Grant County HMP planning team is headed by the Grant 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 the organizations they represent.

Find the planning team members on the Grant County HMP website

Table 1. Hazard Mitigation Planning (HMP) Team

Name	Agency/Organization	Participant Title
Tina Lindquist	Grant County Emergency Management	Emergency Management Director (Prior)
Jeremiah Ulrich	Grant County Emergency Management	Emergency Management Director (Current)
Jon Combs	Grant County Sheriff's Office	Sheriff
Jeff Merrick	Grant County Facilities Management	Facility Maintenance Manager
Matthew Yavarow	Grant County Highway Department	County Engineer
Brent Gulbrandson	Grant Soil & Water Conservation District	Technical Manager
Kelsey Peterson	Horizon Public Health	PHEP/DP&C Supervisor
Betsy Hills	Horizon Public Health	Assistant Administrator of Programs and Services
Shelley Svec	Horizon Public Health	Health Educator/PHEP Coordinator
Kelsey Peterson	Horizon Public Health	Supervisor
Greg Lillemon	Grant County Environmental Services	Administrator
Reed Peterson	Grant County Environmental Services	Assistant Administrator Environmental Services
Reuben Anderson	Grant County Environmental Services	Environmental Services Technician
Troy Johnson	Grant County	Commissioner
Amy Johnson	City of Ashby	Mayor
Mike Thormodson	City of Ashby	Clerk/Treasurer
Michelle Jenson	City of Barrett/Grant County Hwy. Dept.	Mayor/Highway Dept. Accountant
Amanda Blume	City of Herman	Clerk/Treasurer
Paul Kirkeide	City of Herman	Mayor
Chris Vlaminck	City of Herman Fire Department	Fire Chief
Janee Strunk	City of Hoffman	City Administrator
Tanya Bakken	City of Wendell	City Clerk
Manda Westrom	Roseville Township	Clerk
Jason Puchalski	Sanford Township	Supervisor
Katie Ennen	Western Prairie Human Services	Senior Coordinator/Social Worker
Kari Rude	Western Prairie Human Services	Deputy Director/Human Resources Director
Jill Amundson	West Central Initiative	Impact Evaluator

Name	Agency/Organization	Participant Title
Mark Kaelke	West Central Initiative	Community Planner
Jacob Ellefson	Otter Tail Power Company	Area Manager
Brian Zavesky	Missouri River Energy Services	Senior Transmission Engineer
Sue Lundeen	Runestone Electric Association	Manager of Member Services
Jeremy Huhnstock	Traverse Electric Cooperative	General Manager
Dale Schwagel	Traverse Electric Cooperative	Operations Manager
Jeff McKeever	Otter Tail Power Company	Principal Engineer
Lisa Villcheck	MN HSEM	Regional Program Coordinator
Paul Thaemert	MN DNR	Hydrologist
Bryan Christensen	MnDOT	Public Engagement
Justin Swiers	MnDOT	Maintenance Superintendent
Lynn Siegel	Traverse County	Emergency Manager
Patrick Waletzko	Otter Tail County	Emergency Manager
Tina Lindquist	Pope County	Emergency Management Director

2.2 Review of Existing Plans, Capabilities & Vulnerabilities

Grant 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 5.1.3 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 Grant 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 Grant 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. 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 Grant 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 Grant County to support mitigation.

Local Mitigation Surveys: As part of Grant County's 2024 HMP update, participating jurisdictions and key county personnel were asked to fill out a Local Mitigation Survey (LMS) form. Questions in the LMS form addressed the following:

- Part A: Hazard Identification, Risk Assessment & Vulnerability Analysis

- Part B: Local Mitigation Capabilities Assessment
- Part C: Local Mitigation Projects
- Part D: 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 Grant County LMS report, see Appendix C).

2.3 Planning Process Timeline and Steps

To update the 2017 Grant County HMP, U-Spatial consultants worked in coordination with Grant County Emergency Management and members of the planning team. The updated plan includes new data documenting the types of hazards faced by Grant County residents and emergency planning officials as well as new thinking on how to address these hazards.

2.3.1 Grant County Stakeholder Coordination

Two planning team meetings took place via Zoom video conference hosted by U-Spatial. Meeting participants included representatives from Grant 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, Grant 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 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 dates of Hazard Mitigation update meetings and public outreach. The public feedback period for the draft plan was open from 12/11/24 to 12/27/24, for a period of 15 days. Appendix G provides documentation of the public outreach for feedback on the draft plan by Grant County and jurisdictions.

Table 2. Grant County hazard mitigation update meetings and public outreach

Event	Date	Appendix
Kickoff Webinar	5/3/23	Appendix F, Planning Team Meetings
News Release #1	6/6/23	Appendix G, Public Outreach & Engagement Documentation
Planning Team Meeting #1	12/7/23	Appendix F, Planning Team Meetings
Planning Team Meeting #2	11/15/24	Appendix F, Planning Team Meetings
News Release #2	12/11/24	Appendix G, Public Outreach & Engagement Documentation

At the close of the public outreach period, the U-Spatial consultants worked with the Grant 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, Grant 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, reviewing and providing feedback to the plan update.

U-Spatial and Grant 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 Grant 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. Email was also used by the public to submit feedback to Grant County following news releases on the HMP.

- **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 Grant 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. Grant 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 Grant County HMP update planning process and a reference to supporting documentation.

Table 3. Jurisdictional participation in planning process

Jurisdiction (2022 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
Grant County (6,040)	X	X	X	X	X	X
City of Ashby (470)	X	X	X	X	X	X
City of Barrett (366)	X	X	X	X		X
City of Elbow Lake (1,214)	X		X	X		X
City of Herman (384)	X	X	X	X		X
City of Hoffman (661)	X		X	X	X	X
City of Norcross (52)*	X			X		
City of Wendell (166)*	X			X	X	X
Neighboring Jurisdictions:						
Traverse County		X				
Stevens County						
Wilkin County						
Otter Tail County		X			X	
Douglas County						
Pope County					X	

*The cities of Norcross and Wendell are not included in this plan as participating jurisdictions.

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 2024 HMP

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

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 Grant County, updated the existing mitigation actions published in the 2017 HMP, and proposed new mitigation actions.

The team examined the hazards identified in the 2017 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 Grant 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 2024 Grant County HMP Update

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

3.1.2 FEMA- and Minnesota-Declared Disasters and Assistance

Another historical perspective is derived from FEMA-declared disasters. Between 1957 and July 2024, 16 federal disasters and three emergencies were declared in Grant County; see details on the Grant 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). Grant County has not been included in any State Disaster Declarations.

The Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC), and Flood Mitigation Assistance (FMA) Program are FEMA-administered hazard mitigation assistance programs which 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 Grant County

Project Identifier	Sub-Grantee	Project Type	Project Total	Federal Share
DR-1175-0039-R	Grant Soil and Water Conservation District	300.3: Vegetation Management - Wind	$30,740	$7,002

Project Identifier	Sub-Grantee	Project Type	Project Total	Federal Share
PDMC-PL-05-MN-2005-003	Grant County	91.1: Local Multihazard Mitigation Plan	$33,000	$24,750
DR-1772-0008-R	Elbow Lake	206.2: Safe Room (Tornado and Severe Wind Shelter) - Public Structures	$161,260	$120,945

SOURCE: (FEMA, 2023C)

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 on the webpage for each hazard. Additionally, at-risk populations are summarized for each jurisdiction in the county profile page. Vulnerable attributes of a population are addressed with each natural hazard.

Explore population vulnerability on the Grant 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 and 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 the 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
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.

Indirect impacts of extreme heat include infrastructure failures like roads buckling and power outages; strain on essential services, such as emergency medical services and law enforcement response time due to increases in crime; and disruptions to important social and economic networks, such as school and event cancellations, which reduces access to education, physical activity, and community support.

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 parts 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 Grant County website

3.4 Jurisdictional Change in Risk or Vulnerability Assessment

Jurisdictions in Grant 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, Grant 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: Part A. Responses here are edited only for clarity.

Grant County

Flooding: We have multiple areas that are prone to flooding during high rain events and fast snow melt. We need to upsize several culverts to better handle high rain events and/or fast snow melts. In addition, we need to raise up specific roads that historically see overland flooding in heavy rain fall and/or fast snow melt.

Ice Storms, Blizzards: Much of the county's municipal electrical service consists of overhead power lines and electrical poles. Those overhead lines and power poles are prone to failure in ice storms and blizzards with heavy snowfall and high winds that may bring down trees and branches.

Windstorms, Tornadoes: Population increase occurs in the summer months in Grant County due to visitors. Additional storm shelters may be needed if a severe weather event occurs. We have experienced power outages from strong wind events that brought down power lines. Traverse Electric Company is the rural electric cooperative that serves much of Grant County. TEC has identified specific projects throughout the county that include replacement of aging power poles and conversion of overhead power lines to underground in areas where infrastructure has failed or is vulnerable to failure due to severe storm events.

Extreme Cold: We have a high population of senior citizens and low-income residents who are more vulnerable during periods of extreme cold with power outages. The county has experienced damages to roads from spring frost heaves, frozen culverts that cause localized flooding.

Drought: Due to drought in recent years have caused local aquafers to reach record lows imposing water restrictions county-wide. This puts major stress on our agricultural community.

Landslides: The Grant SWCD has noted that there are varying areas of landslide concern along several lakes in Grant County (Pomme De Terre Lake, Gramm Lake, Lightning Lake, and Pelican Lake), where steep shorelines have eroded over the years as a result of high winds/waters. This erosion may pose risk to several homes along shorelines that could be compromised. Grant County does not currently have a map documenting areas of concern or any plans in place for landslide mitigation. An assessment needs to be conducted with planning for targeted mitigation activities. There are no areas of concern located within any city limits.

City of Ashby

Ice Storms, Blizzards: Much of the city's municipal electrical service consists of overhead power lines and electrical poles. Those overhead lines and power poles are prone to failure in

ice storms and blizzards with heavy snowfall and high winds that may bring down trees and branches.

City of Barrett

All Hazards: We need to obtain a portable generator for our Fire Department and Community Center. The Community Center serves as our local shelter if people are displaced from a severe storm event or extended power outage.

Extreme Cold: In the past we have experienced frozen water service lines during periods of extreme cold. There is also the risk of our water tower freezing up in extreme cold. Our residents are more vulnerable during periods of extreme cold with power outages.

Drought: Weather patterns have been very extreme and a drought could affect our water table and availability of water to our residents.

Windstorms, Tornadoes: There is campground within the city that does not have a storm shelter and residents are vulnerable to high wind and tornado events. Our municipal owned Barrett Lakeside Pavilion operates during the summer months and does not have a storm shelter. The city's outdoor warning siren is older and does not reach all sections of town.

City of Elbow Lake

Windstorms: The city had a severe windstorm event in 2022, which resulted in lost power, which caused some potentially bad situations, such as the sewer lift stations and the water tower was out of power.

City of Herman

All Hazards: We need to 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. We also have a large population of senior citizens that do not use cell phones to receive emergency notifications.

Flooding: We have ditches around and through town that can cause flooding in streets and water damage to houses during early snow melt prior to culverts opening up in the spring and heavy summer rains.

Ice Storms, Blizzards: Much of the city's municipal electrical service consists of overhead power lines and electrical poles. Those overhead lines and power poles are prone to failure in ice storms and blizzards with heavy snowfall and high winds that may bring down trees and branches.

Windstorms, Tornadoes: Our municipal campground is active during summer and fall months with RVs and campers and does not have a storm shelter.

Extreme Cold: We have a high population of senior citizens and low-income residents who are more vulnerable during periods of extreme cold with power outages. In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold.

City of Hoffman

Flooding: We have a city lift station that is prone to flooding during high rain events. The city park is vulnerable to flooding and park equipment has been damaged in the past. The city is located on an old slough which means almost all of the residential homes in Hoffman experience basement flooding in the spring of the year. We need to update the drainage at our Fire Department Building as this location is typically used as a hub for emergency services during a hazard.

Ice Storms, Blizzards: Much of the city's municipal electrical service consists of overhead power lines and electrical poles. Those overhead lines and power poles are prone to failure in ice storms and blizzards with heavy snowfall and high winds that may bring down trees and branches.

Windstorms, Tornadoes: Our municipal campground is active during spring, summer, and fall months with RVs and campers and has one bathroom/shower building that doubles as a storm shelter. This campground does not have a tornado siren and is a significant distance from the city siren. Our newest street consists of homes that are built slab-on-grade. They do not have a tornado shelter to seek shelter in during a high wind event.

Extreme Cold: We have a high population of senior citizens and low-income residents who are more vulnerable during periods of extreme cold with power outages. The city has experienced damages to roads from spring frost heaves, frozen culverts that cause localized flooding. This localized flooding happens in the parking lot of our fire department/ambulance building making it difficult for emergency vehicles to leave the parking lot.

City of Norcross

No local vulnerabilities to report.

City of Wendell

No local vulnerabilities to report.

3.4.2 Future Development

Because Grant 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. Grant 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 Grant 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: Part A. Responses here are edited only for clarity.

Grant County

Nothing to report.

City of Ashby

Nothing to report.

City of Barrett

Nothing to report.

City of Elbow Lake

Nothing to report.

City of Herman

Nothing to report.

City of Hoffman

The Hoffman Senior Living was constructed in 2018. This facility added 20 apartments/rooms to the community. With the construction of this new assisted living facility there is a large concentration of senior residents in one location that will need assistance during a disaster event. The new construction homes built on our newest street are all built slab-on-grade, so residents do not have a basement for safety during high wind or tornado events. There is also not a tornado shelter available nearby these residents.

City of Norcross

Nothing to report.

City of Wendell

Nothing to report.

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 Grant 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 Grant 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 Grant 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. Flooding was the primary hazard in eight of the 19 federal disaster declarations in Grant County.

4.1.1 Probability of Occurrence

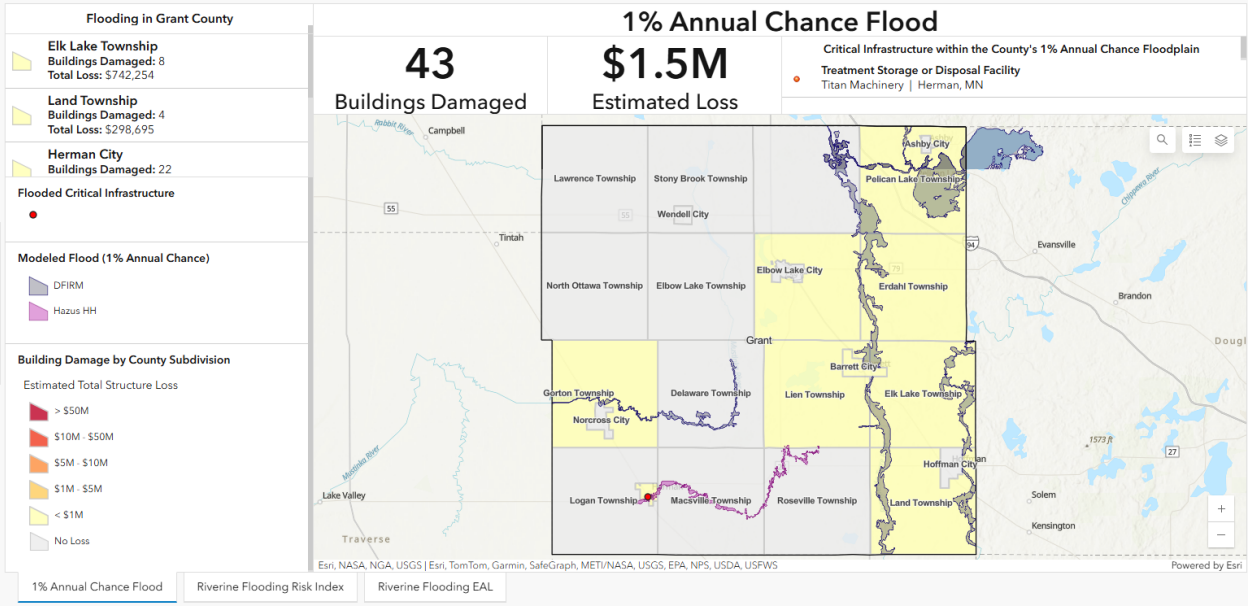
From 1997 through February 2024, the NCEI Storm Events Database has recorded 20 flood and flash flood events. Grant County has experienced at least one flash flood or one riverine flood event every year on average during this period.

View interactive maps and see information about flooding history, risk, and vulnerability

Minnesota HSEM has encouraged a potential risk and economic loss analysis for a 1% annual chance flood using the FEMA tool, Hazus for ArcGIS. A Digital Flood Insurance Rate Map (DFIRM) defined the 1% annual chance flood boundary. Where available, stream base flow elevation and cross-section data were used to generate a depth grid with a 10-meter horizontal resolution.

The City of Herman did not have a DFIRM available, so a hydrologic and hydraulic (H&H) model was run in Hazus to generate a depth grid with a 10-meter horizontal resolution. This modeling was only done for rivers intersecting this incorporated city in Grant County. The resulting Hazus 1% annual chance floodplain is shown in the Flood Vulnerability dashboard on the Grant County HMP website (Figure 1), where it is available in an interactive form.

Figure 1. 1% Annual chance flood in Grant County



4.1.2 Vulnerability

Potential economic loss estimates were based on county-specific building data. Grant 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 Grant 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, 7,405 points were input to Hazus to represent buildings with a total estimated building plus contents value of $1.0 billion. Approximately 59% of the buildings (and 55% 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	4,370	$548,437,884	87	$10,014,900	35	$1,139,094
Commercial	333	$75,569,084	5	$252,600	4	$29,183
Other	2,702	$381,522,068	37	$4,911,200	4	$332,946
Totals	7,405	$1,005,529,036	129	$15,178,700	43	$1,501,223

SOURCE: (FEMA, 2023A)

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 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 Grant County.

Buildings identified as essential facilities for the Hazus flood analysis include hospitals, police and fire stations, and schools (often used as shelters). Loss of 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 Grant 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 any critical infrastructure within the 1% annual chance floodplain, given the higher risk of the facility or infrastructure being incapacitated or destroyed during a flood. There is one treatment and storage facility which may be at risk in the 1% annual chance flood. The facility is the Titan Machinery facility in the City of Herman.

Community Vulnerability

Potential economic losses were estimated by Census Minor Civil Division. The City of Herman showed the most structures at risk in a 1% annual flood. Additionally, Elk Lake and Land Townships had the highest potential losses compared to the rest of the county. All jurisdictions with buildings identified in the 1% annual chance flood zone can also be viewed on the Grant County HMP website.

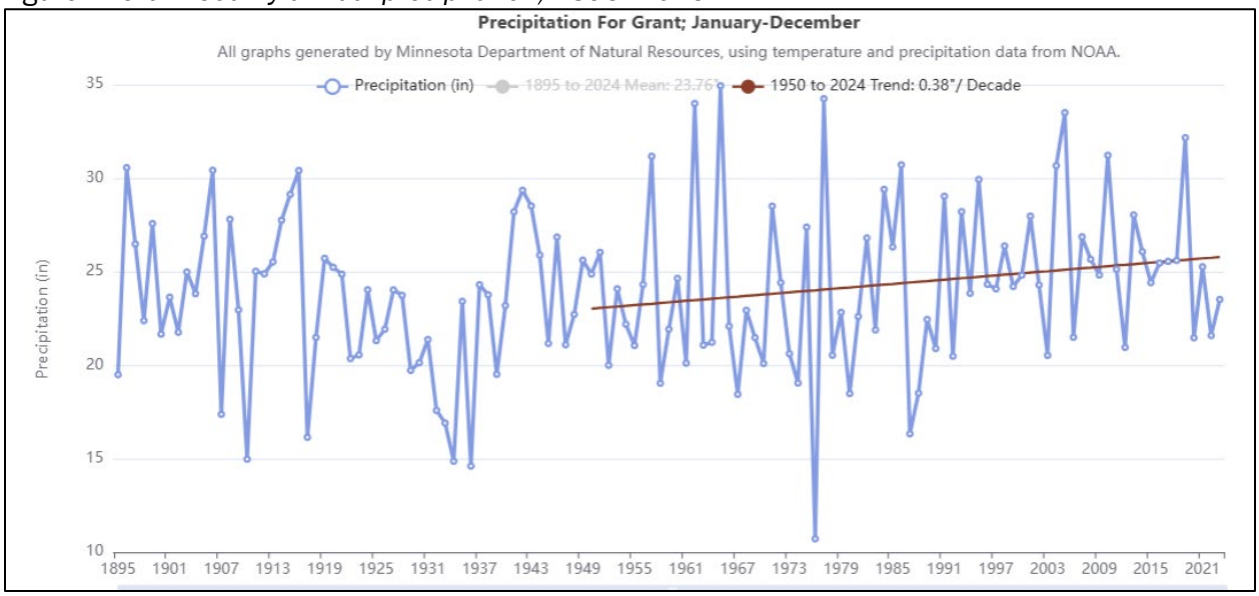
The status of jurisdictional participation in the National Flood Insurance Program and any repetitive loss properties are detailed in Section 5.1.1. National Flood Insurance Program (NFIP).

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

4.1.3 Flooding and Climate Change

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).

Figure 2. Grant County annual precipitation, 1895–2023



SOURCE:(MN DNR, 2023A)

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

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

Grant 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 (i.e., culvert replacements, road repair) is an ongoing need. The county and many of our townships have limited funding for road

infrastructure. Grant County continues to provide assistance on road infrastructure mitigation projects to reduce the impacts of localized flooding.

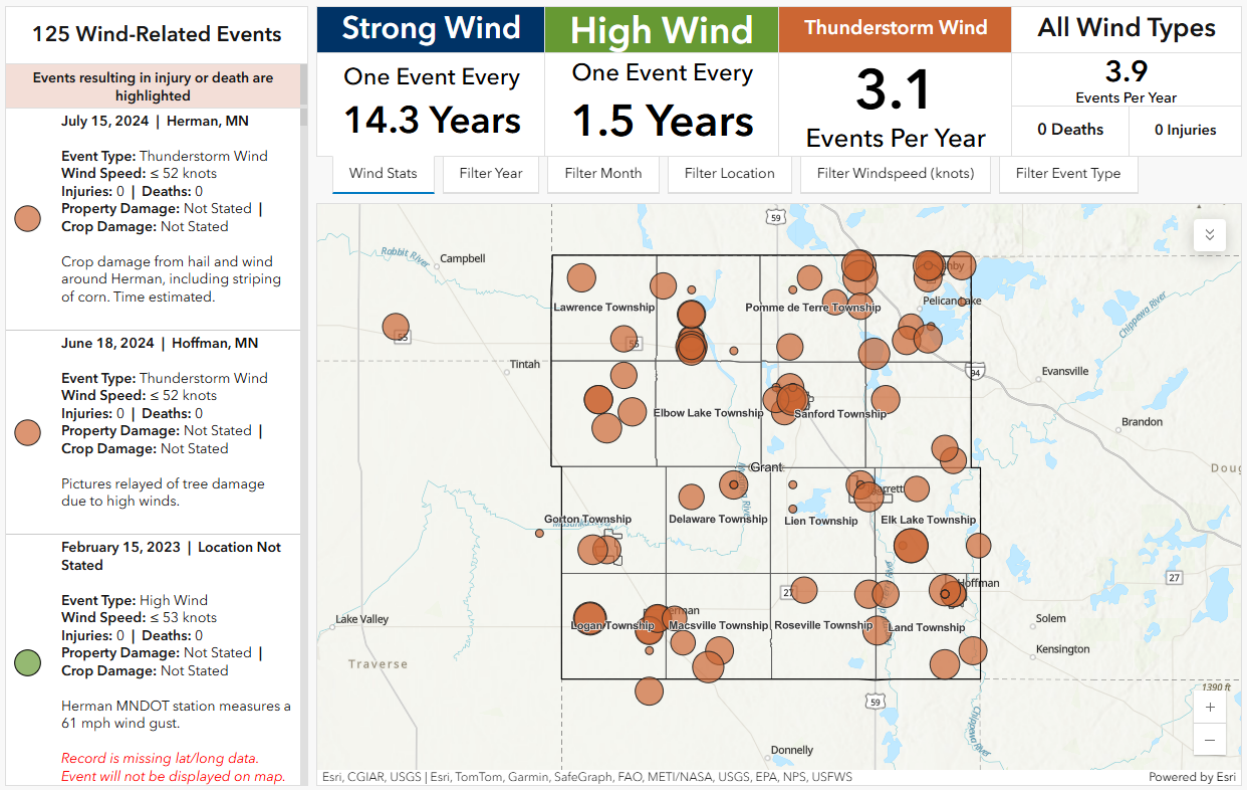
Funding: The county needs funding assistance to improve roads and culverts that experience repetitive flooding. Significant State and Federal funding is needed to construct infrastructure projects to prevent, reduce, and mitigate the impacts of high rain events and flooding.

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 Grant County is shown in Figure 3; an interactive version of this map can be found on the Grant County HMP website.

View interactive maps and see information about windstorm history, risk, and vulnerability

Figure 3. History of windstorms in Grant County



4.2.1 Probability of Occurrence

To determine the probability of future wind-related events in Grant County, records of previous wind-related events (strong wind, high wind, and thunderstorm wind) in Grant 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 July 2024 is 3.9 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

Grant 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 powerlines throughout Grant County are above ground, exposing them to potential damage from high wind events. The county and local jurisdictions continue to work with utility providers to convert overhead powerlines 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 is a tornado watch/warning and what to do when outdoor warning sirens are activated. Grant 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.

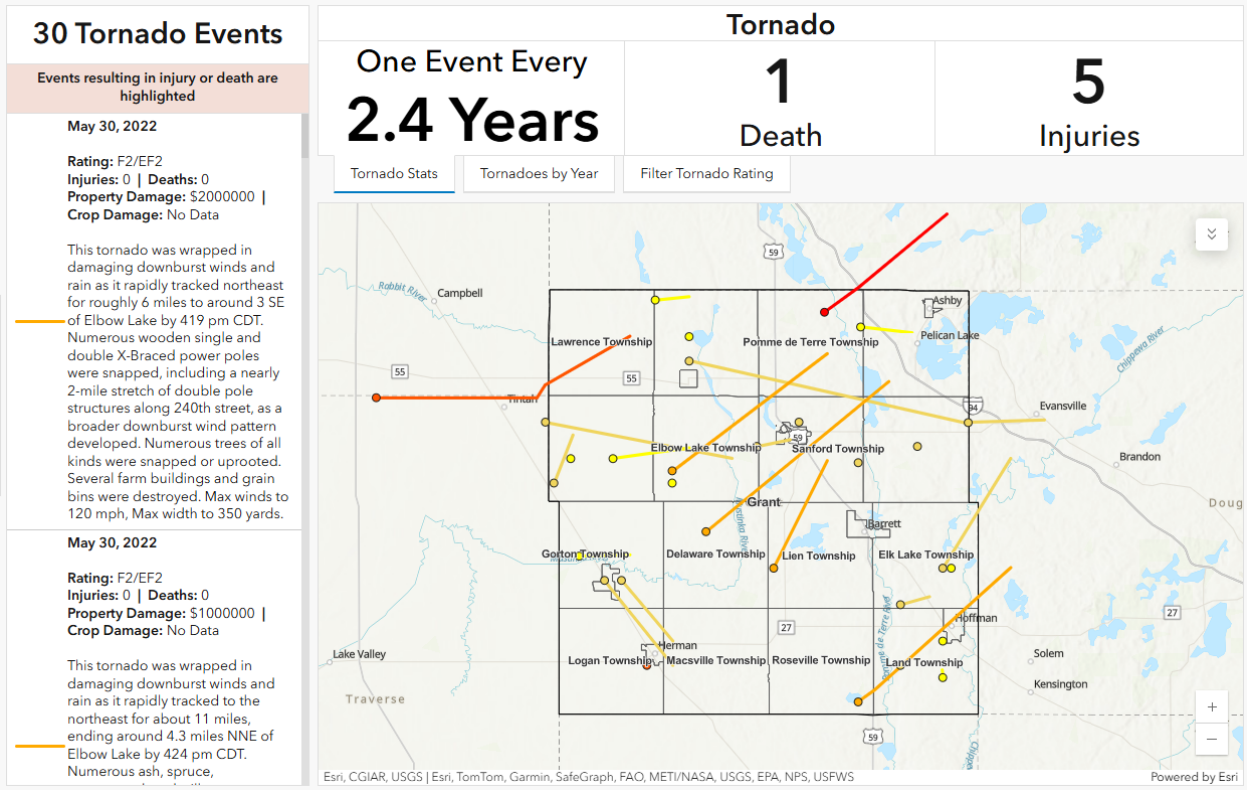
Storm Shelters and Tornado Safe Rooms: There are areas throughout Grant County without viable storm shelters or tornado safe rooms where there are populations vulnerable to high wind and storm events, such as mobile home parks and campgrounds. A coordinated approach is needed to identify where storm 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 Grant County is shown in Figure 4; an interactive version of this map can be found on the Grant County HMP website.

View interactive maps and see information about tornado history, risk, and vulnerability

Figure 4. History of tornadoes in Grant County



4.3.1 Probability of Occurrence

Estimating the probability of future tornadoes in Grant 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 July 2024, there has been one tornado every 2.4 years in Grant County. These 30 tornadic events occurred in 17 of the 72 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 Grant County, there was an annual frequency of 3.1–5.0 tornadoes within a 50-mile radius. The historical frequency was higher in the west than the east. 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 Grant 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 Grant 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

Grant 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 powerlines throughout Grant County are above ground, exposing them to potential damage from high wind events. The county and local jurisdictions continue to work with utility providers to convert overhead powerlines 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 is a tornado watch/warning and what to do when outdoor warning sirens are activated. Grant 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 Grant County without viable storm shelters or tornado safe rooms where there are populations vulnerable to high wind and storm

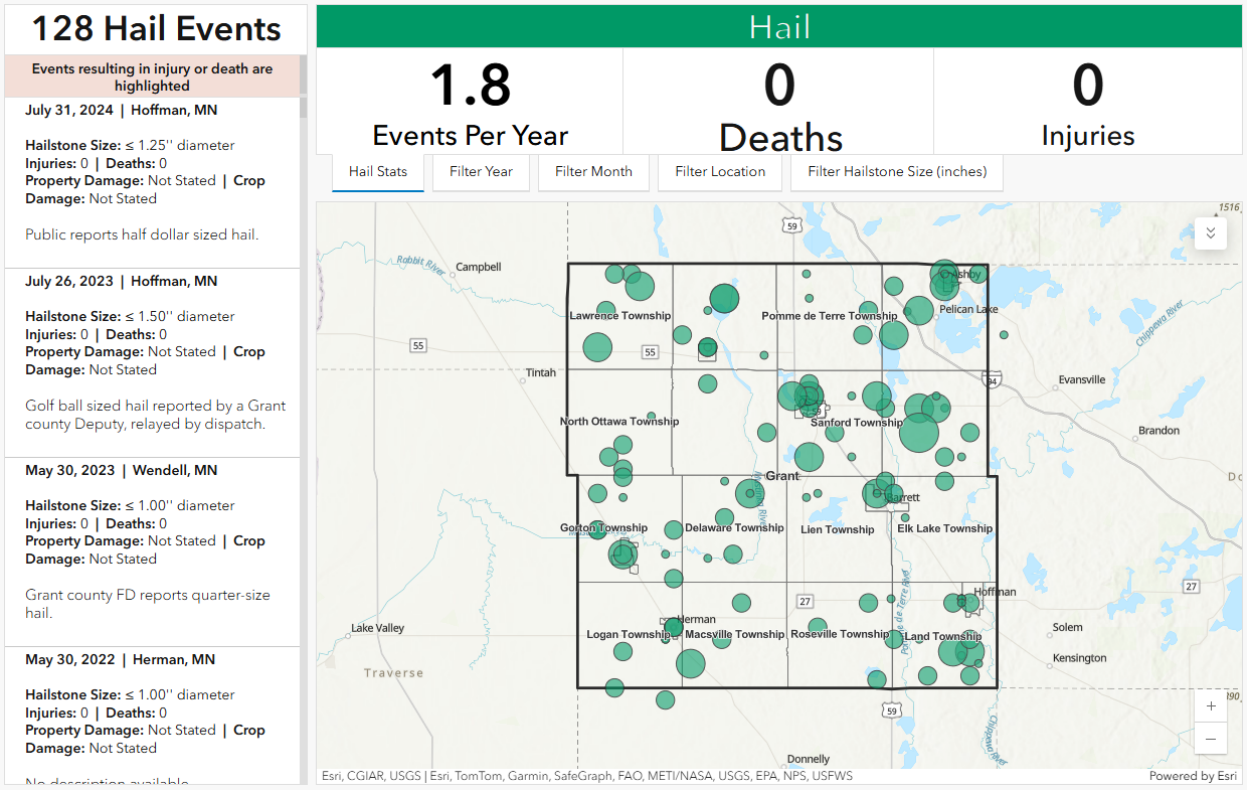
events, such as mobile home parks and campgrounds. A coordinated approach is needed to identify where storm shelters or tornado safe rooms are needed and to evaluate whether new construction or a retrofit of facilities is possible. Finding funding for the implementation of such construction projects 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 Grant County is shown in Figure 5; an interactive version of this map can be found on the Grant County HMP website.

View interactive maps and see information about hail history, risk, and vulnerability

Figure 5. History of hail in Grant County



4.4.1 Probability of Occurrence

To determine the probability of future hailstorms in Grant County, records of previous hail events were examined for the period of record. From January 1955 through July 2024, the relative frequency of hail events was 1.8 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

Grant 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 Grant County reported $3,223,915 in hail damages (2021 ADJ), ranking 69th among Minnesota counties in total hail damages. Grant County's losses are primarily due to crop damage reported at $1,619,487, followed by $1,604,428 property damages. Crop indemnity payments due to hail totaled $7,448,586 (2021 ADJ) for the period of record spanning 1989–2022 (CEMHS, 2023).

Within Grant 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

Grant 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. These include:

Above-Ground Power Lines: Most powerlines throughout Grant County are above ground, exposing them to potential damage from high wind events. The county and local jurisdictions continue to work with utility providers to convert overhead powerlines 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 is a tornado watch/warning and what to do when outdoor warning sirens are activated. Grant 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.

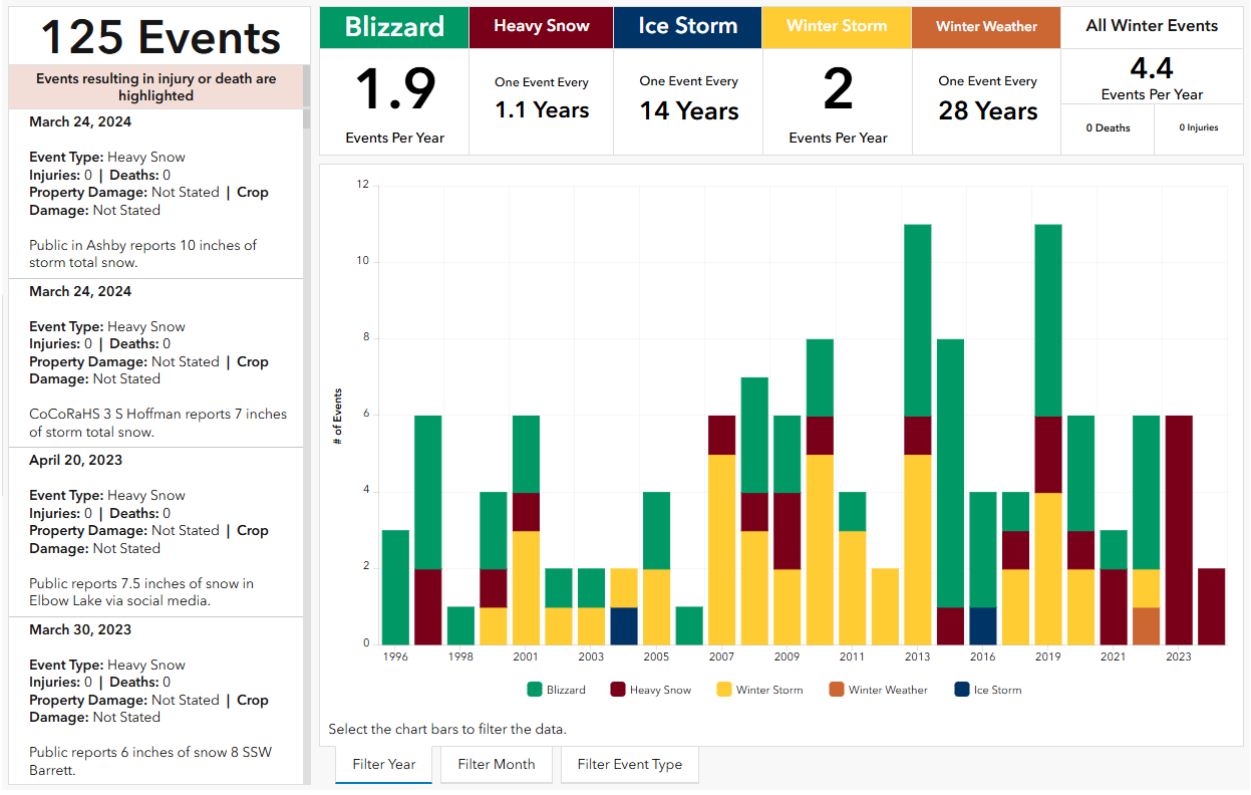
Storm Shelters and Tornado Safe Rooms: There are areas throughout Grant County without viable storm shelters or tornado safe rooms where there are populations vulnerable to high wind and storm events, such as mobile home parks and campgrounds. A coordinated approach is needed to identify where storm 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 several winter weather events which 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 Grant County is shown in Figure 6; an interactive version of this map can be found on the Grant County HMP website.

View interactive maps and see information about winter storm history, risk, and vulnerability

Figure 6. History of winter storms in Grant County



4.5.1 Probability of Occurrence

To determine the probability of future winter-related storm events in Grant 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 March 2024, the relative frequency of winter-related storm events in Grant County is 4.4 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. Citizens living 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

Grant 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 Grant 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.

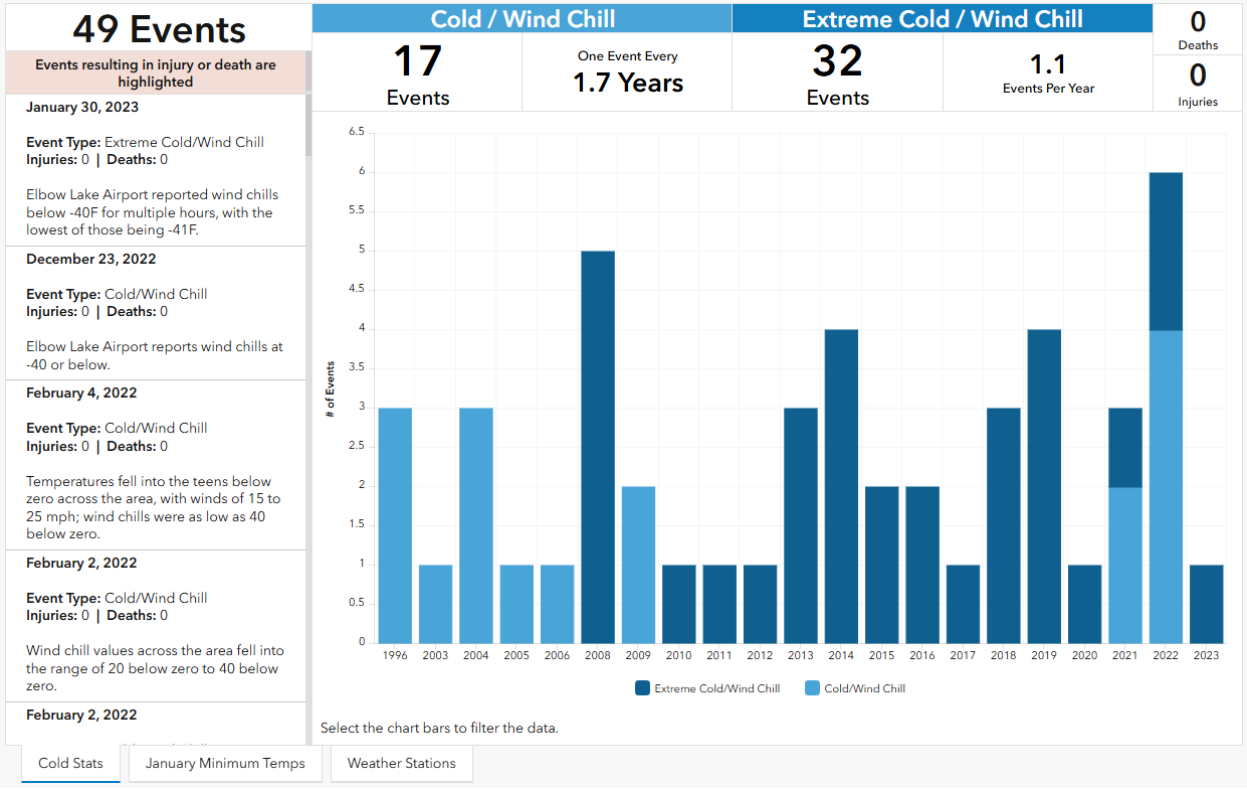
Backup Power: Not all designated shelter facilities have generator back-up power to provide the ability to care for residents if displaced during a severe winter event coupled with an extended power outage.

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 Grant County can be especially dangerous when low temperatures and wind create arctic-like wind chills. The history of extreme cold in Grant County is shown in Figure 7; an interactive version of this dashboard can be found on the Grant County HMP website.

View interactive maps and see information about extreme cold history, risk, and vulnerability

Figure 7. History of extreme cold in Grant County



4.6.1 Probability of Occurrence

To determine the probability of future cold-related events in Grant 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 January 2024, the relative frequency of extreme cold/wind chill events in Grant County is 1.1 per year. (NCEI, 2023). 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 Grant 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

Grant 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. Grant 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

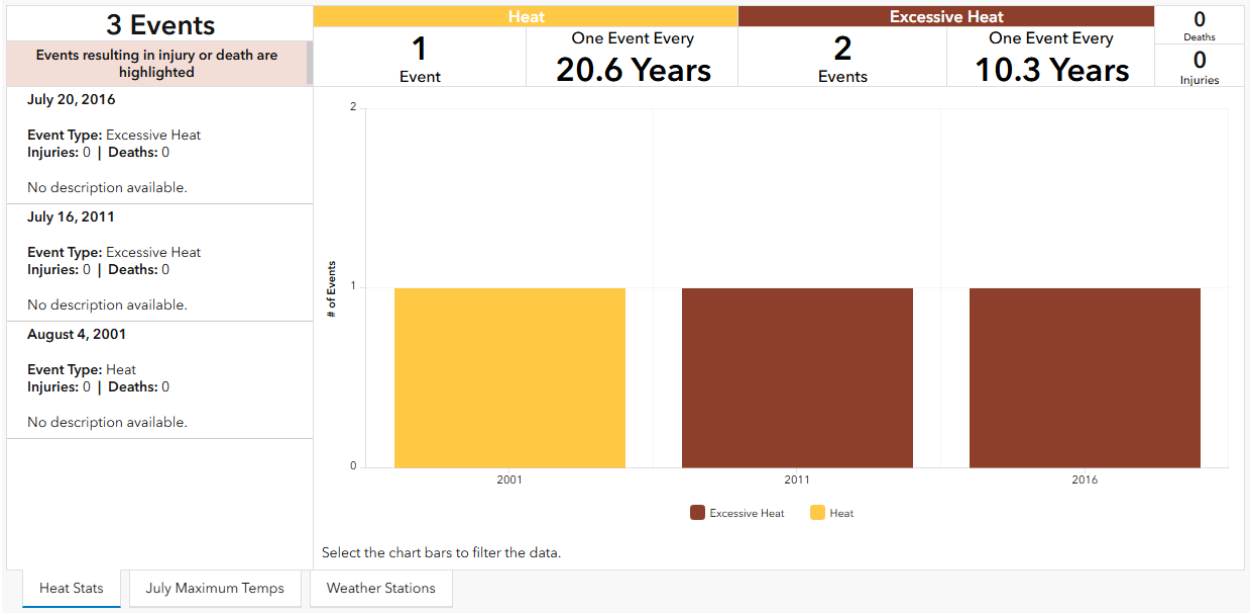
Extreme heat is the combination of very high temperatures and exceptionally humid conditions. Grant County's agricultural lands and structures are vulnerable to heat damage and its residents to injury, exacerbation of pre-existing chronic conditions, and even death (Moss, 2017). Medical costs related to extreme heat can be enormous, and with extreme heat estimated to create $1 billion in health care-related costs in the United States in 2023 (Center for American Progress, 2023). In 2023 in Minnesota, 682 people went to the emergency department and two died from heat-related illness (MDH, 2024).

When the atmospheric moisture content is high, the rate of perspiration from the body decreases and the human body feels warmer (NWS, 2021c). Heat stress can be indexed by combining the effects of temperature and humidity. The history of extreme heat in Grant County is shown in Figure 8; an interactive version of this chart can be found on the Grant County HMP website.

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 44th among Minnesota counties in crop indemnity payments, heat-related losses for Grant County totaled over $1,218,831 (2021 ADJ) for the period of record spanning 1989 to 2022 (CEMHS, 2023).

View interactive maps and see information about extreme heat history, risk, and vulnerability

Figure 8. History of extreme heat in Grant County



4.7.1 Probability of Occurrence

To determine the probability of future heat-related events in Grant County records of previous heat and excessive heat events were summed and divided by the dataset's period of record, resulting in the annual relative frequency of heat-related events. Based on records in the NCEI Storm Events Database through January 2024, the relative frequency of extreme heat events in the county is one event every 10.3 years. This relative frequency can infer the probability of these events occurring in the future. The nearest weather station to Grant County, Wheaton Station in Traverse County, reported daily maximum temperatures above 90 °F a total of 413 times, an average of 13 days per year.

4.7.2 Vulnerability

The Minnesota Department of Health released a 2012 Minnesota Extreme Heat Toolkit, 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. Minnesota has no official system to report deaths and illnesses linked to extreme heat (MDH, 2012). It is important to not underestimate the danger of extreme heat events within the state.

Key Message #3 in the Midwest Chapter of the NCA5 states that Mitigation and adaptation 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).

The impact extreme heat has on individuals is not equal. According to the Center 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 with 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 which exacerbates the effects of extreme heat, or have a condition which 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 home 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).

View at-risk populations in Grant County

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.

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).

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).

The average number of days per year with temperatures over 95 °F under a high carbon emissions (SSP 585), mid-century (2040–2059) scenario is illustrated in the Climate Dashboard on the Plan website

On average, by mid-century (2040–2059), under a high emissions (SSP 585) scenario, Grant County may reach 14.96 days/year of temperature greater than 95 °F, an increase of 8.92 more days to the historical (1995–2014) simulations average of 6.03 days/year (Liess, S. et al., 2023).

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 (ICAT, 2017).

4.7.4 Program Gaps and Deficiencies

Grant 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:

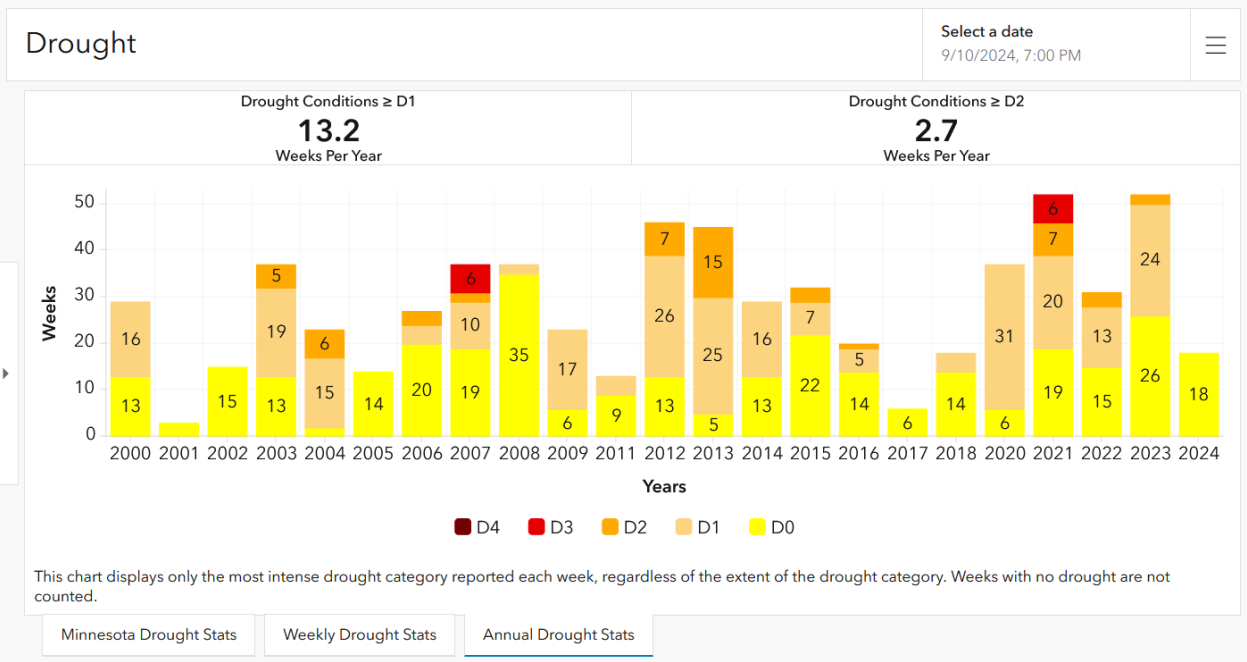
Generators for Backup Power to Critical Facilities & Shelters: Not all healthcare and other critical facilities utilized for the care of residents & visitors, including designated severe weather/emergency shelters (schools, churches, etc.) have backup power to run cooling systems in the event of a power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

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 Grant County HMP website.

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

Figure 9. Annual drought statistics in Grant County since 2000



4.8.1 Probability of Occurrence

To determine the probability of future droughts in Grant 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 10, 2024 for any occurrence of drought ≥ D1 in Grant County, regardless of the duration of the drought. According to the weekly reported data, the relative frequency of the county experiencing drought conditions ≥ D1 is 13.2 weeks per year, and the relative frequency of drought conditions ≥ D2 is 2.7 weeks per year (NDMC, 2024b). 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, 2024b) 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 eight reported drought incidents in Grant County between 2000 and 2023, impacting six sectors with the greatest impacts to the following sectors: agriculture; and plants & wildlife (NDMC, 2024a). Since droughts are regional in nature, jurisdictions within Grant 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, 2021a). In addition, droughts may negatively affect an individual's health by contributing to poor air quality caused by wildfire smoke and particulate, 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, Grant County's agriculture sector has been impacted by drought more than once, and with 75% of Grant 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, Grant County received $21,242,982.63 (2021 ADJ) in crop indemnity payments due to drought, placing it as the 45th-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

Grant 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. Grant County was not surveyed and therefore has no features listed in the USGS landslide inventory.

An interactive map of landslide history and risk in Grant County can be found on the Grant County State Hazard Mitigation Plan Website. Planning team members mentioned Pomme De Terre Lake, Gramm Lake, Lightning Lake, and Pelican Lake as areas of landslide. Spatial data were not available for these sites so these locations are not reflected on the map.

See interactive information about landslides, including history, on the Grant County HMP website

4.9.1 Probability of Occurrence

To determine the frequency of landslides in Grant County, we require records of previous landslides and the period in which they occurred. Comprehensive data for historical landslide events are not available. The historical data we do have does not have dates of the slope failure associated. Statewide and national maps suggest that landslide risk in Grant County is relatively low; however, anecdotal evidence does indicate that there is a risk of landslides in bluff areas. 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 Grant County is low, landslides remain a concern to Grant County Emergency Management.

4.9.2 Vulnerability

The county reports large sloughing on several lakes in Grant County. High bluffs that have been eroding the bank/shorelines are leading to some potential infrastructure issues in the future. Lakes where this is occurring include Pomme De Terre Lake, Gramm Lake, Lightning Lake, and Pelican Lake. Particularly along the northeast shore of Pomme De Terre Lake, a steep shoreline has been eroding because of high winds and water. There are several homes along this shoreline that over time could be compromised. All of these vulnerable areas are outside of incorporated cities.

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 that is included in 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. Four percent of state highway corridor land running through Grant County (3,300 acres) is being managed for high or moderate risk of 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

The Grant County Soil and Water Conservation District has identified that an assessment needs to be conducted to identify specific areas of concern for landslide risk. Geospatial mapping, along with identification of mitigation actions to reduce risk of landslides, was noted to be a current deficiency for this hazard.

4.10 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, 2020). 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 13 dams in Grant County. Dams are mapped on the MN State 2024 HMP website. Grant County had no dams classified as High Hazard Dams, three dams classified as Significant Hazard Dams, and ten dams classified as Low Hazard Dams. No dams have been removed.

4.10.1 Probability of Occurrence

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. There is one noted dam incident in Grant County. In 2010 at North Ottawa, a dike along the dam's inflow channel breached. This was a dam of Significant Hazard Potential. Total dam failures are extremely unlikely if the dam is maintained in compliance with Minnesota's Dam Safety Program. The likelihood of failure in Grant County is low.

4.10.2 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 9 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 9. 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, 2020).

4.10.3 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.

4.10.4 Program Gaps and Deficiencies

Grant County Emergency Management did not identify any program gaps or deficiencies that make its citizens more vulnerable to dam failure.

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 to assist with recovery, and to build disaster-resistant communities. Mitigation actions and projects should be based on a well-constructed risk assessment, provided in Section 3 of this plan. 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 the lessening of disaster damages. The assessment also provides an evaluation of these capabilities to determine whether the activities can be improved in order 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 Grant County as related to hazard mitigation.
- Appendix C: As part of the Grant 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 Grant 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.

Table 10 lists and describes jurisdictional participation in the National Flood Insurance Program (NFIP).

Table 10. NFIP participation in Grant County

FEMA Plan Requirements Plan Review Tool, Section C2	Description
Name of Community	**Grant County**
Participation in the NFIP	Participating – Entry date 05/01/1988
FEMA Map	FEMA mapped high-risk areas
Current Effective Map Date	05/01/1988
Potential Buildings Damaged in Floodplain (including all townships and cities)	43
1. Adoption of NFIP minimum floodplain management criteria via local regulation	Adoption of current floodplain ordinance: 04/06/1994
2. Adoption of the latest effective Flood Insurance Rate Map (FIRM), if applicable	4/6/1994
3. Implementation and enforcement of local floodplain management regulations to regulate and permit development in SFHAs	Grant County enforces requirements of the NFIP through the county's floodplain ordinance (Grant County Floodplain Management Ordinance), adopted 04/06/1994 and made effective 5/4/1994 (date of publication). This ordinance establishes the floodplain district and zoning regulations and conditional uses permitted within the floodway, flood fringe, and general floodplain districts of Grant County. The Grant County Land Management Office maintains and enforces the floodplain management ordinance for the county.
4. Appointment of a designee or agency to implement the addressed commitments and requirements of the NFIP	Floodplain Administrator: Greg Lillemon, Grant County Land Management Administrator
5. Description of how participant implements the substantial improvement / substantial damage provisions of their floodplain management regulations after an event.	Following a flood event, the county would work with the MN DNR to use a form to track cumulative improvements and repetitive losses in the floodplain. The county would also review the MN DNR Minnesota Post-Flood Substantial Damage Playbook for Local Officials.
Name of Community	**City of Elbow Lake**
Participation in the NFIP	Participating – Entry date 03/26/1997 (Emergency Program)
FEMA Map	No FEMA mapped high-risk areas
Current Effective Map Date	N/A
Potential Buildings Damaged in Floodplain	0

FEMA Plan Requirements Plan Review Tool, Section C2	Description
1. Adoption of NFIP minimum floodplain management criteria via local regulation	Adoption of current floodplain ordinance: N/A Community participates in the NFIP but does not have a floodplain ordinance.
2. Adoption of the latest effective Flood Insurance Rate Map (FIRM), if applicable	N/A
3. Implementation and enforcement of local floodplain management regulations to regulate and permit development in SFHAs	N/A Community participates in the NFIP but does not have a floodplain ordinance.
4. Appointment of a designee or agency to implement the addressed commitments and requirements of the NFIP	Floodplain Administrator: Jeff Holsen, City Administrator-Clerk-Treasurer
5. Description of how participant implements the substantial improvement / substantial damage provisions of their floodplain management regulations after an event.	Following a flood event, the city would work with the MN DNR to use a form to track cumulative improvements and repetitive losses in the floodplain. The city would also review the MN DNR Minnesota Post-Flood Substantial Damage Playbook for Local Officials.
Name of Community	**City of Herman**
Participation in the NFIP	Participating – Entry date 11/05/2009
FEMA Map	No FEMA mapped high-risk areas
Current Effective Map Date	NSFHA – No Special Flood Hazard Area
Potential Buildings Damaged in Floodplain	22
1. Adoption of NFIP minimum floodplain management criteria via local regulation	Adoption of current floodplain ordinance: Adoption of current floodplain ordinance: N/A Community participates in the NFIP but does not have a floodplain ordinance.
2. Adoption of the latest effective Flood Insurance Rate Map (FIRM), if applicable	N/A
3. Implementation and enforcement of local floodplain management regulations to regulate and permit development in SFHAs	N/A Community participates in the NFIP but does not have a floodplain ordinance.
4. Appointment of a designee or agency to implement the addressed commitments and requirements of the NFIP	Floodplain Administrator: Amanda Blume, City Clerk

FEMA Plan Requirements Plan Review Tool, Section C2	Description
5. Description of how participant implements the substantial improvement / substantial damage provisions of their floodplain management regulations after an event.	Following a flood event, the city would work with the MN DNR to use a form to track cumulative improvements and repetitive losses in the floodplain. The city would also review the MN DNR Minnesota Post-Flood Substantial Damage Playbook for Local Officials.
Name of Community	**City of Ashby**
Participation in the NFIP	NOT Participating
FEMA Map	No FEMA mapped high-risk areas
Name of Community	**City of Barrett**
Participation in the NFIP	NOT Participating
FEMA Map	No FEMA-mapped high-risk areas
Name of Community	**City of Hoffman**
Participation in the NFIP	NOT Participating
FEMA Map	No FEMA-mapped high-risk areas (NSFHA – No Special Flood Hazard Area)
Name of Community	**City of Wendell**
Participation in the NFIP	NOT Participating
FEMA Map	No FEMA-mapped high-risk areas
Name of Community	**City of Norcross**
Participation in the NFIP	NOT Participating
FEMA Map	FEMA mapped high-risk areas
Current Effective Map Date	12/13/1974
Potential Buildings Damaged in Floodplain	0
Description of why community does not participate in the NFIP.	Uncertain. Participation in NFIP is voluntary, and reasons for non-participation vary, though DNR encourages enrollment.

SOURCE: (CEIL STRAUSS, MN FLOODPLAIN MANAGER, PERSONAL COMMUNICATION, SEPTEMBER 22, 2023)

Repetitive loss properties are defined as properties that have had 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.

Grant County has no RL or SRL properties. For more information on the areas that flood repeatedly in Grant County, see the Grant County Flooding page.

5.1.2 Plans and Ordinances

Grant County and its incorporated communities have a number of plans and ordinances in place to ensure the safety of residents and the effective operation of communities including a Zoning Ordinance, Floodplain Ordinance, Emergency Operations Plan, and Wellhead Protection Plan.

5.1.3 Plans and Programs in Place to Address Natural Hazards

Grant 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"). For the purpose of grouping related natural hazards, "Summer Storms" encompasses Tornadoes, Windstorms, Lightning, and Hail. Following is a description of the plans and programs in place by Grant County to support mitigation for the hazards addressed in this plan.

All Hazards

All Hazards Emergency Operations Plan: Grant 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.

CodeRED Emergency Notification System and IPAWS: Grant 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 Grant County website page. Grant County also uses IPAWS (Integrated Public Alert Warning System), which allows for both targeted and county-wide emergency notifications to both residents and visitors (not an "opt-in" service).

X-Band Weather Radar: Grant County now hosts the first x-band weather radar located atop the water tower in Wendell, MN. The radar fills a crucial gap in coverage, providing data for lower altitudes that were previously not monitored effectively. Existing radars cover only high-altitude weather systems, between 6,000-10,000 feet. This new installation promises to enhance local weather monitoring capabilities by focusing on lower-level atmospheric conditions. This radar array is unique for the area as it operates on X band frequencies, making it the first of its kind in Minnesota.

Relationship with National Weather Service: Grant County has a strong relationship with the Grand Forks National Weather Service (NWS) Forecast Office, having access to all live and on-demand briefings, announcements, and educational opportunities, and contact information for direct collaboration as needed. The county also receives all products/statements issued by the NWS, and in turn shares or incorporates these into its community outreach and public education.

Preparedness Outreach & Public Education: Grant County Emergency Management utilizes the Grant County website, Grant County Facebook Page, and local news media to communicate with residents, visitors, schools, and long-term care facilities on emergency preparedness, severe weather, and other hazard conditions throughout the year. The Grant County Emergency Management website page provides emergency preparedness information and resource links for the public.

Family Assistance Center/Mass Care Sheltering: In the event of a disaster where temporary sheltering is needed, Grant County Emergency Management works in coordination with Horizon Public Health, Western Prairie Human Services, 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.

NOAA Weather Radios: Grant County Emergency Management promotes the use of NOAA Weather Radios by residents, businesses, schools, long term care facilities, government buildings, faith communities, and other places of common gathering. NOAA Weather Radios broadcast continuous weather information directly from the nearest National Weather Service office, including warnings, watches, forecasts, and other hazard information 24 hours a day, 7 days a week. They are an important tool to be able to receive information, particularly in the event of extended power outages where updates from local media and cell phone apps may not be available.

Backup Power: Grant County works to ensure the continuity of operations of county government services and critical infrastructure in the event of an extended power outage. County facilities with backup generators include the Grant County Courthouse, Grant County Law Enforcement Center, and Grant County Government Building.

Schools Support: Grant 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: Grant County Emergency Management works closely with the MN HSEM Region 4 regional program coordinator and neighboring county emergency managers on a range of planning, training, and exercises to support all-hazards preparedness, mitigation, response, and recovery capabilities.

Severe Winter Storms

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

Winter Hazard Awareness Week: Grant County participates in the Winter Hazard Awareness Week campaign sponsored by MN HSEM and the NWS 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. Grant 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.

Snow Removal & Ice Control: The Grant County Highway Department conducts winter road maintenance on county roads in accordance with the Grant County Snow & Ice Control Policy. Other road jurisdictions conduct winter road maintenance on their respective road systems in accordance with each of their established policy and/or practice.

Severe Summer Storms

Severe Weather Statements (Watch, Advisory, Warning, etc.): Grant 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.

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

Skywarn® Program: Grant County Emergency Management works with the National Weather Service to offer Storm Spotter training on an 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: Grant 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. Grant 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 Grant County Highway 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 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. Grant County Emergency Management works to relay extreme cold temperature warnings from the NWS to help alert residents and visitors to hazardous conditions. The Grant 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: Grant County Emergency Management and Horizon Public Health promote public awareness of personal safety measure 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, Horizon Public Health will work with Grant County Emergency Management 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 cold temperature warnings are issued by the National Weather Service. Grant County Emergency Management works to relay extreme cold temperature warnings from the NWS to help alert residents and visitors to hazardous conditions. The Grant County Emergency Management Office also encourages residents to follow local news or NWS weather applications to receive severe weather and extreme temperature notifications.

Public Education and Awareness: Grant County Emergency Management and Horizon Public Health promote public awareness of personal safety measure 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, Horizon Public Health work with Grant County Emergency Management and local Fire or EMS agencies as needed to assist vulnerable residents such as the elderly who may need temporary sheltering.

Drought

Public Awareness & Outreach: In the event of extreme drought conditions, Grant 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 Grant 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

Shoreland Ordinance: Grant County Shoreland Management Ordinance, adopted 06/19/2018 establishes development restrictions within shoreland management districts including sensitive areas. Restrictions set forth in the ordinance help to protect sensitive shoreland areas against impacts of development. In addition to establishing setback requirements, the ordinance specifies that local shoreland controls must regulate placement of structures in relation to high water elevation for flood protection.

Flooding

National Flood Insurance Program (NFIP): Grant County has FEMA Mapped High Risk Areas and participates in the NFIP. Initial entry date into the program was 05/01/1988.

Floodplain Administrator: The Grant County Land Management Director is the county's designated Floodplain Administrator, who is responsible to implement the requirements of the NFIP.

Floodplain Ordinance: Grant County Floodplain Management Ordinance, 04/06/1994 establishes the flood plain district and zoning regulations and conditional uses permitted within the floodway, flood fringe, and general floodplain districts. The Grant County Land Management Office maintains and enforces the floodplain management ordinance for the county. The ordinance is adopted to comply with the rules and regulations of the National Flood Insurance Program codified as 44 Code of Federal Regulations Parts 59 -78, as amended, so as to maintain the community's eligibility in the National Flood Insurance Program.

Floodplain Mapping: Grant County's current effective FEMA flood map date is 05/01/1988. The county's Zoning Office is the repository for the floodplain maps for the county. The Zoning

Office assists county residents in determining whether their property is affected by an officially mapped flood area.

Shoreland Ordinance: Grant County Shoreland Management Ordinance, 06/19/2018 establishes allowable uses and development standards in shoreland areas designated within the county. In addition to establishing setback requirements, the ordinance specifies that local shoreland controls must regulate placement of structures in relation to high water elevation for flood protection.

Subdivision Ordinance: There are ordinances with development of subdivisions. This is maintained by the Grant County Land Management Office.

Transportation Plan: The Grant County Highway Dept. maintains a 5 Year Road Improvement Plan and schedules projects for implementation.

Minnesota Buffer Law: The Grant SWCD administers the state Buffer Law and provides technical assistance on buffer compliance by landowners. Buffers benefit bank stabilization and reduced erosion and sedimentation into ditches, streams, rivers, and lakes.

One-Watershed One Plan (1w1P): Grant County has participated in the Pomme de Terre River Association 1W1P and the Bois de Sioux Watershed District 1W1P. Both plans address regional watershed planning which include measures for flood mitigation.

Red River Watershed Management Board Governing Documents, 1998 Red River Basin Flood Mediation Agreement, and the 20 Percent Flow Reduction Strategy - The portion of Grant County in the Bois de Sioux Watershed District is a participant within the Red River Watershed Management Board, whose mission is to institute, coordinate, and finance projects and programs to alleviate flooding and assure the beneficial use of water in the watershed of the Red River of the North and its tributaries. A number of technical and scientific standards are utilized across the Red River Basin (see Red River Retention Authority – Basin Technical and Scientific Advisory Committee Briefing Papers #1, #2, and #3, Culvert Sizing for Flood Damage Reduction). We also have our own permitting, bylaws, and rules for those portions of the Mustinka River and Bois de Sioux River watersheds in Grant County.

Dam/Levee Failure

No noted plans or programs in place.

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 Grant County Plan. This framework, as outlined below, will allow for integration of the mitigation actions that are listed by Grant 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 11.

Table 11. 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

Mitigation Strategy	Description	Example Mitigation Actions
		• Open space preservation • Shoreline codes • Stormwater management regulations and master plans
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 Grant 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 Grant 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 Grant 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 the cities of Ashby, Barrett, Elbow Lake, Herman, Hoffman, Norcross, and Wendell.

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

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 11 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 2017 Grant 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 12 provides criteria that were taken into consideration in the process.

Table 12. Criteria for Mitigation Action Priority Ranking

Ranking	Criteria
High Priority	• Methods for reducing risk from the hazard are technically reliable. • The County 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 of time, or are permanent risk reduction solutions.
Moderate Priority	• Mitigation methods are established. • The County has limited experience with the kinds of measures that may be appropriate to mitigate the hazard. • Some mitigation measures are eligible for federal grants. • There is a limited range of effective mitigation measures for the hazard. • Mitigation measures are cost-effective only in limited circumstances. • Mitigation measures are effective for a reasonable period of time.
Low Priority	• Methods for reducing risk from the hazard are not well-established, are not proven reliable, or are experimental. • The State or Counties have little or no experience in implementing mitigation measures, and/or no technical knowledge of them. • Mitigation measures are ineligible under federal grant programs. • There is a very limited range of mitigation measures for the hazard, usually only one feasible alternative. • The mitigation 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 of the action within the next five-year planning cycle.

- Ongoing – Implementation of the action will require continued application.
- Defined (year) – Implementation of the action will occur within a defined time frame that is noted.
- TBD – The anticipated time frame for implementation of an action is to be determined.

Responsibility
Each mitigation action identifies what personnel, department or agency will be 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. As part of the plan update process, communities were asked to describe how they will integrate the mitigation actions listed into other planning mechanisms since the last plan update. 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 where potential funding may come from to support implementation of the mitigation activity, such as existing county or city funding, state or federal funding. Projects that may be eligible for future FEMA Hazard Mitigation Assistance grant funding are noted.

5.3.1 Grant County Mitigation Action Chart

The Grant County Mitigation Action Chart is provided in Table 13. Appendix H provides the mitigation action charts developed for each city participating in the HMP update.

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

Table 13. Grant County Mitigation Action Chart (2024–2028)

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All Hazards	Education & Awareness Programs	EMERGENCY NOTIFICATION Encourage all county residents to sign-up for the county's CodeRED Emergency Notification System.	Existing High Ongoing	Grant County Emergency Management (GCEM)	Grant County utilizes CodeRed/Onsolve Emergency Notification System, as well as IPAWS. A link to sign up for the system is located on the homepage of the Grant County website. GCEM encourages all local communities to help direct residents to get signed up for CodeRED notifications.	County Funding
2	All Hazards	Education & Awareness Programs	PUBLIC OUTREACH Conduct outreach to the public to increase awareness and preparedness for severe weather events, periods of extreme temperatures, and extended power outages.	Existing High Ongoing	GCEM	Grant County Emergency Management utilizes the Grant County website, Grant County Facebook Page, and local news media to communicate with residents, visitors, schools, and long-term care facilities on emergency preparedness, severe weather, and other hazard conditions throughout the year. The Grant County website page provides emergency preparedness information and resource links for the public. GCEM participates annually in the NWS Severe Weather Awareness weeks and gets that information out to the public.	County Funding
3	All Hazards	Mitigation Preparedness & Response Support	EOP PLANNING 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 Ongoing	GCEM	Grant 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.	County Funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
4	All Hazards	Local Planning & Regulations	FUTURE DEVELOPMENT Incorporate mitigation strategies across county and local government plans and policies that address future growth and new development.	Existing High 2025-2030	GC Admin, GC Planning., GC Hwy. Dept in coord with local gov'ts	Grant County continues to work closely with surrounding communities to address planning for increased growth and development that will affect emergency response services as well as an increase in vulnerable systems and infrastructure. Grant County uses it Shoreland Ordinance, Floodplain Ordinance, and Transportation Plan to address long-term planning for future development.	County Funding
5	All-Hazards	Mitigation Preparedness & Response Support	VULNERABLE POPULATIONS Work with county departments, partner agencies, facilities, and local jurisdictions to address planning and outreach efforts for those considered to be more vulnerable to severe weather events.	Existing High Ongoing	GCEM, Western Prairie Human Services, Horizon Public Health	Grant County Emergency Management works in coordination with Western Prairie Human Services, Horizon Public Health, the Grant County Senior Coordinator and the Grant County Sheriff in addressing emergency planning for and outreach to vulnerable populations within the county, such as the elderly and low-income residents.	County Funding other agencies & organizations
6	All-Hazards	Mitigation Preparedness & Response Support	GENERATOR BACKUP POWER Install generators at key county facilities to ensure continuity of operations and services in the event of loss of power.	Existing High Ongoing	GCEM	This is an ongoing effort of GCEM in coordination with other county departments. Backup generators are purchased by Grant County as needed and as funding is available.	County Funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
7	All-Hazards	Mitigation Preparedness & Response Support	MASS CARE SHELTERING Ensure that plans and designated facilities are in place in order to provide temporary sheltering due to a severe weather or other disaster event.	Existing High 2025-2030	GCEM in coord with other agencies	In the event of a disaster where temporary sheltering is needed, GCEM works in coordination with Horizon Public Health, Western Prairie Human Services, 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.	County Funding
8	Extreme Heat/Cold Temps	Education & Awareness Programs	EXTREME TEMPS PUBLIC OUTREACH Provide outreach and education to the public on personal safety measures to take during periods of extreme heat or cold.	In-Progress High 2024	GCEM	GCEM works to share information received from the Grand Forks, ND National Weather Service (NWS) Forecast Office when periods of extreme heat or cold are forecast and occurring. Public education regarding extreme temperatures safety also occurs during the NWS severe Weather Awareness weeks that occur in April and November each year.	County Funding
9	Extreme Heat/Cold Temps	Mitigation Preparedness & Response Support	WARMING/COOLING CENTERS Work with local communities to develop plans for operating warming centers for those who are vulnerable during extreme cold events.	New High 2025-2030	GCEM	In the event that heating or cooling centers need to be opened in the county, GCEM will work in coordination with local governments/Fire & EMS, as well as Horizon Public Health and Western Prairie Human Services as needed.	County and Local Gov't Funding
10	Severe Winter Storms	Local Planning & Regulations	SNOW & ICE CONTROL Implement snow removal and ice control to ensure the safety of county roads impacted by winter storms.	Existing High 2025-2030	Grant County Hwy. Dept., MnDOT, and Local Townships	The Grant County Highway Department conducts winter road maintenance on county roads. Other road authorities conduct winter road maintenance on their respective road systems in accordance with each of their established policy and/or practice.	County Funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
11	Severe Summer Storms	Education & Awareness Programs	SKYWARN TRAINING Work with the National Weather Service (NWS) to provide Skywarn® training and develop a network of trained Storm Spotters throughout the county.	Existing High 2025-2030	GCEM in coord with NWS	GCEM works with the Grand Forks, ND NWS Office to offer this training on an annual basis to local Fire, EMS, and law enforcement departments and local residents that wish to be trained as spotters.	National Weather Service
12	Severe Summer Storms	Mitigation Preparedness & Response Support	OUTDOOR WARNING SIRENS Ensure outdoor warning sirens throughout the county are functional and maintained by the jurisdictions where they are located.	Existing High 2025-2030	GCEM in coord with local jurisdictions	Outdoor warning sirens throughout the county are tested monthly by the Grant County Sheriff's Office in coordination with local jurisdictions. Warning sirens are owned and maintained by the cities where they are located. GCEM will work with local jurisdictions that are seeking to upgrade their existing warning sirens or to purchase a new one.	County Funding & local jurisdictions
13	Severe Summer Storms	Structure & Infrastructure Projects	STORM SHELTERS / TORNADO SAFE ROOMS 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 2025-2030	GCEM in coord with local jurisdictions	GCEM will assist any mobile home park or community 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 grant program funding, based on funding availability and application approval.	County Funding, Local Gov't, Possible FEMA Grant Funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
14	Severe Summer Storms	Mitigation Preparedness & Response Support	X-BAND WEATHER RADAR Continue to utilize X-Band Weather Radar to fill a crucial gap in radar coverage.	Existing High 2025-2030	GCEM in coord with NWS and local jurisdictions	Since 2023, Grant County has hosted the first x-band weather radar located atop the water tower in Wendell, MN. The radar fills a crucial low-level gap in coverage, providing data for lower altitudes that were previously not monitored effectively. Grant County continues to use X-Band Weather Radar and share information with the public about this important resource for severe weather monitoring. No local/county funds are used for the x-band radar. It is a private/public partnership and the Climavision funds the operations of the radar, there is no cost to county or city. The NWS pays for the supplemental data.	Climavision and NWS
15	Severe Winter & Summer Storms	Structure & Infrastructure Projects	POWERLINE RETROFITS Encourage municipalities to work with their electric providers to address measures to avoid power outages from high wind events and storms.	Existing High 2025-2030	GCEM, local jurisdictions in coord with electric utility providers	GCEM continues to encourage municipalities within the county to work with their local and rural electric cooperatives (City of Grant, City of Warroad, and Grant Electric Cooperative). FEMA HMA grant funding may be a source for projects such as power pole replacements or powerline retrofits that eligible rural and municipal electric coops can apply for.	Electric Coop funding, Possible FEMA Grant Funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
16	Severe Winter & Summer Storms	Structure & Infrastructure Projects	TRAVERSE ELECTRIC COMPANY PLANNED RETROFIT PROJECTS Work with Traverse Electric as needed to address implementation of specific retrofit projects that will reduce vulnerability of power pole and power line failures within the county.	New High 2025-2030	Traverse Electric Company	Traverse Electric Company is the rural electric cooperative that serves much of Grant County. TEC has identified specific projects throughout the county that include replacement of aging power poles and conversion of overhead power lines to underground in areas where infrastructure has failed or is vulnerable to failure due to severe storm events. TEC has authority over all project elements and coordination with local communities as needed. Grant County Emergency Management will provide assistance as needed if TEC seeks to apply for future FEMA BRIC grant funding to implement these projects.	Traverse Electric, Possible FEMA BRIC Grant funding
17	Severe Winter & Summer Storms	Local Planning & Regulations	BUILDING SAFETY Ensure that new development projects follow state building codes in order to withstand the impacts of severe weather events, including roof collapse from heavy snow or damages from high wind events.	Existing Moderate 2025-2030	Grant County Environmental Services	Grant County Environmental Services oversees permits for new development. Grant County recommends new development is built to meet the specifications as provided by the State of Minnesota's Department of Labor and Industry in order to minimize financial burdens and potential safety hazards which can arise from poorly constructed buildings. Local communities enforce their own building permits respectively.	County Funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
18	Severe Winter & Summer Storms	Natural Systems Protection	VEGETATION MANAGEMENT Manage trees and other vegetation along roads from severe storm events to reduce risk to powerlines and passing motorists.	Existing Moderate 2025-2030	GC Highway Dept., Local Utility Providers	The Grant County Highway Department conducts vegetation management along county roads to reduce the risk of downed trees or branches resulting from severe storm events. Local utility providers also work to manage vegetation near power lines to reduce the risk of downed lines and power outages. Grant County Environmental Services has also been working a MnDOT draft roadside vegetation management plan.	County Funding, Utility Coops
19	Flooding	Local Planning & Regulations	SHORELAND ORDINANCE Implement the county's Shoreland Ordinance to reduce potential impacts of high rain events to adjacent structures.	Existing High 2025-2030	GC Envir. Services	The Grant County Shoreland Management Ordinance establishes development restrictions within shoreland management districts including sensitive areas. Restrictions set forth in the ordinance help to protect sensitive shoreland areas against impacts of development. In addition to establishing setback requirements, the ordinance specifies that local shoreland controls must regulate placement of structures in relation to high water elevation for flood protection.	County Funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
20	Flooding	Local Planning & Regulations	FLOODPLAIN ORDINANCE Enforce the county's Floodplain Ordinance to regulate development in mapped flood risk areas.	Existing High 2025-2030	GC Envir. Services	Grant County Floodplain Management Ordinance, 04/06/1994 establishes the flood plain district and zoning regulations and conditional uses permitted within the floodway, flood fringe, and general floodplain districts. The Grant County Environmental Services Office maintains and enforces the floodplain management ordinance for the county. The ordinance is adopted to comply with the rules and regulations of the National Flood Insurance Program codified as 44 Code of Federal Regulations Parts 59 -78, as amended, so as to maintain the community's eligibility in the National Flood Insurance Program.	
21	Flooding	Local Planning & Regulations /Structure & Infrastructure Projects	LOCALIZED FLOOD RISK REDUCTION Plan for and implement measures to address localized flood reduction projects for roads, bridges, and culverts throughout the county.	Existing High 2025-2030	GC Hwy. Dept.	The Grant County Highway Department maintains update of the county's 5-year Transportation Plan and schedules projects for implementation. This includes addressing areas where localized impacts may occur from high rain events.	County Funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
22	Flooding	Local Planning & Regulations	DITCH MAINTENANCE Continue to address needed repairs to county ditches to reduce problems caused as a result of high rain storm events.	Existing Moderate 2025-2030	GC Hwy. Dept.	Grant County manages the system of county ditches, to reduce over-the-road flooding resulting from high rain events as allowed by MN Statute 103E. The annual county ditch plan assists in efforts to reduce risk from natural hazards by documenting the needed repairs to the county ditch system, and the progress made to complete those repairs. It covers seasonal inspections that are conducted to identify problems caused by severe storms. Those problems may include side inlet repairs, ditch slope repair and stabilization and removal of downed trees and emergent vegetation which are impeding the flow of water.	Benefitted Property Owners, Drainage Authorities
23	Flooding	Local Planning & Regulations	WATERSHED PLANNING Work with area watershed organizations to address mitigation plans and projects that address risk reduction for localized flooding and erosion.	Existing Moderate 2025-2030	Grant SWCD	Grant County works in partnership with the Bois de Sioux Watershed and the Pomme de Terre River Association on a regular basis. Grant County has participated in the Pomme de Terre River Association 1W1P and the Bois de Sioux Watershed District 1W1P. Both plans address regional watershed planning which include measures for flood mitigation.	SWCD, Watershed District funding
24	Flooding	Local Planning & Regulations	PROPERTY BUYOUTS Conduct property buyouts to acquire homes affected by repetitive flooding and physically relocate or remove those homes to eliminate future flood damages.	Existing Low 2025-2030	GCEM, GC Envr. Services	There are currently no potential property buyout projects identified by Grant County. The county will continue to evaluate and assist with potential future property acquisition projects and application to FEMA or MN DNR for grant funding to conduct buyouts.	Grant County, Possible FEMA Grant Funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
25	Landslides	Local Planning & Regulations / Natural Systems Protection	LANDSLIDE RISK ASSESSMENT & DEVELOPMENT OF MITIGATION ACTIONS Conduct an assessment of areas of landslide risk along lakes in Grant County, that includes mapping of areas of concern and development of targeted mitigation strategies.	New High 2025-2030	Grant SWCD and GC Land Management in coord with private property owners	The Grant County SWCD and GC Land Management Office will work to conduct an assessment of known areas considered to be at risk for landslides where steep shorelines have eroded over the years as a result of high winds/waters. An evaluation of mitigation measures, including engineering approaches for bank stabilization as well as property buyouts of homes with willing property owners, will be conducted. The county may seek to apply for FEMA BRIC grant funding to support the planning phase of this effort as well as for the implementation of eligible mitigation actions that are identified.	Grant SWCD, Grant County Land Services, FEMA BRIC grant funding
26	Flooding	Natural Systems Protection	CONSERVATION EASEMENTS Acquire and use conservation easements to prevent development in known flood hazard areas.	Existing Moderate 2025-2030	SWCD and Watershed Districts	The SWCD and Watershed Districts play a role in helping to acquire conservation easements to protect areas sensitive to flooding.	SWCD & Watershed Districts funding
27	Flooding	Natural Systems Protection	FLOOD DIVERSION & STORAGE Construct flood diversion and storage projects where identified as needed to reduce the impacts of high rain events on streams, rivers, or drainage systems which may result in localized or downstream flooding.	New High Ongoing	SWCD and Watershed Districts	The Grant County SWCD works with area Watershed Districts to design, construct, and maintain projects diverting floodwaters from a stream, river, or drainage system into a wetland, floodplain, canal, pipe, other conduit and storing them in reservoirs, floodplains, wetlands, impoundments, or other storage facilities. This allows for a controlled baseflow release and tempers peak flows, stages, and velocities to mitigate flooding.	SWCD & Watershed Districts funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
28	Drought	Education & Awareness Programs	DROUGHT OUTREACH & EDUCATION Provide outreach and education to residents to be aware of watering restrictions, water conservation tips, and fire safety during periods of severe drought.	Existing High 2025-2030	GCEM in coord with MN DNR and local gov'ts	GCEM continues to provide public outreach and education during heightened drought periods using the county website and social media platforms. GCEM encourages city and townships to promote drought awareness to residents at the local level.	Grant County
29	Drought	Local Planning & Regulations	WATERING RESTRICTIONS Implement watering restrictions during periods of drought as per MN DNR guidance.	Existing High 2025-2030	GCEM in coord with MN DNR and local gov'ts	Grant County and local jurisdictions will establish and enforce watering restrictions as per MN DNR guidelines during periods of severe drought.	County Funding, Local Gov'ts

Section 6 – Plan Maintenance

6.1 Monitoring, Evaluation, and Updating the Plan

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

The Grant County emergency management director (EMD) is the individual responsible for leading all efforts to monitor, evaluate, and update the hazard mitigation plan within the five-year window. Throughout the five-year planning cycle, the Grant County EMD will work with an emergency managers group to help monitor, review, evaluate, and update the HMP. The group will include township representatives and designated city emergency managers from the cities of Ashby, Barrett, Elbow Lake, Herman, Hoffman, Norcross, and Wendell, 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 Grant County EMD will conduct outreach to and communicate with the group on a quarterly basis 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 Grant County EMD will convene the group to meet on a more regular basis 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 Grant 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 Grant 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.

Throughout the five-year window of the plan, each respective county department and jurisdiction will be required to report on the status of mitigation actions in their charts to the Grant County EMD so that progress notes may be maintained for the next plan update.

6.2 Implementation

Grant 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 Grant County and its jurisdictions (see Appendix H and Section 5.3). The cities of Ashby, Barrett, Elbow Lake, Herman, Hoffman, Norcross, and Wendell participated in the HMP planning process and 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 Grant 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.

Regulation: Regulation is an important mitigation tool for Grant 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 HMP. The Grant County EMD and the emergency managers group will continue to engage new public stakeholders in planning discussions and project implementation during the five-year cycle of this plan.

The Grant 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, Grant County will take the following measures:

- The Grant County HMP website link will be posted on the Grant 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, Grant 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 Grant County HMP website). Each respective jurisdiction will be required to report on the status of mitigation actions in their charts to the Grant County EMD.
- Grant 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 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.

Appendices

Appendix A – References

Appendix B – Adopting Resolutions

Appendix C – Local Mitigation Survey Report

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 A – References

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Appendix B – Adopting Resolutions

Appendix C – Local Mitigation Survey Report

Grant County
Local Mitigation Survey Report

Overview
As part of Grant County's 2024 Hazard Mitigation Plan update, participating jurisdictions and county personnel were asked to fill out a Local Mitigation Survey (LMS) form. The purpose of the survey was to gather jurisdictionally-specific information needed to support update of the plan and to help inform development of local-level mitigation actions for the next five-year planning cycle.

Following is a list of the jurisdictions that participated in the survey.

LMS Forms

Grant County	**Yes**
City of Ashby	**Yes**
City of Barrett	**Yes**
City of Elbow Lake	**Yes**
City of Herman	**Yes**
City of Hoffman	**Yes**
City of Norcross	*No*
City of Wendell	*No*

The following LMS Survey Report includes a copy of each jurisdiction's completed survey.

Grant County

LOCAL MITIGATION SURVEY

Please fill out the Point of Contact information and Parts A, B, C, and D of this survey. Please be as specific as in your responses with information as it relates to your jurisdiction. It is strongly recommended to include government officials and staff to help provide detailed feedback.

Name of Jurisdiction: GRANT COUNTY

Point of Contact:

Name: Christina Lindquist
Job Title: Emergency Management Director
Phone: (218) 685-8224
Email: tina.lindquist@co.grant.mn.us

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. HAZARD IDENTIFICATION

In the chart below, please identify the natural hazards that pose the greatest risk to your community. Consider past damaging events, likelihood of future events, and impacts to community assets. Rank the prioritization of hazards as high, moderate, or low. Only put an "X" next to those hazards that are of moderate to high priority. These will be addressed with localized mitigation actions.

Natural Hazard	Use an "X" to select the hazards that pose the greatest risk to your jurisdiction.	Please indicate if the hazard is of high, moderate, or low priority.	Do feel that this hazard has increased, decreased, or had no change?
Flooding	X	High	No change
Winter Storms	X	High	Increased
Tornadoes	X	Moderate	Increased
Windstorms	X	High	Increased
Lightning		Low	No change
Hail	X	Moderate	No change
Extreme Cold	X	Moderate	No change
Extreme Heat	X	Moderate	No change
Drought	X	Moderate	No change
Wildfire		Low	Increased
Landslides	X	Moderate	No change
Dam/Levee Failure		Low	No change

2. RECENT HAZARD EVENTS

Please describe any severe weather or disaster events that have occurred over roughly the last 5 years that caused damages in your community or resulted in a disaster declaration.

Spring 2023 flooding event, FEMA-4722-DR federal declaration had 10 Grant County townships as eligible applicants, as well as one city and the county Highway Department. Damages consisted of debris, road and culvert washouts.

May 30, 2022, Grant County experienced derecho storm event which caused significant damage to trees, ag buildings, powerlines, roads, culverts, etc. This was a federally declared disaster, DR-4666, to include 2 power companies, 1 city, the county Highway Department, and the DNR.

May 12, 2022, Grant County experienced derecho storm event which caused significant damage to trees, ag buildings, summer recreational homes, powerlines, roads, culverts, etc. This was a federally declared disaster, DR-4658, to include 4 electrical companies, the hospital, and 1 city.

Spring 2019 flooding event, FEMA-4442 federal declaration had 7 Grant County townships as eligible applicants, as well as 2 cities and the county Highway Department. Damages consisted of road wash outs, overland flooding, busted culverts, and bridge replacements.

3. LOCAL VULNERABILITIES

Use the chart below to identify what specific community assets are vulnerable to damages or loss from the hazards that pose risk to your community.

Natural Hazard (please list)	**Vulnerability Assessment** **Describe <u>specific</u> community assets (infrastructure, systems, or populations) that are suspectable to damage or loss from hazard events.**
Flooding	We have multiple areas that are prone to flooding during high rain events and fast snow melt. We need to upsize several culverts to better handle high rain events and/or fast snow melts. In addition, we need to raise up specific roads that historically see overland flooding in heavy rain fall and/or fast snow melt.
Ice Storms, Blizzards	Much of the county's municipal electrical service consists of overhead power lines and electrical poles. Those overhead lines and power poles are prone to failure in ice storms and blizzards with heavy snowfall and high winds that may bring down trees and branches.
Windstorms and Tornadoes	Population increase occurs in the summer months in Grant County. Additional storm shelters may be needed if a severe weather event occurs. We have experienced power outages from strong wind events that brought down power lines.
Extreme Cold	We have a high population of senior citizens and also low-income residents who are more vulnerable during periods of extreme cold with power outages. The county has experienced damages to roads from spring frost heaves, frozen culverts that cause localized flooding.
Drought	Due to drought in recent years have caused local aquafers to reach record lows imposing water restrictions county-wide. This puts major stress on our agricultural community.

4. REDUCTION IN VULNERABILITY

Please describe any actions your community has taken to reduce vulnerability against future severe weather or disaster events. This can include examples of any work that has been completed or is currently underway.

Grant County encourages businesses, residents, childcare providers, event center owners, campground and resorts, and area nursing homes to enroll in the county's emergency notification system so they will be aware of dangerous storm events.

Grant County Emergency Managements hosts preparedness events for children, senior citizens, business owners, and the Whole Community.

Grant County has also increased use of its website and Facebook page to communicate with residents on emergency preparedness.

5. INCREASE IN VULNERABILITY

Please describe any current conditions or changes you feel have increased your community's vulnerability to future severe weather or disaster events. Please include any factors such as recent population growth or new development.

New residential and commercial properties within our Grant County would increase the cost of damage due to a tornado, wind or hail along with increased storm water runoff to our stormwater system.

Grant County is 1 of the 72 counties in the state that have some level of weather radar gap. This is alarming when considering how volunteer weather spotters are used. Many counties are sending weather spotters out into weather, that may not be captured on radar. In addition, when considering how weather alerts are issued, and that at times weather systems are developing and happening below radar coverage, there is also cause for more concern for public safety.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. PUBLIC OUTREACH

Please describe what capabilities you have in place to communicate with those in your community to share information about severe weather events and personal preparedness. Please include any considerations for underserved communities or socially vulnerable populations within your jurisdiction.

Grant County Emergency Management utilizes the Grant County website, Grant County Facebook Page, and local news media to communicate with residents, visitors, schools, and long-term care facilities on emergency preparedness, severe weather, and other hazard conditions throughout the year.

The Grant County website page provides emergency preparedness information and resource links for the public.

Grant County utilizes CodeRed/Onsolve Emergency Notification System, as well as IPAWS.

2. EMERGENCY NOTIFICATION SYSTEM

Do you encourage residents in your community to sign up for the county's emergency notification system and/or a local emergency alert system? If yes, how? If not, is this something you would do?

Grant 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 Grant County website page.

Grant County also now hosts the first x-band weather radar located atop the water tower in Wendell, MN. The radar fills a crucial low-level gap in coverage, providing data for lower altitudes that were previously not monitored effectively. Existing radars cover only high-altitude weather systems, between 6,000-10,000 feet. This new installation promises to enhance local weather monitoring capabilities by focusing on lower-level atmospheric conditions. This radar array is unique for the area as it operates on X band frequencies, making it the first of its kind in Minnesota.

3. LOCAL PLANS & POLICIES

Please describe any local plans, authorities or policies in place that help to reduce risk from natural hazards in your community. Please make note of enforcement of existing building codes and land use and development ordinances or regulations as they apply to your community. Please also note if your community has any plans or policies in place related to resilience and adaptation for climate change.

All Hazards Emergency Operations Plan: Grant 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.

Family Assistance Center/Mass Care Sheltering: In the event of a disaster where temporary sheltering is needed, Grant County Emergency Management works in coordination with Horizon Public Health, Western Prairie Human Services, 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.

Snow Removal & Ice Control: The Grant County Highway Department conducts winter road maintenance on county roads. MNDOT removes snow from State Highways as well as disperses salt/sand as needed.

Shoreland Ordinance: Grant County Shoreland Management Ordinance, adopted 06/19/2018 establishes development restrictions within shoreland management districts including sensitive areas. Restrictions set forth in the ordinance help to protect sensitive shoreland areas against impacts of development. In addition to establishing setback requirements, the ordinance specifies that local shoreland controls must regulate placement of structures in relation to high water elevation for flood protection.

Floodplain Ordinance: Grant County Floodplain Management Ordinance, 04/06/1994 establishes the flood plain district and zoning regulations and conditional uses permitted within the floodway, flood fringe, and general floodplain districts. The Grant County Land Management Office maintains and enforces the floodplain management ordinance for the county. The ordinance is adopted to comply with the rules and regulations of the National Flood Insurance Program codified as 44 Code of Federal

Regulations Parts 59 -78, as amended, so as to maintain the community's eligibility in the National Flood Insurance Program.

Subdivision Ordinance: There are ordinances with development of subdivisions. This is maintained by the Grant County Land Management Office.

Transportation Plan: The Grant County Highway Dept. maintains a 5 Year Road Improvement Plan and schedules projects for implementation.

Minnesota Buffer Law: The Grant SWCD administers the state Buffer Law and provides technical assistance on buffer compliance by landowners. Buffers benefit bank stabilization and reduced erosion and sedimentation into ditches, streams, rivers, and lakes.

One-Watershed One Plan (1w1P): Grant County has participated in the Pomme de Terre River Association 1W1P and the Bois de Sioux Watershed District 1W1P. Both plans address regional watershed planning which include measures for flood mitigation.

County Ditch System: The annual county ditch plan assists in efforts to reduce risk from natural hazards by documenting the needed repairs to the county ditch system, and the progress made to complete those repairs. It covers seasonal inspections that are conducted to identify problems caused by severe storms. Those problems may include side inlet repairs, ditch slope repair and stabilization and removal of downed trees which are impeding the flow of water. The county plan works in coordination with cities to document when repair work is needed on a ditch to mitigate impacts of tiles not performing their needed function.

4. STAFF & PARTNERSHIPS

Please describe what staff or other partnerships are in place to help accomplish mitigation in your community. This can include specific department staff or outside agencies that have a role with mitigation-related planning or projects.

Grant County departments work together to accomplish mitigation goals through integrated policies and programs. Key departments include Grant County Emergency Management, Grant County Sheriff's Office, Grant County Highway Department, Grant County Land Management, Western Prairie Human Services, Horizon Public Health, Grant County Administration, and Grant Soil and Water Conservation District. Grant County also works in partnership with the Bois de Sioux Watershed and the Pomme de Terre River Association on a regular basis.

Grant County Emergency Management works closely with city emergency managers within the county on emergency preparedness and response capabilities.

Grant County Emergency Management works closely with the MN HSEM Region 4 regional program coordinator and neighboring county emergency managers on an annual basis for joint planning, training, and exercises.

Grant 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.

Grant County has a strong relationship with the Grand Forks, ND National Weather Service (NWS) Forecast Office, having access to all live and on-demand briefings, announcements, and educational opportunities, and contact information for direct collaboration as needed. The county also receives all products/statements issued by the NWS, and in turn shares or incorporates these into its community outreach and public education.

5. PROGRAMS IN PLACE

Describe any programs in place that to help reduce risk from natural hazards in your community.

Severe Weather Statements (Watch, Advisory, Warning, etc.): Grant County Emergency Management works to relay all severe weather and extreme temperature statements received from the NWS to help alert residents and visitors to hazardous conditions.

NOAA Weather Radios: Grant County Emergency Management promotes the use of NOAA Weather Radios by residents, businesses, schools, long term care facilities, government buildings, faith communities, and other places of common gathering.

National Weather Service – Severe Weather Awareness Weeks: Grant County participates in the annual Winter Hazard Awareness Week and Severe Weather Awareness Week campaigns sponsored by MN HSEM and the NWS each November and April. Each week-long effort provides specific information each day covering the topics of severe weather winter weather, outdoor winter safety, indoor winter safety, and winter driving safety. Grant County Emergency Management promotes and shares information during the week via social media which communities, schools, churches or other civic programs are encouraged to share locally.

Outdoor Warning Siren Testing: Outdoor warning sirens throughout the county are tested monthly by the Grant County Sheriff's Office in coordination with local jurisdictions.

Skywarn Program: Grant County Emergency Management works with the National Weather Service to offer Storm Spotter training on an 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.

Vegetation Management: The Grant County Highway 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 utility providers also work to manage vegetation near power lines to reduce the risk of downed lines and power outages.

Grant Soil and Water Conservation District: The Grant SWCD helps to connect agricultural landowners and local jurisdictions in Grant County to educational and other technical resources for issues associated with managing land and conservation projects.

6. FUNDING & OTHER RESOURCES

Please describe what sorts of funding or other resources are available to help accomplish mitigation in your community. Please make note of any work with outside organizations or agencies or municipal/rural electrical coop providers.

Currently for mitigation projects, Grant County would need to budget for those projects unless there was potential grant funding available.

PART C: LOCAL MITIGATION PROJECTS

1. LOCAL MITIGATION PROJECTS

Please describe what mitigation actions would help to reduce risk to your community from future hazard events. Please consider mitigation activities that address local vulnerabilities; limit risk to existing structures or new development; and also any actions that benefit underserved communities or socially vulnerable populations in your community. Please be as specific as possible in your responses.

Flooding – Continue to work with the Bois de Sioux Watershed District on planning and projects for flood mitigation. The BDSWD has submitted mitigation projects to be included in the Grant County mitigation action chart related to floodplain and stream corridor restoration, slope management, conservation easements, and flood diversion & storage. The Grant County Highway department continues to evaluate existing stream and river culverts with each individual paving project and replaces them to meet current flood events.

Utility Projects – Traverse Electric has submitted four project ideas they would like to be included so that they may be eligible for future FEMA HMA grant funding. The projects include a range of utility retrofits to reduce vulnerability against future power outages from severe storm events. Specific project efforts include conversion of overhead powerlines to underground and replacing aging power poles that are vulnerable to failure.

Public Outreach - Encourage all county residents to sign-up for the county's emergency notification alert system. Provide ongoing education and outreach to residents on personal preparedness for severe weather, extreme temperatures, and extended power outages. Coordinate with local jurisdictions to share information locally. Encourage schools and long-term facilities that house senior citizens or other vulnerable populations to have emergency plans and generators in place to deal with severe weather, extreme temperatures and power outages.

2. GAPS OR DEFICIENCIES

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

Backup Power: Not all county, city, and other incident support facilities (e.g., public safety/emergency services stations, designated mass care shelters, etc.) have generator backup power in the event of extended power outages. County and local government funding to purchase generators is limited and obtaining generators can be a slow process.

Project Funding: Finding funding for the implementation of mitigation projects is a barrier. The county, townships, and cities have limited funding for mitigation activities such as infrastructure improvements for flood mitigation or constructing storm shelter or tornado safe rooms in areas where people are vulnerable to high wind events. Outside grant funding is necessary and can be difficult to obtain.

PART D: SURVEY PARTICIPANTS

Please list the names & titles of all persons that contributed information to this survey.

Tina Lindquist, Grant County Emergency Management Director
Greg Lillemon, Grant County Environmental Services Director/Deputy EMD
Reed Petersen, Assistant Environmental Services Administrator
Matt Yavarow, Grant County Highway Engineer

Grant County

LOCAL MITIGATION SURVEY

Please fill out the Point of Contact information and Parts A, B, C, and D of this survey. Please be as specific as in your responses with information as it relates to your jurisdiction. It is strongly recommended to include government officials and staff to help provide detailed feedback.

Name of Jurisdiction: CITY OF ASHBY

Point of Contact:

Name: Mike Thormodson
Job Title: Clerk/Treasurer
Phone: 218-747-2876; Cell: 218-280-2215
Email: ashbycit@prtel.com

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. HAZARD IDENTIFICATION

In the chart below, please identify the natural hazards that pose the greatest risk to your community. Consider past damaging events, likelihood of future events, and impacts to community assets. Rank the prioritization of hazards as high, moderate, or low. Only put an "X" next to those hazards that are of moderate to high priority. These will be addressed with localized mitigation actions.

Natural Hazard	Use an "X" to select the hazards that pose the greatest risk to your jurisdiction.	Please indicate if the hazard is of high, moderate, or low priority.	Do feel that this hazard has increased, decreased, or had no change?
Flooding			
Winter Storms	x	moderate	No change
Tornadoes	x	moderate	No change
Windstorms			
Lightning			
Hail			
Extreme Cold	x	moderate	No change
Extreme Heat			
Drought			
Wildfire			
Landslides			
Dam/Levee Failure			

2. RECENT HAZARD EVENTS

Please describe any severe weather or disaster events that have occurred over roughly the last 5 years that caused damages in your community or resulted in a disaster declaration.

July 2020 tornado caused a lot a damage north of town. Debris consisted of building materials, trees, and other materials lost due to high wind speeds.

3. LOCAL VULNERABILITIES

Use the chart below to identify what specific community assets are vulnerable to damages or loss from the hazards that pose risk to your community.

Natural Hazard (please list)	**Vulnerability Assessment** **Describe <u>specific</u> community assets (infrastructure, systems, or populations) that are suspectable to damage or loss from hazard events.**
Ice storms and blizzards	Much of the city's municipal electrical service consists of overhead power lines and electrical poles. Those overhead lines and power poles are prone to failure in ice storms and blizzards with heavy snowfall and high winds that may bring down trees and branches.

4. REDUCTION IN VULNERABILITY

Please describe any actions your community has taken to <u>reduce vulnerability</u> against future severe weather or disaster events. This can include examples of any work that has been completed or is currently underway.

None I'm aware of.

5. INCREASE IN VULNERABILITY

Please describe any current conditions or changes you feel have <u>increased</u> your community's vulnerability to future severe weather or disaster events. Please include any factors such as recent population growth or new development.

None I'm aware of.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. PUBLIC OUTREACH

Please describe what capabilities you have in place to communicate with those in your community to share information about severe weather events and personal preparedness. Please include any considerations for underserved communities or socially vulnerable populations within your jurisdiction.

We post information on our city website and Facebook page. We also post information on bulletin boards at City Hall, the Senior Center and at the Post Office.

2. EMERGENCY NOTIFICATION SYSTEM

Do you encourage residents in your community to sign up for the county's emergency notification system and/or a local emergency alert system? If yes, how? If not, is this something you would do?

I haven't but could if I knew more about it.

City residents can sign up to receive CodeRed Alerts that are sent out via the Grant County Sheriff's Office. The Sheriff's Office will use CodeRed when emergency notifications are necessary. Residents can choose to receive the notifications on their land-line, cell phone, by text, or by email. The NWS also has capabilities to send weather alerts directly from their office to our local CodeRed system.

In addition, IPAWs can be used to help alert citizens that are within reach and are affiliated with the nearest cell phone towers in/around the City of Ashby. This is similar to how Amber Alerts work. A notification is sent directly to the tower site, and then any device connected to the tower receives the notice.

Important note, individual mobile devices have to have their settings correctly to receive notifications. It must 'be allowed' in the settings.

In addition, local radio and TV stations will be used in emergency situations when time and availability allow. The County Facebook page, along with the Grant County Sheriff's and Grant County Highway's Facebook pages are great resources for accurate and up to date notifications and information.

3. LOCAL PLANS & POLICIES

Please describe any local plans, authorities or policies in place that help to reduce risk from natural hazards in your community. Please make note of enforcement of existing building codes and land use and development ordinances or regulations as they apply to your community. Please also note if your community has any plans or policies in place related to resilience and adaptation for climate change.

The city's planning and zoning department enforces the MN State Building Code and the City Code zoning requirements for new development.

4. STAFF & PARTNERSHIPS

Please describe what staff or other partnerships are in place to help accomplish mitigation in your community. This can include specific department staff or outside agencies that have a role with mitigation-related planning or projects.

Our fire chief is the city's designated Emergency Manager. We also have a public safety committee.

The City Fire Chief is also a member of the Grant County Fire Chief's Association. All cities and townships sign Resolutions agreeing to mutual aid of staff and resources. This historical partnership provides a structure to help with state and federal reimbursement in declared disasters.

5. PROGRAMS IN PLACE

Describe any programs in place that to help reduce risk from natural hazards in your community.

The school has tornado drills.

All public schools in Grant County compile with the standard tornado and fire drills and are conducted on their respective campus.

Grant County participates in the both the summer and winter Severe Weather Awareness Campaigns that promotes preparedness and response to all-natural disaster severe weather.

The city works with Grant County to test our outdoor warning siren on the first Wednesday of each month to ensure it is working properly.

Grant County public safety entities that include law, fire, EMS, public works, schools, and bus companies maintain compliance with the ARMER state standard of training. Learning and maintaining skills on interoperability in Grant County, as well as the region and state.

6. FUNDING & OTHER RESOURCES

Please describe what sorts of funding or other resources are available to help accomplish mitigation in your community. Please make note of any work with outside organizations or agencies or municipal/rural electrical coop providers.

We have a warning siren.

PART C: LOCAL MITIGATION PROJECTS

1. LOCAL MITIGATION PROJECTS

Please describe what mitigation actions would help to reduce risk to your community from future hazard events. Please consider mitigation activities that address local vulnerabilities; limit risk to existing structures or new development; and also any actions that benefit underserved communities or socially vulnerable populations in your community. Please be as specific as possible in your responses.

None in play.

2. GAPS OR DEFICIENCIES

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

Don't know of any gaps.

PART D: SURVEY PARTICIPANTS

Please list the names & titles of all persons that contributed information to this survey.

Mike Thormodson, City Clerk/Treasurer
Tina Lindquist, County Emergency Management Director

Grant County

LOCAL MITIGATION SURVEY

Please fill out the Point of Contact information and Parts A, B, C, and D of this survey. Please be as specific as in your responses with information as it relates to your jurisdiction. It is strongly recommended to include government officials and staff to help provide detailed feedback.

Name of Jurisdiction: CITY OF BARRETT

Point of Contact:

Name: Marita Rhude
Job Title: Clerk/Treasurer
Phone: 320-528-2440
Email: barrett@runestone.net

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. HAZARD IDENTIFICATION

In the chart below, please identify the natural hazards that pose the greatest risk to your community. Consider past damaging events, likelihood of future events, and impacts to community assets. Rank the prioritization of hazards as high, moderate, or low. Only put an "X" next to those hazards that are of moderate to high priority. These will be addressed with localized mitigation actions.

Natural Hazard	Use an "X" to select the hazards that pose the greatest risk to your jurisdiction.	Please indicate if the hazard is of high, moderate, or low priority.	Do feel that this hazard has increased, decreased, or had no change?
Flooding		Low	Decrease
Winter Storms		Low	No Change
Tornadoes	X	Medium	Increase
Windstorms		Low	No Change
Lightning		Medium	Increase
Hail		Low	No Change
Extreme Cold	X	Medium	No Change
Extreme Heat		Low	No Change
Drought	X	Medium	No Change
Wildfire		Low	No Change
Landslides		N/A	
Dam/Levee Failure		Low	No Change

2. RECENT HAZARD EVENTS

Please describe any severe weather or disaster events that have occurred over roughly the last 5 years that caused damages in your community or resulted in a disaster declaration.

We have experienced high wind events that affected the county.

3. LOCAL VULNERABILITIES

Use the chart below to identify what specific community assets are vulnerable to damages or loss from the hazards that pose risk to your community.

Natural Hazard (please list)	**Vulnerability Assessment** **Describe specific community assets (infrastructure, systems, or populations) that are suspectable to damage or loss from hazard events.**
All Hazards	We need to obtain a portable generator for our Fire Department and Community Center. The Community Center serves as our local shelter if people are displaced from a severe storm event or extended power outage.
Extreme Cold	In the past we have experienced frozen water services line in extreme cold. There is also the risk of our water tower freezing up in extreme cold. Our residents are more vulnerable during periods of extreme cold with power outages.
Drought	Weather patterns have been very extreme and a Drought could affect our water table and availability of water to our residents.
Windstorms and Tornadoes	There is campground within the city that does not have a storm shelter and residents are vulnerable to high wind and tornado events. Our municipal owned Barrett Lakeside Pavilion operates during the summer months and does not have a storm shelter. The City's outdoor warning siren is older and does not reach all sections of town.

4. REDUCTION IN VULNERABILITY

Please describe any actions your community has taken to reduce vulnerability against future severe weather or disaster events. This can include examples of any work that has been completed or is currently underway.

The City recently completed a street reconstruction project which included adding more storm sewer and enlarged the size of storm water holding pond. The City also installed a low temperature alarm in our water treatment plant and has added a permanent generator to the water treatment plant for power outages. All our sewer lift stations have all had cellular alarms installed. A permanent generator at our main lift station was also installed.

5. INCREASE IN VULNERABILITY

Please describe any current conditions or changes you feel have increased your community's vulnerability to future severe weather or disaster events. Please include any factors such as recent population growth or new development.

Weather conditions have become more volatile, and the chances of tornadoes, windstorms, and drought have become more prevalent.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. PUBLIC OUTREACH

Please describe what capabilities you have in place to communicate with those in your community to share information about severe weather events and personal preparedness. Please include any considerations for underserved communities or socially vulnerable populations within your jurisdiction.

We post information on our city website and Facebook page. We also post information on bulletin boards at the Bank, Post Office and City Hall. We also use the local newspaper.

2. EMERGENCY NOTIFICATION SYSTEM

Do you encourage residents in your community to sign up for the county's emergency notification system and/or a local emergency alert system? If yes, how? If not, is this something you would do?

Yes. We have a place on the homepage of our city website with a link to the county's code red sign-up page. We include information on emergency notification on our Facebook page annually.

City residents can sign up to receive CodeRed Alerts that are sent out via the Grant County Sheriff's Office. The Sheriff's Office will use CodeRed when emergency notifications are necessary. Residents can choose to receive the notifications on their land-line, cell phone, by text, or by email. The NWS also has capabilities to send weather alerts directly from their office to our local CodeRed system.

In addition, IPAWs can be used to help alert citizens that are within reach and are affiliated with the nearest cell phone towers in/around the City of Ashby. This is similar to how Amber Alerts work. A notification is sent directly to the tower site, and then any device connected to the tower receives the notice.

Important note, individual mobile devices have to have their settings correctly to receive notifications. It must 'be allowed' in the settings.

In addition, local radio and TV stations will be used in emergency situations when time and availability allow. The County Facebook page, along with the Grant County Sheriff's and Grant County Highway's Facebook pages are great resources for accurate and up to date notifications and information.

3. LOCAL PLANS & POLICIES

Please describe any local plans, authorities or policies in place that help to reduce risk from natural hazards in your community. Please make note of enforcement of existing building codes and land use and development ordinances or regulations as they apply to your community. Please also note if your community has any plans or policies in place related to resilience and adaptation for climate change.

The City has a Zoning Ordinance the regulates land use.

4. STAFF & PARTNERSHIPS

Please describe what staff or other partnerships are in place to help accomplish mitigation in your community. This can include specific department staff or outside agencies that have a role with mitigation-related planning or projects.

Grant County has a designated Emergency Manager position, and they are available to help in any given situation. We are a member of MnWARN. We have a mutual aid agreement with all Grant County agencies to provide resources in the event of an emergency. The City Fire Chief is also a member of the Grant County Fire Chief's Association. All cities and townships sign Resolutions agreeing to mutual aid of staff and resources. This historical partnership provides a structure to help with state and federal reimbursement in declared disasters.

5. PROGRAMS IN PLACE

Describe any programs in place that to help reduce risk from natural hazards in your community.

Our city works with the county to participate in the National Weather Service's annual Severe Winter/Spring Weather Awareness Week by posting severe weather awareness information out on our city Facebook page, bulletin board and local newspaper. Our local School, Care Center and Assisted Living practices tornado drills on a regular basis.

The city works with Grant County to test our outdoor warning siren on the first Wednesday of each month to ensure it is working properly.

Grant County public safety entities that include law, fire, EMS, public works, schools, and bus companies maintain compliance with the ARMER state standard of training. Learning and maintaining skills on interoperability in Grant County, as well as the region and state.

6. FUNDING & OTHER RESOURCES

Please describe what sorts of funding or other resources are available to help accomplish mitigation in your community. Please make note of any work with outside organizations or agencies or municipal/rural electrical coop providers.

None, currently.

PART C: LOCAL MITIGATION PROJECTS

1. LOCAL MITIGATION PROJECTS

Please describe what mitigation actions would help to reduce risk to your community from future hazard events. Please consider mitigation activities that address local vulnerabilities; limit risk to existing structures or new development; and also any actions that benefit underserved communities or socially vulnerable populations in your community. Please be as specific as possible in your responses.

Windstorms/Tornadoes - Upgrade the city's warning siren, it is outdated and does not reach all areas of the City limits. The City owns a Lakeside Pavilion that rents out for events and holds a large number of people, we need a safe place for people in the event of a storm. Work with the local Resort to construct a storm shelter or tornado safe room.

Flooding –Enforce the city's sump pump ordinance to minimize impacts to the city's stormwater system.

Drought – Establish and enforce watering use restrictions when in periods of severe drought.

Severe Winter / Summer Storms – Post information on the city's website and local bulletin boards to encourage residents to sign up for the county's emergency notification system. Participate in the National Weather Service's – Severe Weather Awareness Weeks. Acquire a portable generator for our Community Center, which is our designated community mass care shelter.

Extreme Cold – Encourage residents to be prepared for periods of extreme cold and potential power outages. Use our city website and utility bills to notify residents to avoid freezing pipes during sub-zero weather. Work with the local nursing home to be prepared with emergency plans for extended power outages. Work with the county and partner agencies to establish a warming center facility and program for those who are homeless and exposed to extreme cold.

2. GAPS OR DEFICIENCIES

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

Not all our residents are signed up for the county's emergency notification system. We are small city with limited financial and staff resources to address local mitigation projects.

PART D: SURVEY PARTICIPANTS

Please list the names & titles of all persons that contributed information to this survey.

Marita Rhude, Clerk/Treasurer
Jason Wendt, Public Works Director
Tina Lindquist, County Emergency Management Director

Grant County

LOCAL MITIGATION SURVEY

Please fill out the Point of Contact information and Parts A, B, C, and D of this survey. Please be as specific as in your responses with information as it relates to your jurisdiction. It is strongly recommended to include government officials and staff to help provide detailed feedback.

Name of Jurisdiction: CITY OF ELBOW LAKE

Point of Contact:

Name: Jeff Holsen
Job Title: Clerk Administrator/Treasurer
Phone: 218-685-4483
Email: cityhall@runestone.net

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. HAZARD IDENTIFICATION

In the chart below, please identify the natural hazards that pose the greatest risk to your community. Consider past damaging events, likelihood of future events, and impacts to community assets. Rank the prioritization of hazards as high, moderate, or low. Only put an "X" next to those hazards that are of moderate to high priority. These will be addressed with localized mitigation actions.

Natural Hazard	Use an "X" to select the hazards that pose the greatest risk to your jurisdiction.	Please indicate if the hazard is of high, moderate, or low priority.	Do feel that this hazard has increased, decreased, or had no change?
Flooding			
Winter Storms			
Tornadoes	X	Low	
Windstorms	X	Moderate	Increased
Lightning			
Hail			
Extreme Cold			
Extreme Heat			
Drought			
Wildfire			
Landslides			
Dam/Levee Failure			

2. RECENT HAZARD EVENTS

Please describe any severe weather or disaster events that have occurred over roughly the last 5 years that caused damages in your community or resulted in a disaster declaration.

On Memorial Day, 2022 the city had a windstorm come through the city and surrounding areas with max winds over 100 mph. Debris consisted of building materials, trees, and other materials lost due to high wind speeds.

3. LOCAL VULNERABILITIES

Use the chart below to identify what specific community assets are vulnerable to damages or loss from the hazards that pose risk to your community.

Natural Hazard (please list)	**Vulnerability Assessment Describe specific community assets (infrastructure, systems, or populations) that are suspectable to damage or loss from hazard events.**
Windstorms	The city had a severe windstorm event in 2022, which resulted in lost power, which caused some potentially bad situations, such as the sewer lift stations and the water tower was out of power.

4. REDUCTION IN VULNERABILITY

Please describe any actions your community has taken to reduce vulnerability against future severe weather or disaster events. This can include examples of any work that has been completed or is currently underway.

We have converted many blocks to underground. Our city is probably 79% underground now and we are trying to put everything underground except the major transmission lines. We also purchased two backup generators for the sewer lift stations.

5. INCREASE IN VULNERABILITY

Please describe any current conditions or changes you feel have increased your community's vulnerability to future severe weather or disaster events. Please include any factors such as recent population growth or new development.

None.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. PUBLIC OUTREACH

Please describe what capabilities you have in place to communicate with those in your community to share information about severe weather events and personal preparedness. Please include any considerations for underserved communities or socially vulnerable populations within your jurisdiction.

We use the city website, Facebook, radio and TV

2. EMERGENCY NOTIFICATION SYSTEM

Do you encourage residents in your community to sign up for the county's emergency notification system and/or a local emergency alert system? If yes, how? If not, is this something you would do?

City residents can sign up to receive CodeRed Alerts that are sent out via the Grant County Sheriff's Office. The Sheriff's Office will use CodeRed when emergency notifications are necessary. Residents can choose to receive the notifications on their land-line, cell phone, by text, or by email. The NWS also has capabilities to send weather alerts directly from their office to our local CodeRed system.

In addition, IPAWs can be used to help alert citizens that are within reach and are affiliated with the nearest cell phone towers in/around the City of Ashby. This is similar to how Amber Alerts work. A notification is sent directly to the tower site, and then any device connected to the tower receives the notice.

Important note, individual mobile devices have to have their settings correctly to receive notifications. It must 'be allowed' in the settings.

In addition, local radio and TV stations will be used in emergency situations when time and availability allow. The County Facebook page, along with the Grant County Sheriff's and Grant County Highway's Facebook pages are great resources for accurate and up to date notifications and information.

3. LOCAL PLANS & POLICIES

Please describe any local plans, authorities or policies in place that help to reduce risk from natural hazards in your community. Please make note of enforcement of existing building codes and land use and development ordinances or regulations as they apply to your community. Please also note if your community has any plans or policies in place related to resilience and adaptation for climate change.

We have a good sound alarm system in Elbow Lake.

4. STAFF & PARTNERSHIPS

Please describe what staff or other partnerships are in place to help accomplish mitigation in your community. This can include specific department staff or outside agencies that have a role with mitigation-related planning or projects.

Great fire department and county law enforcement are readily available. Municipally owned electric system with its employees living right in Elbow Lake for quick response times. The City Fire Chief is also a member of the Grant County Fire Chief's Association. All cities and townships sign Resolutions agreeing to mutual aid of staff and resources. This historical partnership provides a structure to help with state and federal reimbursement in declared disasters.

5. PROGRAMS IN PLACE

Describe any programs in place that to help reduce risk from natural hazards in your community.

Grant County does a great job in helping the city with all of this. (i.e., public outreach on severe weather). All public schools in Grant County compile with the standard tornado and fire drills and are conducted on their respective campus.

Grant County participates in the both the summer and winter Severe Weather Awareness Campaigns that promotes preparedness and response to all-natural disaster severe weather.

The city works with Grant County to test our outdoor warning siren on the first Wednesday of each month to ensure it is working properly.

Grant County public safety entities that include law, fire, EMS, public works, schools, and bus companies maintain compliance with the ARMER state standard of training. Learning and maintaining skills on interoperability in Grant County, as well as the region and state.

6. FUNDING & OTHER RESOURCES

Please describe what sorts of funding or other resources are available to help accomplish mitigation in your community. Please make note of any work with outside organizations or agencies or municipal/rural electrical coop providers.

The city uses its own budget. We have a good relationship with the county engineer. We own our own electric system and we have great insurance coverage.

PART C: LOCAL MITIGATION PROJECTS

1. LOCAL MITIGATION PROJECTS

Please describe what mitigation actions would help to reduce risk to your community from future hazard events. Please consider mitigation activities that address local vulnerabilities; limit risk to existing structures or new development; and also any actions that benefit underserved communities or socially vulnerable populations in your community. Please be as specific as possible in your responses.

No changes here.

2. GAPS OR DEFICIENCIES

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

Not aware of any at this point in time.

PART D: SURVEY PARTICIPANTS

Please list the names & titles of all persons that contributed information to this survey.

Jeff Holsen, City Clerk Admin. Treasurer
Tina Lindquist, County Emergency Management Director

Grant County

LOCAL MITIGATION SURVEY

Please fill out the Point of Contact information and Parts A, B, C, and D of this survey. Please be as specific as in your responses with information as it relates to your jurisdiction. It is strongly recommended to include government officials and staff to help provide detailed feedback.

Name of Jurisdiction: CITY OF HERMAN

Point of Contact:

Name: Amanda Blume
Job Title: Clerk/Treasurer
Phone: 320-677-2297
Email: ctyhrmn@runestone.net

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. HAZARD IDENTIFICATION

In the chart below, please identify the natural hazards that pose the greatest risk to your community. Consider past damaging events, likelihood of future events, and impacts to community assets. Rank the prioritization of hazards as high, moderate, or low. Only put an "X" next to those hazards that are of moderate to high priority. These will be addressed with localized mitigation actions.

Natural Hazard	Use an "X" to select the hazards that pose the greatest risk to your jurisdiction.	Please indicate if the hazard is of high, moderate, or low priority.	Do feel that this hazard has increased, decreased, or had no change?
Flooding	x	Moderate	No change
Winter Storms	x	High	No change
Tornadoes		Low	No change
Windstorms	x	High	No change
Lightning		Low	No change
Hail		Low	No change
Extreme Cold	x	Moderate	No change
Extreme Heat		Low	No change
Drought		Low	No change
Wildfire		Low	No change
Landslides		Low	No change
Dam/Levee Failure		Low	No change

2. RECENT HAZARD EVENTS

Please describe any severe weather or disaster events that have occurred over roughly the last 5 years that caused damages in your community or resulted in a disaster declaration.

In May 2022, we had a severe storm with strong wind damaging trees and powerlines, resulting in power outages and tree damage to vehicles, homes and destruction at our municipal campground. Debris consisted of building materials, trees, and other materials lost due to high wind speeds.

3. LOCAL VULNERABILITIES

Use the chart below to identify what specific community assets are vulnerable to damages or loss from the hazards that pose risk to your community.

Natural Hazard (please list)	**Vulnerability Assessment** **Describe <u>specific</u> community assets (infrastructure, systems, or populations) that are suspectable to damage or loss from hazard events.**
All Hazards	We need to 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. We also have a large population of senior citizens that do not use cell phones to receive emergency notifications.
Flooding	We have ditches around and through town that can cause flooding in streets and water damage to houses during early snow melt prior to culverts opening up in the spring and heavy summer rains.
Ice Storms, Blizzards	Much of the city's municipal electrical service consists of overhead power lines and electrical poles. Those overhead lines and power poles are prone to failure in ice storms and blizzards with heavy snowfall and high winds that may bring down trees and branches.
Windstorms and Tornadoes	Our municipal campground is active during summer and fall months with RVs and campers and does not have a storm shelter.
Extreme Cold	We have a high population of senior citizens and also low-income residents who are more vulnerable during periods of extreme cold with power outages. In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold.

4. REDUCTION IN VULNERABILITY

Please describe any actions your community has taken to <u>reduce vulnerability</u> against future severe weather or disaster events. This can include examples of any work that has been completed or is currently underway.

Throughout the summer maintenance works on keeping the ditches and culverts clean and clear of brush and debris that could hinder water displacement.

5. INCREASE IN VULNERABILITY

Please describe any current conditions or changes you feel have <u>increased</u> your community's vulnerability to future severe weather or disaster events. Please include any factors such as recent population growth or new development.

None that I can think of.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. PUBLIC OUTREACH

Please describe what capabilities you have in place to communicate with those in your community to share information about severe weather events and personal preparedness. Please include any considerations for underserved communities or socially vulnerable populations within your jurisdiction.

We post information on Local Facebook pages, newspaper, and the radio if needed. We also post information on bulletin boards at City Hall, Post Office, and Bank. We make announcements at City Council meetings and post flyers on our community bulletin board outside of City Hall.

2. EMERGENCY NOTIFICATION SYSTEM

Do you encourage residents in your community to sign up for the county's emergency notification system and/or a local emergency alert system? If yes, how? If not, is this something you would do?

Yes, but mainly through word of mouth. I am willing to post a flyer on it at City Hall, the Post Office, Bank and on the local Facebook pages.

City residents can sign up to receive CodeRed Alerts that are sent out via the Grant County Sheriff's Office. The Sheriff's Office will use CodeRed when emergency notifications are necessary. Residents can choose to receive the notifications on their land-line, cell phone, by text, or by email. The NWS also has capabilities to send weather alerts directly from their office to our local CodeRed system.

In addition, IPAWs can be used to help alert citizens that are within reach and are affiliated with the nearest cell phone towers in/around the City of Ashby. This is similar to how Amber Alerts work. A notification is sent directly to the tower site, and then any device connected to the tower receives the notice.

Important note, individual mobile devices have to have their settings correctly to receive notifications. It must 'be allowed' in the settings.

In addition, local radio and TV stations will be used in emergency situations when time and availability allow. The County Facebook page, along with the Grant County Sheriff's and Grant County Highway's Facebook pages are great resources for accurate and up to date notifications and information.

3. LOCAL PLANS & POLICIES

Please describe any local plans, authorities or policies in place that help to reduce risk from natural hazards in your community. Please make note of enforcement of existing building codes and land use and development ordinances or regulations as they apply to your community. Please also note if your community has any plans or policies in place related to resilience and adaptation for climate change.

Our city follows the MN Basic Code of Ordinances and participates in an All-County Mutual Aid Agreement. We also have a wellhead implementation plan for emergencies and keeping the drinking water safe.

4. STAFF & PARTNERSHIPS

Please describe what staff or other partnerships are in place to help accomplish mitigation in your community. This can include specific department staff or outside agencies that have a role with mitigation-related planning or projects.

We are a member of MnWARN. We work closely with the County on mitigation-related planning and projects. The City Fire Chief is also a member of the Grant County Fire Chief's Association. All cities and townships sign Resolutions agreeing to mutual aid of staff and resources. This historical partnership provides a structure to help with state and federal reimbursement in declared disasters.

5. PROGRAMS IN PLACE

Describe any programs in place that to help reduce risk from natural hazards in your community.

Our city works with the county to participate in the National Weather Service's annual Severe Winter/Spring Weather Awareness Week by posting severe weather awareness information out on local Facebook pages. Our local school practices tornado drills on an annual basis. Each spring and fall we do outreach to homeowners to remind them to clear leafy and woody debris from roadside gutters to prevent clogging and over the road flooding in these areas. Each spring we do outreach to encourage residents to maintain their sump pumps to reduce the chances of basement flooding.

The city works with Grant County to test our outdoor warning siren on the first Wednesday of each month to ensure it is working properly.

Grant County public safety entities that include law, fire, EMS, public works, schools, and bus companies maintain compliance with the ARMER state standard of training. Learning and maintaining skills on interoperability in Grant County, as well as the region and state.

6. FUNDING & OTHER RESOURCES

Please describe what sorts of funding or other resources are available to help accomplish mitigation in your community. Please make note of any work with outside organizations or agencies or municipal/rural electrical coop providers.

The city primarily uses its own budget to address mitigation projects, such as ditch cleaning.

PART C: LOCAL MITIGATION PROJECTS

1. LOCAL MITIGATION PROJECTS

Please describe what mitigation actions would help to reduce risk to your community from future hazard events. Please consider mitigation activities that address local vulnerabilities; limit risk to existing structures or new development; and also any actions that benefit underserved communities or socially vulnerable populations in your community. Please be as specific as possible in your responses.

Windstorms/Tornadoes - Upgrade the city's warning siren, it is outdated. A storm shelter for the municipal campground.

Flooding – Work with the city and county engineer on local flood reduction measures. Enforce the city's sump pump ordinance to minimize impacts to the city's stormwater system.

Severe Winter / Summer Storms – Post information on the city's website and local bulletin boards to encourage residents to sign up for the county's emergency notification system. Participate in the National Weather Service's – Severe Weather Awareness Weeks. Acquire a portable generator for our Community Center, which is our designated community mass care shelter.

Extreme Cold – Encourage residents to be prepared for periods of extreme cold and potential power outages. Use local Facebook pages and utility bills to notify residents to avoid freezing pipes during sub-zero weather.

2. GAPS OR DEFICIENCIES

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

Our city does not have its own website to do better outreach to our residents. Not all our residents are signed up for the county's emergency notification system. We are small city with limited financial and staff resources to address local mitigation projects.

PART D: SURVEY PARTICIPANTS

Please list the names & titles of all persons that contributed information to this survey.

Amanda Blume, City Clerk/Treasurer
Paul Kirkeide, Mayor
Tina Lindquist, County Emergency Management Director

Grant County

LOCAL MITIGATION SURVEY

Please fill out the Point of Contact information and Parts A, B, C, and D of this survey. Please be as specific as in your responses with information as it relates to your jurisdiction. It is strongly recommended to include government officials and staff to help provide detailed feedback.

Name of Jurisdiction: CITY OF HOFFMAN

Point of Contact:

Name: Janee Strunk
Job Title: City Administrator
Phone: (320) 986-2448
Email: cityofhoffman@runestone.net

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. HAZARD IDENTIFICATION

In the chart below, please identify the natural hazards that pose the greatest risk to your community. Consider past damaging events, likelihood of future events, and impacts to community assets. Rank the prioritization of hazards as high, moderate, or low. Only put an "X" next to those hazards that are of moderate to high priority. These will be addressed with localized mitigation actions.

Natural Hazard	Use an "X" to select the hazards that pose the greatest risk to your jurisdiction.	Please indicate if the hazard is of high, moderate, or low priority.	Do feel that this hazard has increased, decreased, or had no change?
Flooding	x	Moderate	No change
Winter Storms	x	High	No change
Tornadoes	x	High	No change
Windstorms	x	High	No change
Lightning	x	High	No change
Hail	x	High	No Change
Extreme Cold			
Extreme Heat			
Drought			
Wildfire			
Landslides			
Dam/Levee Failure			

2. RECENT HAZARD EVENTS

Please describe any severe weather or disaster events that have occurred over roughly the last 5 years that caused damages in your community or resulted in a disaster declaration.

In May of 2022 we experienced a high wind event that damaged trees and powerlines resulting in power outages and tree damage to vehicles, businesses, and homes. Debris consisted of building materials, trees, and other materials lost due to high wind speeds.

3. LOCAL VULNERABILITIES

Use the chart below to identify what specific community assets are vulnerable to damages or loss from the hazards that pose risk to your community.

Natural Hazard (please list)	**Vulnerability Assessment Describe <u>specific</u> community assets (infrastructure, systems, or populations) that are suspectable to damage or loss from hazard events.**
All Hazards	We need to update the drainage at our Fire Department Building as this location is typically used as a hub for emergency services during a hazard.
Flooding	We have a city lift station that is prone to flooding during high rain events. The city park is vulnerable to flooding and park equipment has been damaged in the past. The city is located on an old slough which means almost all of the residential homes in Hoffman experience basement flooding in the spring of the year.
Ice Storms, Blizzards	Much of the city's municipal electrical service consists of overhead power lines and electrical poles. Those overhead lines and power poles are prone to failure in ice storms and blizzards with heavy snowfall and high winds that may bring down trees and branches.
Windstorms and Tornadoes	Our municipal campground is active during spring, summer, and fall months with RVs and campers and has one bathroom/shower building that doubles as a storm shelter. This campground does not have a tornado siren and is a significant distance from the city siren. Our newest street consists of homes built slab-on-grade. They do not have a tornado shelter to seek shelter in during a high wind event.
Extreme Cold	We have a high population of senior citizens and also low-income residents who are more vulnerable during periods of extreme cold with power outages. The city has experienced damages to roads from spring frost heaves, frozen culverts that cause localized flooding. This localized flooding happens in the parking lot of our fire department/ambulance building making it difficult for emergency vehicles to leave the parking lot.

4. REDUCTION IN VULNERABILITY

Please describe any actions your community has taken to <u>reduce vulnerability</u> against future severe weather or disaster events. This can include examples of any work that has been completed or is currently underway.

We most recently completed an update to our severe weather siren which included wiring the siren to our back up generator. We have a large portable generator which we can use in case of an emergency at our lift stations to help prevent flooding and backups. The city has new storm sewer throughout the town.

5. INCREASE IN VULNERABILITY

Please describe any current conditions or changes you feel have <u>increased</u> your community's vulnerability to future severe weather or disaster events. Please include any factors such as recent population growth or new development.

The Hoffman Senior Living was constructed in 2018. This facility added 20 apartments/rooms to the community. With the construction of this new assisted living facility there is a large concentration of senior residents in one location that will need assistance during a disaster event. The new construction homes built on our newest street are all slab-on-grade, so residents do not have a basement for safety during high wind or tornado events. There is also not a tornado shelter available nearby these residents.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. PUBLIC OUTREACH

Please describe what capabilities you have in place to communicate with those in your community to share information about severe weather events and personal preparedness. Please include any considerations for underserved communities or socially vulnerable populations within your jurisdiction.

We post information on our city website and Facebook page. We also post information on bulletin boards at the post office and grocery stores. The county has an emergency alert system that residents can sign up for to get alerts from local law enforcement.

2. EMERGENCY NOTIFICATION SYSTEM

Do you encourage residents in your community to sign up for the county's emergency notification system and/or a local emergency alert system? If yes, how? If not, is this something you would do?

Yes. We include information on emergency notification annually with our utility bills. City residents can sign up to receive CodeRed Alerts that are sent out via the Grant County Sheriff's Office. The Sheriff's Office will use CodeRed when emergency notifications are necessary. Residents can choose to receive the notifications on their land-line, cell phone, by text, or by email. The NWS also has capabilities to send weather alerts directly from their office to our local CodeRed system.

In addition, IPAWs can be used to help alert citizens that are within reach and are affiliated with the nearest cell phone towers in/around the City of Ashby. This is similar to how Amber Alerts work. A notification is sent directly to the tower site, and then any device connected to the tower receives the notice.

Important note, individual mobile devices have to have their settings correctly to receive notifications. It must 'be allowed' in the settings.

In addition, local radio and TV stations will be used in emergency situations when time and availability allow. The County Facebook page, along with the Grant County Sheriff's and Grant County Highway's Facebook pages are great resources for accurate and up to date notifications and information.

3. LOCAL PLANS & POLICIES

Please describe any local plans, authorities or policies in place that help to reduce risk from natural hazards in your community. Please make note of enforcement of existing building codes and land use and development ordinances or regulations as they apply to your community. Please also note if your community has any plans or policies in place related to resilience and adaptation for climate change.

We currently do not have any local plans, authorities or policies in place to help reduce risk from natural hazards in our community.

4. STAFF & PARTNERSHIPS

Please describe what staff or other partnerships are in place to help accomplish mitigation in your community. This can include specific department staff or outside agencies that have a role with mitigation-related planning or projects.

We have a fire chief and ambulance manager in place within our community. Our county also has a county emergency manager. The City Fire Chief is also a member of the Grant County Fire Chief's Association. All cities and townships sign Resolutions agreeing to mutual aid of staff and resources. This historical partnership provides a structure to help with state and federal reimbursement in declared disasters.

5. PROGRAMS IN PLACE

Describe any programs in place that to help reduce risk from natural hazards in your community.

The city will regularly share any information that they county shares on their Facebook page regarding severe weather awareness.

All public schools in Grant County compile with the standard tornado and fire drills and are conducted on their respective campus.

Grant County participates in the both the summer and winter Severe Weather Awareness Campaigns that promotes preparedness and response to all-natural disaster severe weather.

The city works with Grant County to test our outdoor warning siren on the first Wednesday of each month to ensure it is working properly.

Grant County public safety entities that include law, fire, EMS, public works, schools, and bus companies maintain compliance with the ARMER state standard of training. Learning and maintaining skills on interoperability in Grant County, as well as the region and state.

6. FUNDING & OTHER RESOURCES

Please describe what sorts of funding or other resources are available to help accomplish mitigation in your community. Please make note of any work with outside organizations or agencies or municipal/rural electrical coop providers.

The city primarily uses its own budget to address mitigation projects.

PART C: LOCAL MITIGATION PROJECTS

1. LOCAL MITIGATION PROJECTS

Please describe what mitigation actions would help to reduce risk to your community from future hazard events. Please consider mitigation activities that address local vulnerabilities; limit risk to existing structures or new development; and also any actions that benefit underserved communities or socially vulnerable populations in your community. Please be as specific as possible in your responses.

Windstorms/Tornadoes – Add an additional city warning siren at the municipal campground. Upgrade the storm shelter at the municipal campground. Construct storm shelter on 8th street for those residents that live in a slab-on-grade home. Develop evacuation and sheltering plan with those residents.

Flooding –Enforce the city's sump pump ordinance to minimize impacts to the city's stormwater system.

Drought – Establish and enforce watering use restrictions when in periods of severe drought.

Severe Winter / Summer Storms – Post information on the city's website and local bulletin boards to encourage residents to sign up for the county's emergency notification system. Participate in the National Weather Service's – Severe Weather Awareness Weeks.

Extreme Cold – Encourage residents to be prepared for periods of extreme cold and potential power outages.

2. GAPS OR DEFICIENCIES

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

Not all our residents are signed up for the county's emergency notification system. The city would need significant funding to build storm shelters. We are a small city with limited funding and staff resources to address local mitigation project.

PART D: SURVEY PARTICIPANTS

Please list the names & titles of all persons that contributed information to this survey.

Janee Strunk, City Administrator
Tina Lindquist, County Emergency Management Director

Appendix D – Plans & Programs in Place

Grant County

HMP Plans & Programs in Place Form

EMERGENCY PLANNING CAPABILITIES	*Yes/No*	*Comments*
Emergency Mass Notification System	Yes	CodeRED
Outdoor Warning Sirens (#'s and location)	Yes	Ashby 1 Barrett 1 Elbow Lake 1 Herman 1 Hoffman 1 Norcross 1 Wendell 1
Emergency Operations Plan (EOP)	Yes	County 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	No	Addressed in coordination with schools & local jurisdictions with local vulnerabilities Tipsinah Mounds Campground storm shelter
NWS Weather Ready Nation / StormReady Certification	No	X-Band Weather Radar Wendell, MN
Coordination with Schools	Yes	Tornado Drills, other trainings
Coordination with Neighboring County/Tribal Jurisdictions	Yes	Annual regional planning and training; statewide AMEM conference
Coordination with Local / 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	Yes	Horizon Public Health, Western Prairie Human Services, American Red Cross, Salvation Army
Hazard data and information	Yes	Damage information is kept on file from past

		storm events and disaster declarations
Other (please describe)	Yes	Horizon Public Health has preparedness plans in place. X-Band Weather Radar Wendell, MN

PLANNING & REGULATORY CAPABILITIES	***Yes/No***	***Comments***
Comprehensive/Land Use Plan	Yes	Grant County Land Management Office maintains this plan
Capital Improvements Plan	Yes	Grant County Board of Commissioners maintains this plan
Economic Development Plan	No	
Climate Adaptation Plan	No	
Continuity of Operations Plan (COOP)	Yes	Grant County Emergency Management Grant County Sheriff's Office maintains PSAP COOP
Transportation Plan (Roads, Bridges, Culverts, Ditches)	Yes	Grant County Highway Dept. 3 Year Road Improvement Plan 2021-2023
Stormwater Management Plan / Drainage Plan	Yes	As per 1W1P's in watershed districts
Burning Permits/Restrictions (Sheriff's Office or MN DNR)	Yes	Grant County Sheriff's Office
Comprehensive Local Water Management Plan	Yes	Grant County Local Water Management Plan Amendment (2010-2015) Grant County Land Management maintains this plan
Watershed Plan (One Watershed, One Plan)	Yes	Pomme de Terre River Association 1W1P and the Bois de Sioux

		Watershed District 1W1P
Wellhead Protection Plan		Municipal level plans are done in coordination with MDH
Forest Management Plan	No	
Community Wildfire Protection Plan (CWPP)	No	
Participation in MN DNR Firewise Program	No	
Database of Dry Hydrants/Well Access	No	
Other (please describe)		

LOCAL POLICY / PROGRAM CAPABILITIES	***Yes/No***	***Comments***
Land Use, Planning, & Zoning Ordinance	Yes	Grant County Land Management enforces ordinances established
Subdivision Ordinance	No	There are ordinances with development of subdivisions. This is maintained by the Grant County Land Management Office
Building Codes	No	Grant County Permitting process does require all residential building contractors to have a State license.
National Flood Insurance Program (NFIP)	Yes	Grant County NFIP entry date 05/01/88
Flood insurance rate maps	Yes	Current effective map date 05/01/88
Floodplain Ordinance	Yes	Grant County Floodplain Management Ordinance, 04/06/1994
Shoreland Ordinance	Yes	Grant County Shoreland Management Ordinance, 06/19/2018

Minnesota Buffer Law / Soil Erosion Ordinance	Yes	Grant County SWCD oversees Buffer Compliance Tracking in coordination with Grant County Land Management and legal ditch system authorities.
Home Buyouts for flood or erosion mitigation	No	No buyouts conducted.
Other natural hazard specific ordinance (i.e., stormwater, steep slope, wildfire)	No	
Maintenance programs to reduce risk	Yes	Highway Dept. ROW maintenance and drainage systems
Other (please describe)		

ADMINISTRATIVE/TECHNICAL CAPABILITIES	***Yes/No***	***Comments***
Emergency Management Director	Yes	Grant County Emergency Management Director
Sheriff/Police Department	Yes	Grant County Sheriff (there are no City Police Departments)
Floodplain Administrator	Yes	Grant County Land Management Director
Chief Building Official	Yes	Grant County Land Management Director
County Engineer	Yes	Grant County Highway Department
Mapping Specialist (GIS)	Yes	Grant County Land Management Office Grant County Assessor
Public Health Coordinator/Department	Yes	Horizon Public Health
Planning Commission	Yes	Grant County Planning Advisory Commission
Soil and Water Conservation District	Yes	Grant County SWCD and NRCS
Minnesota Department of Natural Resources	Yes	
Mitigation Planning Committee	Yes	2023 HMP Update Planning Team
Mutual Aid Agreements	Yes	Regional
Other (please describe)	Yes	Grant County Housing Redevelopment Authority (HRA)

EDUCATION & OUTREACH CAPABILITIES	*Yes/No*	*Comments*
SKYWARN Program Training with NWS	Yes	Annual event
Severe Weather Awareness Week (HSEM/NWS)	Yes	Annual event
Winter Weather Awareness Week (HSEM/NWS)	Yes	Annual event
Promotion of NOAA Weather Radios	Yes	During NWS Severe Weather Weeks and Ongoing
Other (please describe)	Yes	Grant County website provides Preparedness Tips and other educational documents and website links

Appendix E – Past Mitigation Action Review Status Report

Grant County

Past Mitigation Action Review Status Report

Following is a report on the status of mitigation actions related to natural hazards included in the Grant County 2017 Hazard Mitigation Plan. This report identifies those actions that have been completed, are being deleted, or are considered as ongoing efforts. Mitigation actions that are noted as "ongoing" will be reviewed and revised as necessary for inclusion in the plan update. This report covers the mitigation actions that were listed for implementation by Grant County and by city jurisdictions, as applicable.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
All-Hazards	Work to ensure that all Grant County residents are aware of and sign-up for the CodeRed emergency notification system.	Grant County	Ongoing	Grant County Emergency Management (GCEM) continues to promote residents to sign up for CodeRED.
All-Hazards	Implement IPAWS to ensure emergency notifications reach all segments of the population including visitors to Grant County.	Grant County	Ongoing	GCEM utilized IPAWS if needed and will continue to do so.
All-Hazards	Ensure that local elected officials and city emergency managers receive NIMS training to understand principles of ICS and the roles and responsibilities of local government during emergency response.	Grant County & All Cities	Delete	Not a necessary mitigation action.
All-Hazards	Ensure Grant County has a fully-functional Emergency Operations Center (EOC).	Grant County	Delete	Not a necessary mitigation action.
All-Hazards	Identify alternate sites for the Emergency Operations Center (EOC). Evaluate and address level of readiness of facilities to support local EOC operations.	Grant County & All Cities	Delete	Not a necessary mitigation action.
Severe Winter & Summer Storms	Provide education and awareness to the public on the risks of severe weather and how to increase personal preparedness to protect life safety. (i.e., Winter Safety driving, emergency food & water survival kits, carbon monoxide alarms, etc.)	Grant County & All Cities	Ongoing	GCEM participates in and promotes the NWS Severe Weather Awareness weeks each April and November. Local cities are encouraged to so the same. Information is also shared on the Grant County website, Facebook page, and by local media.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Severe Winter & Summer Storms	Promote the use of NOAA weather radios as a key communications resource for residents, businesses, and facilities that house vulnerable populations (i.e., nursing homes, senior centers, and day care facilities).	Grant County & All Cities	Ongoing	GCEM and local cities continue to promote residents, businesses, and other facilities to have NOAA weather radios to receive emergency notifications.
Severe Winter & Summer Storms	Identify critical facilities or infrastructure that do not have backup power in the event of a major power outage resulting from severe winter or summer storms.	Grant County & All Cities	Ongoing	Grant County and local jurisdictions continue to identify and address where generator backup power is needed for critical infrastructure.
Severe Winter & Summer Storms	Purchase and install furnaces, as well as generator hook-ups and encourage local generator purchases for identified critical facilities that require backup power.	Grant County & All Cities	Ongoing	Same as above. Obtaining funding to purchase generators is a common limitation.
Severe Winter & Summer Storms	Identify aboveground power lines vulnerable to failure during severe ice storm or wind events and work with public utilities/electric coops to evaluate and implement mitigation projects such as hardening or burying of power lines as needed.	Grant County, Elbow Lake	Ongoing	The rural and municipal electric utilities that serve the county continue to identify and address mitigation measures as needed for reducing risk to power outages.
Severe Winter Storms	Work with private property owners and MnDOT to develop tree windbreaks or agricultural buffer strips to serve as a "living snow fence" to help prevent blowing and drifting snow onto key transportation routes.	Grant County	Ongoing	This has not occurred but it is still something the county may seek to work on with MnDOT and/or Grant County SWCD.
Extreme Temps (Heat / Cold)	Evaluate and address community capabilities to provide temporary warming or cooling centers to the public during periods of extreme hot or cold temperatures.	Grant County & All Cities	Ongoing	GCEM and Grant County Public Health oversee emergency planning and training for activation of temporary shelters, including for extreme temperature events coupled with a power outage.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Severe Summer Storms	Identify areas where vulnerable populations are susceptible to tornadoes or extreme wind events (i.e., schools, campgrounds, or mobile home parks) and evaluate for construction or retrofit of safe rooms or storm shelters.	Grant County & All Cities	Ongoing	GCEM will continue to work with local communities to identify and address areas that would benefit from construction of a storm shelter or tornado safe room.
Severe Summer Storms	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	Grant County & All Cities	Ongoing	Same as above.
Severe Summer Storms	Encourage public and private outdoor recreation sites (i.e., parks, campgrounds, golf courses) to provide shelter, where feasible, or to post information on safety precautions and protective measures to take in the event of severe summer storms.	Grant County	Ongoing	Ongoing as relevant for different recreation areas.
Severe Summer Storms	Ensure that large scale events for the public (i.e., outdoor festivals, concerts, sporting events, and parades) have plans in place to protect and/or evacuate people during extreme weather.	Grant County	Ongoing	This is ongoing under GCEM emergency planning.
Severe Summer Storms	Provide "Storm Spotter" training on an annual basis in communities to ensure that emergency service personnel and community volunteers are adequately trained.	Grant County & All Cities	Ongoing	GCEM works with the National Weather Service to provide Storm Spotter training on an annual basis to law enforcement, fire personnel, and residents that wish to be trained as spotters.
Severe Summer Storms	Encourage owners of critical facilities or infrastructure to identify and implement measures to protect against damage from lightning and severe wind events (i.e., install surge protection for electric equipment or lightning rods/grounding equipment for communications towers; Improve architectural design for optional wind conveyance).	Grant County	Delete	This is not an active mitigation measure and not undertaken by Grant County. Owners are responsible to follow best practices to reduce risk to their facilities or other infrastructure.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Flooding	Work with FEMA to update the County's digital floodplain insurance rate maps (DFIRM).	Grant County	Ongoing	The MN DNR has not updated a current floodplain map for Grant County yet.
Flooding	Enforce and maintain local floodplain ordinances to ensure that new construction is built above regulatory flood protection elevation.	Grant County & All Cities	Ongoing	Grant County and cities that participate in the NFIP have floodplain ordinances in effect.
Flooding	Identify roads and bridges in the County that flood on a regular basis, and identify & prioritize required mitigation measures to reduce future flood damages.	Grant County & All Cities	Ongoing	This is addressed on an annual basis as needed by Grant County Highway Dept. and local city public works.
Flooding	Implement required flood mitigation measures for roads, bridges, and culverts (i.e., raising roads, installation or modification of culverts, creation of flood water retention areas.)	Grant County & All Cities	Ongoing	This is addressed on an annual basis as needed by Grant County Highway Dept. and local road authorities.
Flooding	Implement storm water management structure and infrastructure projects to assist with flood management throughout the County.	Grant County & All Cities + Watershed organizations	Ongoing	This is going by Grant County Highway Dept. and local city public works. Stormwater planning and projects continue as needed to address high rain events.
Flooding	Ensure that wellhead protection plans are in place to address flooding that may lead to contaminated drinking water.	Grant County & All Cities	Delete	Municipal wellhead protection plans are done in conjunction with the MN Dept. of Health.
Flooding	Work with Gorton Township and Delaware Township to evaluate Pine Ridge Park Dam for potential flooding issues to farm sites.	Grant County, Gorton Township, Delaware Townships	Delete	This is not a high hazard dam.
Wildfire	Ensure the continuation of cooperation between local fire departments in wildfire suppression.	Grant County & All Cities	Delete	Wildfire is prioritized as a low-hazard risk in the Grant County HMP update.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Wildfire	Identify and map water resources in Grant County that are sufficient able to support a dry hydrant to provide emergency water for fire suppression in areas not connected to a city water source. Work with local fire depts. And MNDNR to install dry hydrants where feasible.	Grant County	Delete	Wildfire is prioritized as a low-hazard risk in the Grant County HMP update.
Wildfire	Enforce burning permit restrictions as set by the Minnesota DNR for Grant County.	Grant County	Delete	Wildfire is prioritized as a low-hazard risk in the Grant County HMP update.
Wildfire	Provide education to the public on the dangers of and prevention of wildfire, particularly during periods of high-risk due to drought and high winds.	Grant County & All Cities	Delete	Wildfire is prioritized as a low-hazard risk in the Grant County HMP update.
Wildfire	Review and assess evacuation and wildfire response plans in the Grant County Emergency Operations Plan (EOP) on a regular basis.	Grant County	Delete	Wildfire is prioritized as a low-hazard risk in the Grant County HMP update.
Drought	Promote water conservation measures and awareness to residents during periods of drought. Enforce orders for water conservation when needed (i.e., prohibit watering lawns during drought).	Grant County & All Cities	Ongoing	Grant County and local jurisdictions will continue to promote water conservation measures and establish watering restrictions as per the MN DNR recommendations during periods of severe drought.
Erosion	Identify problems areas and mitigation measures to reduce the effects of wind erosion and soil loss that result in sedimentation of culverts to provide soil stabilization. (i.e. - maintaining permanent vegetation in the road right of way, Installing buffer strips, Restoring wetlands).	Grant County	Ongoing	Overseen by Grant SWCD programs with agricultural land owners.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Dam Failure	Work with MNDNR to assess the safety of the Mustinka Flowage Dam and other water control structures.	Grant County	Ongoing	There are 18 dams in the county but none of them are Class I or II dams, none require an Emergency Action Plan. MN DNR Dam Program continues to monitor dam structures.

Appendix F – Planning Team Meetings

Grant County HMP Update

Appendix F – Kickoff Meeting Documentation

Overview:

On 5/3/23 U-Spatial@UMD hosted a kickoff meeting online that was attended by the Grant County Emergency Manager. The webinar included a project overview, U-Spatial@UMD's background, the roles and responsibilities of the Emergency Manager, the contents of the Hazard Mitigation Plan, the planning process, and the projected timeline of the project.

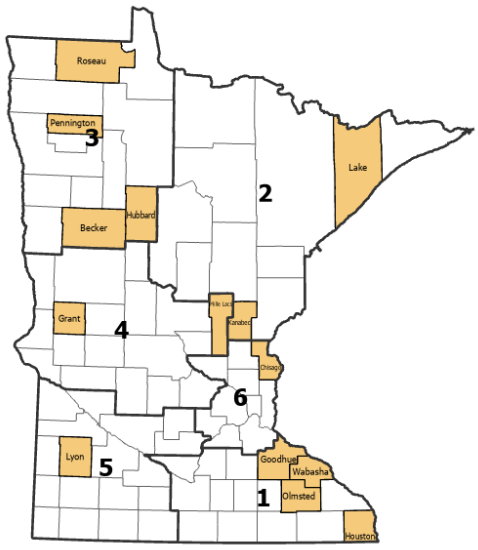
Attached Documentation:

• **Project Handout:** "Minnesota 2023-2024 Multi-Hazard Mitigation Plan Update Project Overview"

• **Webinar Slides:** "Minnesota 2023-2024 Multi-Hazard Mitigation Plan Update Project Kickoff Orientation Webinar"

Minnesota 2023-2024
Hazard Mitigation Plan Update
Project Overview

During 2023-2024, U-Spatial at the University of Minnesota Duluth (U-Spatial@UMD) will be working to update Hazard Mitigation Plans (HMPs) for 14 counties. Our team consists of UMD staff who specialize in GIS applications and research and Hundrieser Consulting LLC, who specializes in stakeholder engagement and mitigation strategies.



Participating Jurisdictions

Becker, Chisago, Goodhue, Grant, Houston, Hubbard, Kanabec, Lake, Lyon, Mille Lacs, Olmsted, Pennington, Roseau, and Wabasha counties. Cities within each county are required to participate in the planning process.

Overview of Update Process

The U-Spatial@UMD team will coordinate with each Emergency Manager throughout the plan update process to engage participating jurisdictions and other stakeholders in the planning process. Following is an overview of key tasks that the U-Spatial@UMD team will facilitate to meet FEMA requirements in the update of each plan:

- Conduct 2 planning team meetings
- Conduct public outreach & engagement
- Assess Plans & Programs in Place to address natural hazards
- Conduct a Past Mitigation Action Review from past plan
- Update prioritization of natural hazards that pose risk
- Complete jurisdictional Local Mitigation Surveys (hazards, vulnerabilities & capabilities)
- Conduct hazard risk assessment for 1% annual chance floods using the Hazus GIS tool
- Inventory critical infrastructure
- Develop hazard profiles for each natural hazard (description, incident history, geographic variability, future probability, relationship to changing climate trends and local vulnerabilities) and present data in an interactive website.
- Prepare a PDF document and interactive website that meets FEMA HMP plan requirements.
- Develop 5-year jurisdictional Mitigation Action Charts

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

Contact

Stacey Stark, U-Spatial Associate Director (MHMP Project Manager)
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HUNDRIESER CONSULTING LLC

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Overview of the HMP Update Process

The U-Spatial@UMD team will coordinate with each Emergency Manager (EM), participating jurisdictions, and other stakeholders throughout the planning process. The plan update generally occurs over the course of 14-18 months from start to finish. Following is an overview of key tasks that will occur and the approximate timeline for completion. This list is not a complete list of what the plan update entails.

Stage 1 Tasks (4-5 months)

- HMP kickoff meeting/webinar with EM and U-Spatial@UMD
- Develop jurisdictional contact list for MHMP planning team
- Disseminate & document News Release #1 (plan update announcement)
- Complete Plans & Programs in Place Checklist
- Conduct a Past Mitigation Action Review from prior plan
- Complete Capabilities Assessment to address natural hazards
- Hold & document Planning Team Meeting #1
- Complete Local Mitigation Surveys (hazards, vulnerabilities & capabilities)
- Revisit prioritization of natural hazards that pose risk
- Assist U-Spatial@UMD with provision of key data
- Complete inventory of Critical Infrastructure

Stage 2 Tasks (5-7 months)

- Develop 5-year Jurisdictional Mitigation Action Charts
- Conduct hazard risk assessment for 1% annual chance floods using the Hazus GIS tool
- Develop hazard profiles for each natural hazard (description, incident history, geographic variability, future probability)
- Complete hazard profiles for each natural hazard
- Complete Plan Maintenance section of draft plan

Stage 3 Tasks (2-3 months)

- EM review of Draft Plan
- Hold & document Planning Team Meeting #2
- Finalize Mitigation Action Charts
- Disseminate & document News Release #2 (Public Review & Comment Period)
- EM coordination of plan review by local government(s) & other stakeholders

Stage 4 Tasks (2-3 months)

- Post-public review revisions made to plan (as necessary)
- Draft Plan sent to HSEM for review & approval
- Draft Plan sent to FEMA for review & approval
- Post FEMA review revisions made to plan (as necessary)
- FEMA to send letter stating “Approval Pending Adoption” to EM
- EM to facilitate MHMP jurisdictional adoptions (County/Tribe and cities)

Ongoing - Quarterly 25% Local Match Tracking Quarterly to HSEM

As part of the MHMP plan update, Emergency Managers are required to submit quarterly reports to HSEM on their local 25% match accrued through HMP activities during that quarter.

Minnesota 2023-2024 Multi-Hazard Mitigation Plan Update Project
Kick-off Orientation Webinar

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Webinar Purpose & Goals

The purpose of this webinar is to provide an orientation for Emergency Managers participating in 2023-2024 Multi-Hazard Mitigation Plan Updates.

- Introduce the U-Spatial@UMD Team and county contacts.
- Provide an overview of the project.
- Clarify roles and responsibilities.
- Outline the planning process, discuss key tasks and timelines.
- Discuss next steps and answer your questions.

Stacey Stark

Introductions

U-Spatial@UMD Project Team


Stacey Stark
Project Manager
U-Spatial@UMD


Bonnie Hundrieser
Emergency Management Planning Consultant
Hundrieser Consulting LLC


Zach Vavra
GIS Specialist and Researcher
U-Spatial@UMD


Steve Graham
Research Associate, Flood Modeling Specialist
U-Spatial@UMD


Jane Lindelof
Project Coordinator, Communications Specialist
U-Spatial@UMD

Emergency Managers:

- Name, Title, and Jurisdiction
- Past Experience with MHMP?

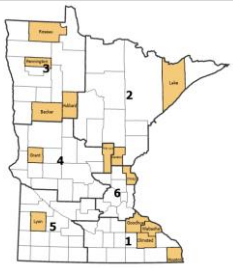
Minnesota HSEM:

Jennifer Davis, MN HSEM
State Hazard Mitigation Officer

Project Overview

14 Counties:

- **Becker**
- **Chisago**
- **Goodhue**
- **Grant**
- **Houston**
- **Hubbard**
- **Kanabec**
- **Lake**
- **Lyon**
- **Mille Lacs**
- **Olmsted**
- **Pennington**
- **Roseau**
- **Wabasha**



Why U-Spatial@UMD?

- **Proven experience**

Our updates of 40+ MHMPs, as well as the State MHMP, have been quickly approved by FEMA and adopted by counties.

- **Advanced Capabilities**

Expertise in the application of GIS, HAZUS, and research supports plan development and meeting all FEMA requirements.

- **Ability to Expedite**

A consistent and proven approach for multiple counties supports State & FEMA review of draft plans.

- **Planning Team**

Our project team includes advanced GIS students and Hundrieser Consulting.

Purpose

The Federal Disaster Mitigation Act of 2000 (DMA 2000) established programs and funding:

*"to reduce the loss of life and property, human suffering, economic disruption, and disaster assistance costs resulting from **natural disasters**"*

A local government plan is required in order to maintain eligibility for FEMA hazard mitigation grant programs.

MHMP's must be updated every 5 years.

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 for Minnesota MHMPs. Hazards may be omitted if low risk is demonstrated.

Overview of MHMP Update Process

Bonnie Hundrieser

U-Spatial@UMD Team Roles & Responsibilities

- Keep you informed about the progress of your plan.
- Facilitate & document jurisdictional engagement.
- Facilitate & document public outreach.
- Work with EM and planning team to complete key tasks.
- Keep up-to-date on FEMA requirements and Minnesota guidance.
- Produce a quality plan that FEMA will approve.
- Answer questions in a timely fashion.
- Support EM's in tracking your required local 25% match.
- Provide quarterly reports to HSEM on your plan progress.

EM Roles & Responsibilities

- Act as main Point of Contact. (EM / Deputy EM)
- Report to HSEM quarterly on required local 25% match.
- Coordinate engagement of MHMP Planning Team.
- Conduct & document public outreach.
- Participate in completion of key assignments for plan update.
- Coordinate with county staff & other key stakeholders to obtain information.
- Assist in timely review of draft document.
- Facilitate completion of local adoptions.

Local 25% Match

EM's will be responsible to track and submit local match documentation to HSEM on a quarterly basis.

Notes:

- EM's are provided with a "Master Match Tracking" Excel Workbook to document match MHMP activities, participants, and amount accrued.
- Bonnie will assist with local match tracking on several task items.
- Regular reminders & guidance will be provided on tracking match.

MHMP Planning Team

In addition to jurisdictional participation, the plan must provide documentation of an **opportunity for stakeholders to be involved** in the current planning process. The MHMP Planning Team should include:

1. Local & Regional Agencies involved in hazard mitigation
2. Agencies that have the authority to regulate development
3. Neighboring communities (counties, tribes)
4. Representatives of businesses, academia, and other private organizations
5. Representatives of nonprofit organizations, including community-based organizations that work with/provide support to underserved communities and socially vulnerable populations

Key Tasks

- Develop Jurisdictional Contact List.
- Hold & document Planning Team Meeting #1 & Meeting #2.

Public Outreach

The plan update must document how the public was given the opportunity to be involved in the planning process and how their feedback was incorporated into the plan.

- Collect feedback on local-level concerns & mitigation actions.
- Use of local/social media, websites & community bulletin boards.
- Other outreach (i.e., attendance at City Council mtgs)
- Must include underserved communities and vulnerable populations within the planning area.

Key Tasks

- Distribute & document News Release #1 (start of plan)
- Distribute & document News Release #2. (public review of plan)
- Conduct additional public outreach (i.e., County Fair, other events).

Hazard Risk Assessment and Vulnerability Analysis

The U-Spatial@UMD Team will work closely with each EM and key departments to provide information as needed.

Key Tasks

- Review and contribute to critical infrastructure inventory.
- Identify specific, local-level impacts and vulnerabilities.
- Identify if and how risk priorities have changed since the last plan.
- Identify any factors (i.e., new development) that may increase the community's vulnerability to natural hazard events.
- Review social vulnerability factors.

Key Task Assignments

Bonnie Hundrieser will coordinate with each EM and participating cities on key task assignments that will provide information required for the plan update.

Key Tasks

- Complete Plans in Place Checklist.
- Complete Capabilities Assessment for Mitigation.
- Conduct Past Mitigation Action Review.
- Coordinate Local Mitigation Survey (LMS) Forms.
- NFIP Status Information and documentation program compliance

Mitigation Action Charts

Bonnie Hundrieser will also coordinate development of draft 5-year jurisdictional Mitigation Action Charts (MACs) for the county and each participating city jurisdiction.

Key Tasks

- Conduct local-level development of MACs.
- Facilitate & document jurisdictional MAC review.
- Hold Planning Team Mtg. #2 for any additional feedback.
- Complete final MAC revisions.

Draft Plan Review

The U-Spatial@UMD Team will work with each EM to conduct a review of the draft MHMP and provide an opportunity for public review & comment on the plan.

Key Tasks

- EM review of initial draft plan > Revisions made as needed.
- Distribute News Release #2 - public review & comment period.
- EM coordination of review by county & key stakeholders.
- Posting of draft plan online with comment form.
- Documentation and incorporation of public feedback.

Plan Submission

The draft MHMP will be submitted to HSEM and FEMA for review & approval. Timing for review & approval is generally within 1-2 months.

Key Steps

- U-Spatial@UMD will submit the draft plan & Plan Review Tool (PRT) to HSEM.
- HSEM will submit the draft plan & PRT to FEMA reviewer.
- FEMA may respond with requests for revisions > U-Spatial@UMD to address revisions and resubmit plan.
- FEMA will send a letter of Approval Pending Adoption (APA status)

Plan Adoption

After FEMA has provided APA status, the county and all participating cities must formally adopt the plan.

Notes

- Good jurisdictional participation will facilitate local adoptions.
- Adoption of the plan is required for HMA grant program eligibility.
- Example adoption resolutions are provided for county and city adoption. Townships may elect to adopt (not required).
- Resolutions are incorporated into the final MHMP (PDF) by the Emergency Manager or included as hard copies.

Plan format and delivery

"Next Gen" - MN Hazard Mitigation Plans

PDF document

- Contains almost all required elements
- No mapping
- Community outreach/input remains the same
- Includes appendices with jurisdictional outreach

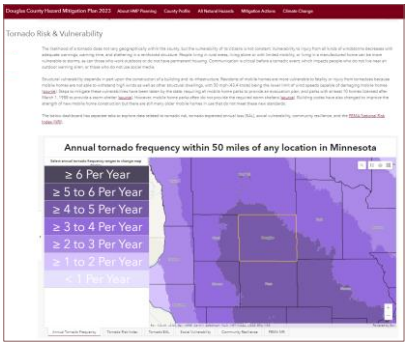
ArcGIS Hub (website) companion

- Interactive maps and content
- Simple, concise explanations and highlights
- Multiple ways to navigate the content
- Links to PDF components and document
- Public input form on site

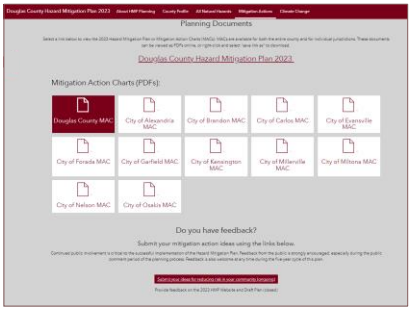
Stacey Stark

Example Web Site

Example Web Site



Example Web Site



Example Web Site

Timeline Overview

- 18-Month total timeline (April 2023 – October 2024)
- Most plans take 14-18 months.
- Staggering of plans will be required to complete update of risk assessments, research of hazard histories, etc. for each jurisdiction.
- Many tasks occur concurrently, others must be done in succession.
- Work is expedited at the pace by which Emergency Managers complete tasks with Bonnie Hundrieser.

Possible timeline for your plan		**Red includes county action items**
Stage 1 Tasks (4-5 months)	May – October 2023	HMP kickoff meeting/webinar with U-Spatial@UMD Develop jurisdictional contact list for MHMP planning team Disseminate & document News Release #1 Hold & document Planning Team Meeting #1 Complete Plans & Programs in Place Checklist Complete Capabilities Assessment to address natural hazards Conduct a Past Mitigation Action Review from prior plan Complete Local Mitigation Surveys Revisit prioritization of natural hazards that pose risk Assist U-Spatial@UMD with provision of key data Complete inventory of Critical Infrastructure
Stage 2 Tasks (4-6 months)	November 2023 – May 2024	Develop 5-year Jurisdictional Mitigation Action Charts Hazus hazard risk assessment for flooding Develop hazard profiles for each natural hazard Complete county profile sections and maps Complete Draft Plan
Stage 3 Tasks (2-3 months)	June – August 2024	EM review of Draft Plan Hold & document Planning Team Meeting #2 Finalize Mitigation Action Charts Disseminate & document News Release #2 EM coordination of plan review by stakeholders
Stage 4 Tasks (2-3 months)	September - November 2024	Post-public review revisions made to plan (as necessary) Draft Plan sent to HSEM for review & approval Draft Plan sent to FEMA for review & approval

Next Steps

U-Spatial@UMD Team members will coordinate each EM to commence work on several tasks that will take place over the next several months.

Notes:

- We are sensitive to the workloads of EM's.
- All information requests or assignments are in prepared form.
- Please communicate your availability to complete/not complete work.
- Plans most expired are priority; however, EM's with completed tasks move up in the que for plan development.

Questions?

What questions do you have for U-Spatial@UMD or HSEM about the MHMP update process?

Contact Information

Stacey Stark, MS, GISP

U-Spatial@UMD

slstark@d.umn.edu

218-726-7438

Example Plans:

https://z.umn.edu/hazardmitigation

Grant County HMP Update
JURISDICTIONAL CONTACT LIST

COUNTY CONTACTS

Name	Title	Phone	Email
Jeremiah Ulrich	Emergency Management Director	(218) 685-8224	jeremiah.ulrich@grantcountymn.gov
Greg Lillemon	Deputy EM Director / Land Management Administrator	(218) 685-8225	greg.lillemon@co.grant.mn.us
Jim Standish	County Coordinator / Housing and Redevelopment Authority	218-685-8240	jim.standish@co.grant.mn.us
Jon Combs	Grant County Sheriff	218-685-	Jon.combs@co.grant.mn.us
Karl Lindquist	County Assessor	218-685-8232	assessor@co.grant.mn.us
Jeff Merrick	Facilities Manager	218-685-8244	jeff.merrick@co.grant.mn.us
Aaron Beyer	Highway Department, Technician Supervisor / Drainage Inspector	218-685-8313	aaron.beyer@co.grant.mn.us
Shelley Svec	Horizon Public Health Preparedness Coordinator	320-634-7084	shelleys@horizonph.org
Stacy Hennen	Western Prairie Human Services, Director	218-685-8200	stacy.hennen@westernprairiemn.us
Troy Johnson	District 1 Commissioner / County Board Chair	218-685-8236	troy.johnson@co.grant.mn.us
Dwight Walvatne	District 2 Commissioner	218-685-8236	dwight.walvatne@co.grant.mn.us
Ken Johnson	District 3 Commissioner	218-685-8236	ken.johnson@co.grant.mn.us
Bill LaValley	District 4 Commissioner	218-685-8236	bill.lavalley@co.grant.mn.us
Doyle Sperr	District 5 Commissioner	218-685-8236	doyle.sperr@co.grant.mn.us

CITY CONTACTS

CITY OF ASHBY (470)

Name	Title	Phone	Email
Mike Thormodson	City Clerk	218-747-2876	ashbycit@prtel.com
Amy Johnson	City Mayor		mayoramyjohnson@gmail.com
Robby Risbrudt	Volunteer Fire Chief	218-770-7487	e_risbrudt@hotmail.com

CITY OF BARRETT (366)

Name	Title	Phone	Email
Marita Rude	City Clerk	320-528-2440	barrett@runestone.net
Michelle Jenson	City Mayor		bcc.jenson@runestone.net
Jason Puchalski	Volunteer Fire Chief	320-766-2705	jcpuc@runestone.net

CITY OF ELBOW LAKE (1,214)

Name	Title	Phone	Email
Jeff Holsen	City Clerk	218-685-4483	cityhall@runestone.net
Deb Hengel	City Mayor		dahengel05@icloud.com
Nathan Porter	Volunteer Fire Chief	218-770-4476	Nporter519@gmail.com

CITY OF HERMAN (384)

Name	Title	Phone	Email
Amanda Blume	City Clerk	320-677-2297	ctyhrmn@runestone.net
Paul Kirkiede	City Mayor		lakesideseed@plantpioneer.com
Chris Vlaminck	Volunteer Fire Chief	320-287-1700	chrisvlaminck@gmail.com

CITY OF HOFFMAN (661)

Name	Title	Phone	Email
Janae Strunk	City Clerk	320-986-2448	hoffmn@runestone.net
Dennis Satre	City Mayor		cityofhoffman@runestone.net
Steve Bergman	Volunteer Fire Chief	320-815-3760	stbergie@icloud.com

CITY OF NORCROSS (52)

Name	Title	Phone	Email
Stephanie Bartell	City Clerk	320-284-2190	cityofnorcross@outlook.com
Brandon Lennox	City Mayor		brandon__lennox@hotmail.com

CITY OF WENDELL (166)

Name	Title	Phone	Email
Tanya Bakken	City Clerk	218-770-8269	wendellcity@runestone.net
Tanner Davison	City Mayor		tanner.davison@yahoo.com
Chad Biss	Volunteer Fire Chief	218-731-6827	bizzers@runestone.net

TOWNSHIP CONTACTS

Name of Township	Name & Title	Phone	Email
Delaware Township	Scott Biss, Supervisor	218-685-4849	smbiss@runestone.net
Elbow Lake Township	Chad Biss, Supervisor	218-458-2276	bizzers@runestone.net
Elk Lake Township	Peggy Pasche, Clerk	320-986-2452	bppasche@runestone.net
Erdahl Township	Gary Nelson	218-948-2973	gnelson@prtel.com
Gorton Township	Cole Amundson, Supervisor	320-284-2102	amund307@gmail.com
Land Township	Mark Reuter, Supervisor	320-815-1955	Reuterma79@hotmail.com
Lawrence Township	Andy Clauson, Supervisor	218-343-0738	a_clauson@hotmail.com
Lien Township	Todd Ronhovde, Supervisor	320-528-2286	ronhovdefarms@gmail.com
Logan Township	Matthew Volkers, Clerk	320-304-2853	Mwvolker77@gmail.com
Macsville Township	Doug Oachs, Clerk	320-677-2429	doug@delawaremutual.com
North Ottawa Township	Boone Carlson, Supervisor	218-770-0807	boonecarlson@gmail.com

Pelican Lake Township	David Johnson, Supervisor	218-770-3120	beavjohnson@gmail.com
Pomme de Terre Township	Aaron Weinandt, Supervisor	701-595-1224	Aaron.weinandt@co.grant.mn.us
Roseville Township	Manda Jo Westrom, Clerk	218-770-1798	mandajo@runestone.net
Sanford Township	Jason Puchalski, Supervisor	218-685-4603	jcpuc@runestone.net
Stony Brook Township	Dominic Blume, Supervisor	218-685-4843	blumeelectric@hotmail.com

OTHER STAKEHOLDER CONTACTS

LOCAL & REGIONAL AGENCIES INVOLVED IN HAZARD MITIGATION

Name of Agency / Organization	Name & Title	Phone	Email
MN Homeland Security & Emergency Management	Lisa Villcheck, HSEM Region 4 Regional Program Coordinator	320-429-0348	Lisa.Villcheck@state.mn.us
Grant Soil & Water Conservation District (SWCD)	Reed Peterson, Environmental Technician	218-685-5395	Reed.Peterson@co.grant.mn.us
Natural Resources Conservation Service (NRCS)	Ryan Haspel, District Conservationist	218-685-5341 ext. 102	ryan.haspel@usda.gov
USDA Rural Development Community Programs	Jeff Scholten, Area Specialist	(320) 763-3191 x112	jeff.scholten@usda.gov
MnDOT District 4	Shiloh Wahl, Transportation District Engineer	218-846-3603	shiloh.wahl@state.mn.us
Grant Soil & Water Conservation District (SWCD)	Jared House, Administrative Manager	218-685-5395	Jared.house@co.grant.mn.us
Bois de Sioux Watershed	Jamie Beyer, Administrator	320-563-4185	bdswd@runestone.net
Farm Service Agency (FSA)	Shannon Olson, Administrator	218-685-5341	Shannon.olson@usda.gov
Pomme de Terre River Association	Micayla Nelson, Watershed Projects Coordinator	320-589-4886 X109	Micayla.nelson@pdtriver.org
MN DNR Ecological and Water Resources Division	Emily Siira, Area Hydrologist	320-634-7345	emily.siira@state.mn.us
MN DNR Firewise	Mike Palmer, Central Area Firewise Specialist	763-284-7213	Michael.a.palmer@state.mn.us

REPRESENTATIVES OF BUSINESSES, ACADEMIA, AND OTHER PRIVATE ORGANIZATIONS

Name of Agency / Organization	Name & Title	Phone	Email
Elbow Lake Municipal Utility	Darin Grosz, Supervisor	218-770-4542	cityshop@runestone.net

Otter Tail Power Company	Tom Hrdlicka, System Operations Mgr.	218-739-8200	thrdlicka@otpco.com
Runestone Electric	Sue Lundeen, Manager of Member Services	320-762-1121	Sue.lundeen@runestoneelectric.com
Traverse Electric Cooperative	Jeremy Huhnstock, General Manger	320-563-8616	Jhuhnstock@traverseelectric.com
Missouri Electric	Brian Zavesky	605-376-9939	Brian.zavesky@mrenergy.com
East River Electric	Dave Schaefer	605-256-8284	dschaefer@eastriver.coop
Ashby Public School	Jon Moore, Superintendent	320-491-8739	jmoore@ashbyps.org
Herman/Norcross Public School	Rick Bleichner, Superintendent	218-677-2291	rbleichner@hncs.k12.mn.us
West Central Area School District	Paul Brownlow, Superintendent	218-640-7879	pbrownlow@isd2342.org

REPRESENTATIVES OF NONPROFIT ORGS, INCLUDING COMMUNITY-BASED ORGS THAT WORK WITH OR PROVIDE SUPPORT TO UNDERSERVED COMMUNITIES AND SOCIALLY VULNERABLE POPULATIONS

Name of Agency / Organization	Name & Title	Phone	Email
Salvation Army Northern Division (MN/ND)	Major Michele Heaver	651-238-7783	Michele.heaver@usc.salvationarmy.org
American Red Cross	Nicole Bathgate Disaster Program Manager	320-330-8153	Nicole.bathgate2@redcross.org
West Central Initiative	Mark Kaelke, Community Planner	218-739-2239	mark@wcif.org
West Central Community Actions	Missy Becker-Cook CEO	218-685-4486	missyb@wcmca.org
Western Prairie Human Services	Katie Ennen, Senior Coordinator	218-685-8220	Katie.ennen@westernprairiemn.us

NEIGHBORING JURISDICTIONS

Name of Jurisdiction	Name & Title	Phone	Email
Traverse County	Lynn Siegel, EMD	(320) 563-0872	lynn.siegel@co.traverse.mn.us
Stevens County	Dona Greiner, EMD	(320) 208-6507	donagreiner@co.stevens.mn.us
Wilkin County	Breanna Koval, EMD	(218) 643-5815	bkoval@co.wilkin.mn.us
Otter Tail County	Patrick Waletzko, EMD	(218) 998-8067	pwaletzk@co.ottertail.mn.us
Douglas County	Julie Anderson, EMD	(320) 304-7115	juliea@co.douglas.mn.us
Pope County	Tina Lindquist, EMD	(320) 634-7850	Tina.Lindquist@popecountymn.gov

LOCAL MEDIA CONTACTS

Name of Local Media	Media Contact	Phone	Email
Grant County Herald	Ashton Hagen, Editor	218-685-5326	ashton@grantcountyherald.com

Grant County HMP Planning Team
Meeting #1 Presentation and Discussion
12/7/23 Meeting Summary & Documentation

Summary: On Thursday, December 7, 2023 Grant 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 Grant County Hazard Mitigation Plan (HMP). The purpose of the meeting was to formally present information about the Grant County HMP update and to discuss key items that would inform plan development. 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: Grant 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 provided in *Appendix F Planning Team Meetings*.

Pre-Meeting Materials: Several days in advance of the meeting an email was sent out to the HMP stakeholder list with materials to review prior to the meeting. Materials included an HMP overview handout, a list of discussion questions that would be covered during the meeting, and a handout on the FEMA Hazard Mitigation Assistance Grant Program. Participants who were registered for the meeting were encouraged to review the questions and be ready to discuss them during the meeting. Stakeholders who were not attending the meeting were also encouraged to fill out and return the discussion question form.

Meeting Participants: A total of **23** people attended the meeting. Representation included elected officials and departmental staff from Grant County and the cities of Ashby, Barrett, and Herman. Representatives from the cities of Elbow Lake, Hoffman, Norcross, and Wendell were not available to attend. Other stakeholders, including neighboring jurisdictions, participated in the meeting. A participant list is provided below:

	Name	Organization	Job Title
1	Tina Lindquist	Grant County Emergency Management	Emergency Management Director
2	Jon Combs	Grant County Sheriff's Office	Sheriff
3	Jeff Merrick	Grant County Facilities Management	Facility Maintenance Manager
4	Matthew Yavarow	Grant County Highway Department	County Engineer
5	Brent Gulbrandson	Grant Soil & Water Conservation District	Technical Manager
6	Kelsey Peterson	Horizon Public Health	PHEP/DP&C Supervisor
7	Betsy Hills	Horizon Public Health	Assistant Administrator of Programs and Services
8	Amy Johnson	City of Ashby	Mayor
9	Mike Thormodson	City of Ashby	Clerk/Treasurer

10	Michelle Jenson	City of Barrett / Grant County Hwy. Dept.	Mayor / Highway Dept. Accountant
11	Amanda Blume	City of Herman	Clerk/Treasurer
12	Paul Kirkeide	City of Herman	Mayor
13	Chris Vlaminck	City of Herman Fire Department	Fire Chief
14	Jason Puchalski	Sanford Township	Supervisor
15	Katie Ennen	Western Prairie Human Services	Senior Coordinator/Social Worker
16	Jill Amundson	West Central Initiative	Impact Evaluator
17	Mark Kaelke, West Central Initiative Foundation	West Central Initiative	Community Planner
18	Jacob Ellefson	Otter Tail Power Company	Area Manager
19	Brian Zavesky	Missouri River Energy Services	Senior Transmission Engineer
20	Sue Lundeen	Runestone Electric Association	Manager of Member Services
21	Jeremy Huhnstock	Traverse Electric Cooperative	General Manager
22	Lynn Siegel	Traverse County	Emergency Manager
23	Patrick Waletzko	Otter Tail County	Emergency Manager

Presentation Overview: The Power Point presentation covered the following items. A PDF of the presentation slides is included with this meeting summary.

- Welcome & Introductions
- Review of HMP Overview (*handout)
- Review of Past Hazard Risk Prioritization, Hazard Profiles, and New Priorities
- Overview of Mitigation Strategies, Actions
- Overview of FEMA HMA grant program
- Discuss local mitigation ideas
- Overview of Next Steps

GRANT COUNTY HMP PLANNING TEAM MEETING #1 DISCUSSION NOTES

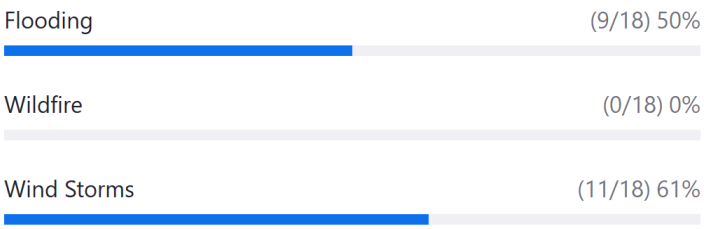
PARTICPANT POLLS

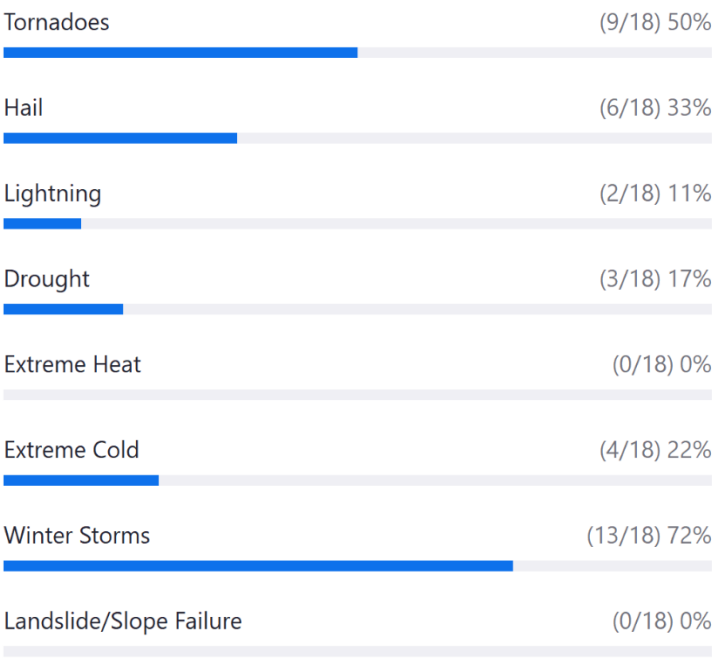
During the presentation, participants were presented with two poll questions to respond to. Following are the poll questions and responses:

POLL #1: TOP HAZARDS

What are the top three hazards of most concern to you in this county? (Multiple Choice)

Poll Results:



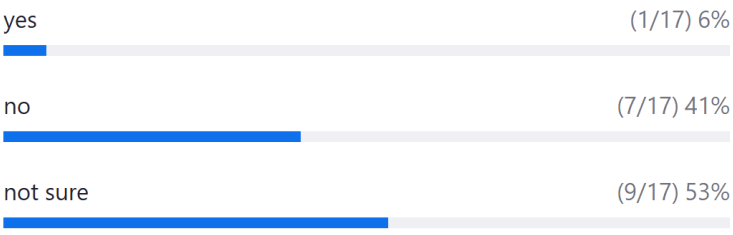


The top 3 hazards noted were Winter Storms, Windstorms, and Flooding.

POLL #2: CHANGE IN PERCEIVED RISK

Has the risk of any natural hazards changed in your jurisdiction in the last 5 years? (increased severity, decreased risk, increased extent, etc) (Single Choice)

Poll Results:



What hazard risk has changed, and in what jurisdiction? (short answer)

Amanda Blume, City of Herman Clerk/Treasurer	Possibly drought increase
Jeff Merrick, Grant County Facility Maintenance Manager	Flash Flood - it seems like this one can be downgraded to Moderate.
Jill Amundson, West Central Initiative Impact Evaluator	Severe storms seem more frequent. I am also concerned about the projected increase in frequency of flooding, especially for low-income housing in low-lying parts of town.

Jeremy Huhnstock, Traverse Electric Cooperative General Manager	Extreme Cold - I believe extreme cold should be a high ranking hazard. According to NERC, the threat of a blackout or brown out for electric is highest during winter months and extreme cold events.
Jason Puchalski, Sanford Township Supervisor	Flooding.

FOCUSED DISCUSSION QUESTIONS

During the presentation there were 3 key discussion questions (DQ's) that were presented to the planning team for feedback. Following are the questions and responses:

DQ #1: ***Are there any vulnerable populations or underserved communities you would identify for Grant County or within your own local jurisdiction? If so, are there any best outreach methods to provide an opportunity to participate?***

- Tina Lindquist, Grant County Emergency Management Director: We do have a large population of elderly seniors with limited transportation. Another population that is increasing is non-English speaking, residents, mostly Spanish. For outreach, we have a Senior Coordinator that is attending the meeting and we also have reps from Horizon Public Health that have relationships with people. So these are ways to assist with outreach to those groups.

- Kelsey Peterson, Horizon Public Health: Senior and disabled populations living in their own home; non-English speaking individuals.

- Jill Amundson, West Central Initiative: Non-English speakers. We should reach out to employers like Riverview Dairy, TFC Poultry, etc. to ensure we understand their employees housing needs.

- Mark Kaelke, West Central Initiative Foundation: Both elderly and very young residents of Grant County are especially vulnerable populations. Staff/officials at elder care and childcare facilities could be a good resource for connecting with them and/or could represent the points of view and needs of these populations as they relate to hazard mitigation. Non-English speakers in Grant County may also be considered vulnerable / underserved populations due to language barriers and lack of access to planning processes. Developing planning materials in other languages, especially Spanish, would be one opportunity for improving outreach to these populations. There is a business and a nonprofit in Morris that could be utilized for Spanish translation service.

DQ#2: ***What do you feel should be recorded as the updated Hazard Prioritizations for the Grant County 2023 HMP? Why?*** Following are the updated hazard priorities noted by planning team members during the meeting, including follow up discussion with Tina Lindquist, Grant County Emergency Management Director:

Natural Hazards	Current Priority
Flooding	High
Winter Storms	High
Windstorms	High
Tornadoes	Moderate

Hail	Moderate
Extreme Cold	Moderate
Extreme Heat	Moderate
Drought	Moderate
Landslides	Moderate
Lightning	Low
Wildfire	Low
Landslides	Low
Dam Failure	Low

***Comments*:**

- Landslides
    - Brent Gulbrandson, Grant SWCD: Landslides may not be a big issue, but I would say we do have some issues with landslides on some of our lakeshores, where large portions of shorebank are washing in, sluffing off. potentially affecting property, and possibly infrastructure.

    - Tina Lindquist, Grant County Emergency Management Director - We have areas of lakeshore with sluffing, but with the county as a whole it differs from low on one half, moderate on the other. There are some mitigation strategies already in place like our county shoreland ordinance which includes a permitting process to get variances. The county also has a compreshensive water plan and we are very involved with our land management office and NRCS, SWCDs, and other watershed districts.

    - Mark Kaelke, West Central Initiative Foundation - Risk is most likely limited to the rare steep slopes in the county and impacts would most likely be minor and limited in scope.

- Windstorms/Tornadoes/Hail/Lightning
    - Tina Lindquist, Grant County Emergency Management Director - Grant County experiences severe windstorms, including two disaster declarations for derecho winds in 2022.

    - Mark Kaelke, West Central Initiative Foundation - The severity of storms is forecast to increase and these events are likely. Warning systems, appropriate shelters, and emergency response preparedness are critical to protecting local vulnerabilities.

- Winter Storms
    - Mark Kaelke, West Central Initiative Foundation - The severity of storms is forecast to increase and these events are likely. Warning systems, appropriate shelters, and emergency response preparedness are critical to protecting local vulnerabilities

- Extreme Heat
    - Mark Kaelke, West Central Initiative Foundation - Extreme heat is forecast to increase in both frequency and severity and is highly likely to occur. Education, public warnings, and cooling facilities, especially for outdoor workers, the elderly, and very young, will continue to grow in importance.

- Extreme Cold
    - Mark Kaelke, West Central Initiative Foundation - Although not forecast to increase, extreme cold is inevitable and still represents a high risk to vulnerable populations. Public warnings and ensuring adequate fuel and heating equipment are available to vulnerable populations will remain critical in addressing this threat.

- Drought
    - Mark Kaelke, West Central Initiative Foundation - Current drought trends are forecast to continue and negative impacts will increase as water sources become depleted. Instituting water conservation measures will help to preserve aquifers, surface, and municipal waters.

- Wildfire
    - Tina Lindquist, Grant County Emergency Management Director - We do have crop fires which presents risk to public health. We don't have a lot of forest land but crop fires are a real concern.

    - Mark Kaelke, West Central Initiative Foundation - The preponderance of cultivated lands in the county would most likely limit this threat.

- Dam/Levee Failure
    - Tina Lindquist, Grant County Emergency Management Director – There are no high hazard potential dams within Grant County but she will check with the Grant County Highway Department to see if there are any dam/levee related concerns to be addressed.

    - Mark Kaelke, West Central Initiative Foundation - As flood potential grows so will the likelihood of dam/ levee failures though impacts would likely be isolated and not catastrophic.

- Flooding:
    - Tina Lindquist, Grant County Emergency Management Director - When we think of flooding, it's not that our cities are being flooded, it's that we have overland flooding to our roads. / Stacey Stark: When we profile flooding in your plan we will define the description of what the hazard of flooding entails for the county.

    - Tina Lindquist, Grant County Emergency Management Director - We had a major flooding event this past spring which resulted in a disaster declaration (DR 4722). Will this information be included on the flooding page of the website? / Stacey Stark – yes, it will. The data will be auto-updated by the NWS. We will have a history of both state and federal disaster declarations for Grant County.

    - Mark Kaelke, West Central Initiative Foundation - Spring flooding is forecast to become more frequent. Protecting municipal water and wastewater systems from the incursion and overload of flood waters, sewage, and agricultural run-off is critical. Stream and wetland restorations, rain gardens, and increasing vegetation can all help attenuate flooding and its impacts.

DQ#3: ***Do you have any ideas for specific mitigation activities for implementation at the county or local level?***

- Tina Lindquist, Grant County Emergency Management Director –
    - Grant County now hosts the first x-band weather radar and is operating & collecting real-time weather data. I want to make sure this is considered at the appropriate time - whether it is rating hazards OR mitigation action steps.
    - In the past, we haven't had any luck with getting mitigation funds for sirens and generators. I still think it is worth trying.
    - Shelter/Family Assistance Center Exercise Jan. 2024
    - In May 2022 we had two declared disasters where many power poles were lost. All those damage assessments could be valuable data

- Jill Amundson, West Central Initiative - Is a generator at public works considered mitigation? / Bonnie Hundrieser – yes, communities should consider where they may need backup generator power.

- Jeremy Huhnstock, Traverse Electric - Traverse Electric would be interested in both utility retrofit and vegetation management. / Bonnie Hundrieser – Please be sure to share any particular utility retrofit projects that Traverse Electric may want to identify as future mitigation projects.

- Jason Puchalski, Sanford Township Supervisor - Overland flooding mitigation would be beneficial for many entities.

- Kelsey, Horizon Public Health - I don't know the answer for our assisted living centers in Grant County, but I wonder if generators would be an option for a FEMA grant. Nursing homes are required to have them for their CMS requirements, but not assisted livings. That seems like a critical infrastructure to me if they don't have one as the tenants with oxygen needs, etc. are high risk if power is lost.

- Mark Kaelke, West Central Initiative Foundation -
    - Assess local waterways for flood potential, especially the Pomme de Terre River, look for under-sized culverts, blockages, narrow channels, and lack of vegetative cover. Address these issues as needed to help address potential flooding issues.
    - Institute water conservation measures (reduce lawn watering, car washing, irrigation volume and encourage low-flow showers, toilets, and rain collection barrels) especially during the heat of the day. Assess municipal and private water systems for leaks doing so proactively, starting in June, may help to prevent water shortages and the need to apply more stringent emergency water conservation later in the summer.
    - Ensure the availability of storm shelters, warning systems, and cooling centers in all communities, especially in areas with vulnerable and/or under-served populations. Seek State and Federal grants for construction of these facilities where they are deficient.

The meeting concluded with an overview of next steps and estimated timeline for completion.

MEETING DOCUMENTATION

Attached are additional documentation items for the Grant County HMP Mtg #1:

- Mtg #1 Email Invitation to RSVP
- Mtg #1 Pre-meeting Materials: Email, HMP Overview Handout, Discussion Questions Response Form, and HMA Grants Program Overview
- Mtg #1 Power Point Presentation Slides

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

From:	Tina Lindquist
To:	Tina Lindquist; Greg Lillemon; Jim Standish; Jon Combs; Assessor; Jeff Merrick; Aaron Beyer; "shelleys@horizonph.org"; "stacy.hennen@westernprairiemn.us"; Troy Johnson; Dwight Walvatne; Ken Johnson; Bill LaValley; Doyle Sperr; "ashbycit@prtel.com"; "mayoramyjohnson@gmail.com"; "e_risbrudt@hotmail.com"; "barrett@runestone.net"; "bcc.jenson@runestone.net"; "jcpuc@runestone.net"; "cityhall@runestone.net"; "dahengel05@icloud.com"; "Nporter519@gmail.com"; "ctyhrmn@runestone.net"; "lakesideseed@plantpioneer.com"; "chrisvlaminck@gmail.com"; "hoffmn@runestone.net"; "cityofhoffman@runestone.net"; "stbergie@icloud.com"; "cityofnorcross@outlook.com"; "brandon__lennox@hotmail.com"; "wendellcity@runestone.net"; "tanner.davison@yahoo.com"; "bizzers@runestone.net"; "smbiss@runestone.net"; "bizzers@runestone.net"; "bppasche@runestone.net"; "gnelson@prtel.com"; "amund307@gmail.com"; "Reuterma79@hotmail.com"; "a_clauson@hotmail.com"; "ronhovdefarms@gmail.com"; "Mwvolker77@gmail.com"; "doug@delawaremutual.com"; "boonecarlson@gmail.com"; "beavjohnson@gmail.com"; Aaron Weinandt; "mandajo@runestone.net"; "jcpuc@runestone.net"; "blumeelectric@hotmail.com"; "Lisa.Villcheck@state.mn.us"; Reed Peterson; "ryan.haspel@usda.gov"; "jeff.scholten@usda.gov"; "shiloh.wahl@state.mn.us"; Jared House; "bdswd@runestone.net"; "Shannon.olson@usda.gov"; "Micayla.nelson@pdtriver.org"; "emily.siira@state.mn.us"; "Michael.a.palmer@state.mn.us"; "Michele.heaver@usc.salvationarmy.org"; "Nicole.bathgate2@redcross.org"; "cityshop@runestone.net"; "thrdlicka@otpco.com"; "Sue.lundeen@runestoneelectric.com"; "Jjanorschke@traverseelectric.com"; "Brian.zavesky@mrenergy.com"; "dschaefer@eastriver.coop"; "jmoore@ashbyps.org"; "rbleichner@hncs.k12.mn.us"; "pbrownlow@isd2342.org"; "mark@wcif.org"; "missyb@wcmca.org"; "Katie.ennen@westernprairiemn.us"; "lynn.siegel@co.traverse.mn.us"; "donagreiner@co.stevens.mn.us"; "bkoval@co.wilkin.mn.us"; "pwaletzk@co.ottertail.mn.us"; "juliea@co.douglas.mn.us"; "kim.joos@popecountymn.gov"
Cc:	"hundrieserconsulting@outlook.com"; "slstark@d.umn.edu"
Subject:	Hazard Mitigation Plan Meeting Invite 12/7/23
Date:	Tuesday, October 17, 2023 12:37:28 PM
Importance:	High

GRANT COUNTY

HAZARD MITIGATION PLAN UPDATE – MEETING INVITATION

Greetings,

Your presence is requested at a Planning Team Meeting for the update of the **Grant County Hazard Mitigation Plan**. 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.

We will be holding the meeting virtually using Zoom video/phone conferencing:

Date: Thursday, December 7, 2023
Time: 10:00 a.m. – 11:30 a.m.
Zoom Link: https://umn-private.zoom.us/webinar/register/WN_modNcLWgTlSrTjqUzgD3AQ

You must click on the link above to register. (Ctrl+Click to follow link) When you register, you will automatically be placed on an RSVP list and will be sent an email confirmation.

About the Plan

The update of the Grant County Hazard Mitigation Plan (HMP) is a requirement by the State of Minnesota Department of Homeland Security & Emergency Management (HSEM) as well as the Federal Emergency Management Agency (FEMA) 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 Grant County and will result in the identification of mitigation actions and projects that will help to reduce

or eliminate the impact of future hazard events, such as flooding and severe winter or summer storms.

Your participation in this plan update is important for several reasons:

1. You will help to identify critical mitigation actions to implement at the county / municipal level, and how they can be integrated with existing plans, policies, or project efforts.

2. Participating jurisdictions will be eligible to apply for FEMA hazard mitigation grant funding.

3. Mitigation planning is necessary to keep our communities resilient against future disasters and reduce the costs of recovery.

4. FEMA requires documentation of how local government and key stakeholders participated in the planning process.

During this meeting we will review and prioritize the natural hazards that pose risk to Grant County and individual communities and discuss a range of mitigation measures for local implementation. The meeting will be facilitated by personnel from U-Spatial at the University of MN Duluth who are working closely with us on this project.

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

Thank you,

Christina L. Lindquist

Grant County Emergency Management
Office: 218-685-8224
Cell: 320-304-0350

Don't be scared. Be prepared.

~Leadership is not about being the best. Leadership is about making everyone else better.~

From:	Bonnie K Hundrieser on behalf of hundrieserconsulting@outlook.com
To:	"tina.lindquist@co.grant.mn.us"; "greg.lillemon@co.grant.mn.us"; "jim.standish@co.grant.mn.us"; "Jon.combs@co.grant.mn.us"; "assessor@co.grant.mn.us"; "jeff.merrick@co.grant.mn.us"; "aaron.beyer@co.grant.mn.us"; "shelleys@horizonph.org"; "stacy.hennen@westernprairiemn.us"; "troy.johnson@co.grant.mn.us"; "dwight.walvatne@co.grant.mn.us"; "ken.johnson@co.grant.mn.us"; "bill.lavalley@co.grant.mn.us"; "doyle.sperr@co.grant.mn.us"; "ashbycit@prtel.com"; "mayoramyjohnson@gmail.com"; "e_risbrudt@hotmail.com"; "barrett@runestone.net"; "bcc.jenson@runestone.net"; "jcpuc@runestone.net"; "cityhall@runestone.net"; "dahengel05@icloud.com"; "Nporter519@gmail.com"; "ctyhrmn@runestone.net"; "lakesideseed@plantpioneer.com"; "chrisvlaminck@gmail.com"; "hoffmn@runestone.net"; "cityofhoffman@runestone.net"; "stbergie@icloud.com"; "cityofnorcross@outlook.com"; "brandon__lennox@hotmail.com"; "wendellcity@runestone.net"; "tanner.davison@yahoo.com"; "bizzers@runestone.net"; "smbiss@runestone.net"; "bizzers@runestone.net"; "bppasche@runestone.net"; "gnelson@prtel.com"; "amund307@gmail.com"; "Reuterma79@hotmail.com"; "a_clauson@hotmail.com"; "ronhovdefarms@gmail.com"; "Mwvolker77@gmail.com"; "doug@delawaremutual.com"; "boonecarlson@gmail.com"; "beavjohnson@gmail.com"; "Aaron.weinandt@co.grant.mn.us"; "mandajo@runestone.net"; "jcpuc@runestone.net"; "blumeelectric@hotmail.com"; "Lisa.Villcheck@state.mn.us"; "Reed.Peterson@co.grant.mn.us"; "ryan.haspel@usda.gov"; "jeff.scholten@usda.gov"; "shiloh.wahl@state.mn.us"; "Jared.house@co.grant.mn.us"; "bdswd@runestone.net"; "Shannon.olson@usda.gov"; "Micayla.nelson@pdtriver.org"; "emily.siira@state.mn.us"; "Michael.a.palmer@state.mn.us"; "Michele.heaver@usc.salvationarmy.org"; "Nicole.bathgate2@redcross.org"; "cityshop@runestone.net"; "thrdlicka@otpco.com"; "Sue.lundeen@runestoneelectric.com"; "Jhuhnstock@traverseelectric.com"; "Brian.zavesky@mrenergy.com"; "dschaefer@eastriver.coop"; "jmoore@ashbyps.org"; "rbleichner@hncs.k12.mn.us"; "pbrownlow@isd2342.org"; "mark@wcif.org"; "missyb@wcmca.org"; "Katie.ennen@westernprairiemn.us"; "lynn.siegel@co.traverse.mn.us"; "donagreiner@co.stevens.mn.us"; "bkoval@co.wilkin.mn.us"; "pwaletzk@co.ottertail.mn.us"; "juliea@co.douglas.mn.us"; "kim.joos@popecountymn.gov"
Cc:	"Stacey Stark"
Subject:	Grant County HMP Planning Team Meeting Materials – Please Review
Date:	Monday, December 4, 2023 9:37:00 AM
Attachments:	Grant County 2023 HMP Overview handout.pdf Grant County_HMP Mtg. #1 Discussion Questions.docx HSEM_HMA Grants Program Overview.pdf

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Greetings,

The Grant County Hazard Mitigation Plan (HMP) Update – Planning Team Meeting #1 will be held via Zoom on **Thursday, December 7, 2023 from 10:00 – 11:30 a.m.** This meeting is a critical step in the plan update process where we meet with county and local government officials, departmental staff, and other agency stakeholders to provide an overview of the plan update and gather important feedback.

Attached are several items that we will reference during the meeting.

1. **Grant County 2023-2024 Hazard Mitigation Plan Update Overview**

2. **Grant County HMP Planning Team Meeting #1 - Discussion Questions**. If you are registered for the meeting, you are encouraged to review and fill out the form in advance. If you are not able to join us, we welcome your feedback by returning the Discussion Questions form via email. Please return your form prior to the meeting so that we may include you in the list of meeting participants and include your feedback in the meeting documentation.

3. **HSEM Hazard Mitigation Assistance (HMA) Grants Program Overview**

If you have not registered yet, please click on the following registration link: https://umn-private.zoom.us/webinar/register/WN_modNcLWgTlSrTjqUzgD3AQ (control+click)
If you are not able to personally attend, we encourage you to send another representative in your stead.

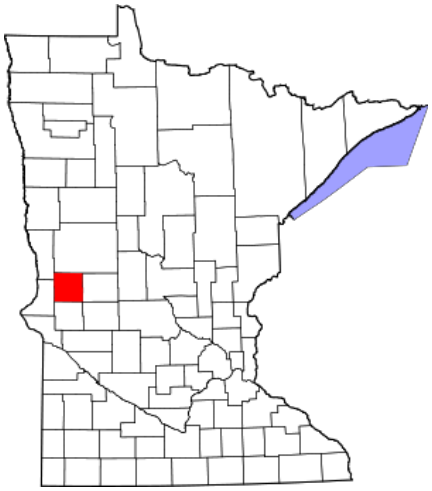
We look forward to meeting with you! If you have any questions, please let me know.

Thank you,
Bonnie Hundrieser

Bonnie K. Hundrieser, CEM
Hazard Mitigation Planning Specialist
Part of the **U-Spatial@UMD** HMP Planning Team
Hundrieser Consulting LLC
Phone: 218-343-3468

Grant County 2023-2024
Hazard Mitigation Plan Update Overview

During 2023-2024, U-Spatial at the University of Minnesota Duluth (U-Spatial@UMD) will be working to update the **Grant County Hazard Mitigation Plan** (HMP). Our team consists of UMD staff who specialize in GIS applications and research and Hundrieser Consulting LLC, who specializes in stakeholder engagement and mitigation strategies.



Overview

Following are key points regarding the Grant County HMP Update:

Plan Requirement: It is a state and federal requirement that local governments develop and adopt an updated HMP every 5 years to be eligible for FEMA hazard mitigation assistance grant program funding. Plans must include a comprehensive risk assessment, engage a range of stakeholders and the public, and result in a plan of action to reduce risk from future natural hazard events.

Who the Plan Covers: The HMP is a multi-jurisdictional plan, covering all of Grant 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.

Who Participates: The HMP is developed in coordination with a local "planning team," which includes county, city, and township government officials and departmental staff and other related key stakeholders. The team participates in two meetings, assists with public outreach, and provides information to help inform the plan update. Input is also sought from the larger public via news releases, social media, and public events. Planning team members and the public help to review and comment on the draft plan.

Plan Content: The HMP addresses the natural hazards that pose risk to Grant County, such as flooding, severe winter storms, windstorms, tornadoes, extreme temperatures, and drought. A hazard profile is developed for each hazard prioritized as moderate to high. Each profile includes a description, incident history, geographic variability, future probability, relationship to changing climate trends and local vulnerabilities, as well as a review of planning and program capabilities. The HMP results in a plan of action for implementation.

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

Final Product: The Grant County HMP will include a PDF plan and an accompanying interactive website.

Contact:

Stacey Stark, U-Spatial Associate Director (HMP Project Manager)
Phone: (218) 726-7438 / Email: slstark@d.umn.edu

U-SPATIAL
UNIVERSITY OF MINNESOTA DULUTH
Driven to Discover℠

Grant County Hazard Mitigation Plan Update
Planning Team Meeting #1 Discussion Questions

As part of the Grant County 1st HMP Planning Team meeting, we will be covering several key discussion items. Your input is important to ensure the plan update reflects current concerns, priorities, and ideas for mitigation activities to reduce risk. Following are **3 discussion questions** where we will be seeking your feedback.

Meeting participants are encouraged to take down notes prior to the meeting using this form. You may also submit your form electronically if you wish to provide your written notes. Forms should be returned to: **hundrieserconsulting@outlook.com**

Please provide your contact information:
Name:
Jurisdiction/Agency:
Job Title:
Phone:
Email:

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1. Outreach to Vulnerable Populations / Underserved Communities

As part of the planning process, FEMA specifically seeks to ensure that communities have addressed how vulnerable populations and underserved communities within the planning area were provided an opportunity to be involved. We are interested in what this means for your county and local community.

DISCUSSION QUESTION: Are there any vulnerable populations or underserved communities you would identify for Grant County or within your own local jurisdiction? If so, are there any best outreach methods to use to provide an opportunity to participate?

Type any comments

2. Review of Hazard Risk Prioritization

As part of the planning process, FEMA specifically seeks to ensure that participants have reviewed the natural hazards that pose risk to the county and its jurisdictions and consider how the priority of those hazards may have changed. Below are the natural hazards were addressed in the county's past hazard mitigation plan and the risk priorities that were noted for each.

GRANT COUNTY 2017 HAZARD MITIGATION PLAN

Hazards	Risk Priority
Severe Summer Storms (Thunderstorms, Lightning, Hailstorms, Windstorms, Tornadoes)	High
Severe Winter Storms	High
Flash Flood & Riverine Flood	High
Wildfire	Moderate

Extreme Heat	Moderate
Extreme Cold	Moderate
Erosion/Land Subsidence	Low
Drought	Low
Dam Failure	Low
Landslides	Not Addressed

DISCUSSION QUESTION: What do you feel should be recorded as the updated hazard prioritizations for the Grant County 2023 HMP? Consider the probability of future events occurring (likelihood) and damaging impacts to local vulnerabilities (people, systems, and critical infrastructure). Please use the chart below to note your answers.

GRANT COUNTY 2023 HMP UPDATE - HAZARD RISK PRIORITIZATIONS

Hazards	Risk Priority (Low, Moderate, or High)	Comments
Flooding		
Windstorms		
Tornadoes		
Hail		
Lightning		
Winter Storms (heavy snow, blizzards, ice storms)		
Extreme Heat		
Extreme Cold		
Drought		
Wildfire		
Landslides		
Dam/Levee Failure		

Type any additional comments

3. Identification of Mitigation Actions

The end-result of the Grant County HMP will be a set of jurisdictional mitigation action charts which will provide a course of action for the county and each city jurisdiction to reduce risk against future hazard events. The development of mitigation actions will be drawn from local-level hazard priorities, known vulnerabilities, and local capabilities to implement actions. The development of mitigation actions is guided by different types of strategies, including: Local Planning & Regulations, Structure & Infrastructure Projects, Natural Systems Protection, Education & Awareness Programs, and Mitigation Preparedness & Response Support. We are interested to know what ideas you may have for mitigation activities that can be incorporated into our planning as we move forward. Please be as specific as possible. For example, “Construct a tornado safe room for the City of X mobile home park.” “Increase the size of culverts on township roads to reduce over the road flooding and erosion from high rain events.”

DISCUSSION QUESTION: Do you have any ideas for specific mitigation activities for implementation at the county or local level?

Type any comments

State of Minnesota
Department of Public Safety
Division of Homeland Security and Emergency Management
445 Minnesota Street, Suite 223
St. Paul, MN 55101-6223

HAZARD MITIGATION ASSISTANCE

Hazard Mitigation Assistance (HMA) grant programs provide funding with the aim to reduce or eliminate risk to property and loss of life from future natural disasters. HMA programs are typically a 75%/25% cost share program. The federal share is 75% of total eligible project reimbursement costs. The local applicant is responsible for 25% of the project costs. The amount of HMGP funds availability is based on a percent of Public Assistance provided by Federal Emergency Management Agency (FEMA).

- Hazard Mitigation Grant Program (HMGP) funds assists in implementing long-term hazard mitigation measures following a Presidential major disaster declaration.
- Pre-Disaster Mitigation (PDM) provides funds for hazard mitigation planning and projects on an annual basis.
- Flood Mitigation Assistance (FMA) provides funds on an annual basis to reduce or eliminate risk of flood damage to buildings that are insured under the National Flood Insurance Program (NFIP).

Who is eligible for grant funding?
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

What types of projects can be funded?
All projects must be eligible, technically feasible, and cost-effective. All projects are subject to environmental and cultural resource review. Examples of projects include:

- **Advance Assistance** may be used to develop mitigation strategies and obtain data, including for environmental and historic preservation compliance considerations, and develop complete project applications in a timely manner.

- **Aquifer Storage and Recovery** (ASR) projects serve primarily as a drought management tool, but can also be used to reduce flood risk and restore aquifers that have been subject to overdraft. The concept is to capture water when there is an abundant supply, store the water in subsurface aquifers, and recover water from the storage aquifer when needed. Storing water underground can help protect it from pollutants, evaporation, and weather events.

- **Floodplain and stream restoration** (FSR) projects are used primarily to reduce flood risk and erosion by providing stable reaches, and may also mitigate drought impacts. FSR projects restore and enhance the floodplain, stream channel and riparian ecosystem's natural function. They provide base flow recharge, water supply augmentation, floodwater storage, terrestrial and aquatic wildlife habitat, and recreation opportunities by restoring the site's soil, hydrology and vegetation conditions that mimic pre-development channel flow and floodplain connectivity.

- **Flood Diversion and Storage** (FDS) projects often are used to reduce flood risk, but also can be used to mitigate drought and improve ecosystem services. These projects involve diverting floodwaters from a stream, river, or other body of water into a conduit such as a canal, pipe, or wetland and storing them in an above-ground storage facility. Water is then slowly released, reducing flood risk.

- **Green Infrastructure Methods** are a sustainable approach to natural landscape preservation and storm water management. Include in *eligible hazard mitigation activities* as well as provide additional ecosystem benefits**.** Ecosystem-based approach to replicate a site's pre-development, natural hydrologic function. Benefits include: Increase water supply, improved water quality, can be scaled to size and designed to fit site conditions.

- **Property Acquisition and Structure Demolition or Relocation –** The voluntary acquisition of an existing at-risk structure and the underlying land, and conversion of the land to open space through the demolition or relocation of the structure. The property must be deed-restricted in perpetuity to open space uses to restore and/or conserve the natural floodplain functions.

- **Retrofit Flood-Prone Residential Structures** are changes made to an existing structure to reduce or eliminate the possibility of damage to that structure from flooding, erosion, or other hazards. Examples of this mitigation are primarily elevation of structures above flood levels and floodwalls.

- **Safe Room Construction** - Safe room construction projects are designed to provide immediate life-safety protection for people in public and private structures from tornado and severe wind events. Includes retrofits of existing facilities or new safe room construction projects, and applies to both single and dual-use facilities

- **Minor Localized Flood Reduction Projects** - Projects to lessen the frequency or severity of flooding and decrease predicted flood damages, such as the installation or up-sizing of culverts, and stormwater management activities, such as creating retention and detention basins. These projects must not duplicate the flood prevention activities of other Federal agencies and may not constitute a section of a larger flood control system.

- **Infrastructure Retrofit** - Measures to reduce risk to existing utility systems, roads, and bridges.

- **Soil Stabilization -** Projects to reduce risk to structures or infrastructure from erosion and landslides, including installing geotextiles, stabilizing sod, installing vegetative buffer strips, preserving mature vegetation, decreasing slope angles, and stabilizing with rip rap and other means of slope anchoring. These projects must not duplicate the activities of other Federal agencies. *New tools for Bioengineered Shoreline Stabilization, Bioengineered Streambank Stabilization.*

- **Wildfire Mitigation** - Projects to mitigate at-risk structures and associated loss of life from the threat of future wildfire through: Defensible Space for Wildfire, Application of Ignition-resistant Construction and Hazardous Fuels Reduction. *New tool for Bioengineered Wildfire Mitigation.*

- **HMGP only - 5 Percent Initiative Projects** – These projects, which are only available pursuant to an HMGP disaster, provide an opportunity to fund mitigation actions that are consistent with the goals and objectives of approved mitigation plans and meet all HMGP program requirements, but for which it may be difficult to conduct a standard Benefit-Cost Analysis (BCA) to prove cost-effectiveness.

How do I apply?
Start by submitting a Notice of Interest, available on HSEMs website at:
https://dps.mn.gov/divisions/hsem

Where can I obtain further information?
For additional information about the HMA grant program, you can refer to the FEMA website:
http://www.fema.gov/hazard-mitigation-assistance

GRANT COUNTY
Hazard Mitigation Plan Update 2023

Planning Team Meeting #1
Presentation & Discussion, 12/7/23

Grant County Minnesota

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

Grant County Project Lead

- Tina Lindquist, Grant County Emergency Management Director

Please type your name and jurisdiction in CHAT Chat **– so others know who is here**

PRESENTER: STACEY STARK

Zoom Logistics

If you haven't yet, please type your Grant and jurisdiction or department in the Chat window

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 the presenters
- 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

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

AGENDA

- Welcome & Introductions
- Review of HMP Overview (*handout)
- Review of Past Hazard Risk Prioritization, Hazard Profiles, and New Priorities
- Overview of Mitigation Strategies, Actions
- Overview of FEMA HMA grant program
- Discuss local mitigation ideas
- Overview of Next Steps

Throughout the presentation we will cover key discussion questions to gather your input!

PRESENTER: STACEY STARK

HMP OVERVIEW – KEY POINTS

GRANT COUNTY 2023 HMP UPDATE

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.

Grant County HMP Update 2023

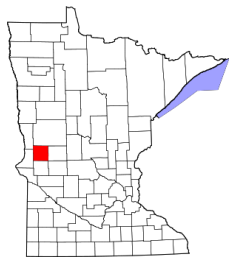
- Last plan was adopted in 2017.
- The updated plan will cover a 5-year window for implementation and grant program eligibility
- Participating jurisdictions must have documented engagement in the planning process and adopt the final plan.

PRESENTER: BONNIE HUNDRIESER

Who the Plan Covers

This is a **multi-jurisdictional plan** that covers Grant 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

Planning Team

The HMP is developed in coordination with county, city, and township government officials and departmental staff and other related key stakeholders.

- Two planning team meetings
- Assistance with public outreach
- Participation in Local Mitigation Survey, Mitigation Action Chart development, and final plan review

The Public

It is required to provide an opportunity to the public to be aware of and provide input to the HMP plan update process.

- Information is shared via news releases, social media, local bulletin boards, and public events.
- Public outreach must include vulnerable populations or underserved communities within the planning area.

PRESENTER: BONNIE HUNDRIESER

Discussion Question #1:

Who are the vulnerable populations or underserved communities in Grant County or within your own local jurisdiction?

What are outreach methods to provide these groups an opportunity to participate?

Plan Content

What Hazards are Addressed

- 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

Poll #1

PRESENTER: BONNIE HUNDRIESER

Plan Content

Risk Assessment & Vulnerability Analysis

The U-Spatial@UMD Team will work closely with the county and each city to provide information as needed.

- Inventory of critical infrastructure.
- Identify specific, local-level impacts and vulnerabilities.
- Identify any factors (i.e., new development) that may increase the community's vulnerability.
- Review social vulnerability factors.
- Identify if and how risk priorities have changed since the last plan. (Increased / Decreased)

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 Grant County Plan will be completed in **2024**.

Format:

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

Comments and Questions?

Hazard Prioritization

REVIEW OF THE HAZARD RISK PRIORITIES FOR GRANT COUNTY

Grant County
2017 HMP Risk Rankings

Severe Summer Storms (Thunderstorms, Lightning, Hailstorms, Windstorms, Tornadoes)	High
Severe Winter Storms	High
Flash Flood & Riverine Flood	High
Wildfire	Moderate
Extreme Heat	Moderate
Extreme Cold	Moderate
Erosion/Land Subsidence	Low
Drought	Low
Dam Failure	Low
Landslides	Not Addressed

Has the level of priority for the following natural hazards changed for Grant County?

Please consider:

- Increase or decrease of events (probability)
- Local vulnerabilities (impacts to people, systems, and infrastructure)
- New development and population growth

Poll #2

Discussion Question #2

What should be recorded as the updated Hazard Prioritizations for the Grant County 2023 HMP?

https://z.umn.edu/GrantHMP

Natural Hazards Assessment on Website- Demo

GRANT COUNTY HMP UPDATE
Review of hazard prioritizations

Hazards	2023 Risk Priority (Low, Moderate, or High)
Flooding	
Windstorms	
Tornadoes	
Hail	
Lightning	
Winter Storms (heavy snow, blizzards, ice storms)	
Extreme Heat	
Extreme Cold	
Drought	
Wildfire	
Landslides	
Dam/Levee Failure	

Comments and Questions?

Mitigation Strategies, Actions & FEMA HMA grants

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

PRESENTER: BONNIE HUNDRIESER

Overview of Mitigation Actions

Mitigation Action Charts are the end product of the HMP.

- Mitigation actions address hazards of moderate to high priority.
- Mitigation actions are specific.
- Mitigation actions address known vulnerabilities.
- Mitigation actions utilize capabilities to reduce risk.
- Jurisdictional mitigation action charts will be developed for the county and each city. Townships and other related agency mitigation efforts will be integrated where appropriate.

PRESENTER: BONNIE HUNDRIESER

FEMA HMA Grant Funding

FEMA

- All applicants must be covered by an approved HMP
- Cost share: Federal 75%, Applicant 25%
- Projects must address risk reduction.
- Eligible projects must be identified in the plan of action.

Eligible Activities:

- Property Acquisition (flooding/erosion)
- Tornado Safe Rooms (new/retrofit)
- Infrastructure Retrofits (utility systems, roads & bridges)
- Wildfire Mitigation
- Soil Stabilization
- Flood Risk Reduction
- Green Infrastructure
- Other projects difficult to conduct a standard BCA

PRESENTER: BONNIE HUNDRIESER

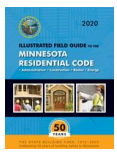
Local Planning & Regulations

NATIONAL FLOOD INSURANCE PROGRAM

Examples:

- Enrollment in the NFIP and enforcement of county and local floodplain ordinances.
- Participation in regional One Watershed, One Plan (1W1P) and partnership projects
- Working with mobile home parks to be in compliance with Minnesota State statutes for storm shelters & evacuation plans.
- Permitting for new development and adhering to MN state building codes to reduce impacts of severe weather to structures.

CLEAN WATER LAND & LEGACY AMENDMENT



PRESENTER: BONNIE HUNDRIESER

Structure & Infrastructure Projects

Examples:

- Installation of new outdoor warning sirens
- Construction of safe rooms / storm shelters
- Burying powerlines to reduce power failure
- Conducting property buyouts for flooding
- Addressing road, bridge, culvert, and drainage ditch improvements to reduce localized flood risks
- Protection of vulnerable critical infrastructure such as lift stations and Fire Halls

PRESENTER: BONNIE HUNDRIESER

Natural Systems Protection

Examples:

- Conduct vegetation management along roads to reduce the risk of downed trees and branches resulting from severe storms. (County, Local, Electric Coop)
- Planting Living Snow Fences to reduce snow drifting
- Installing Rain Gardens to reduce impacts of high rain events

Education & Awareness Programs

Examples:

- Promoting sign-up for the county's emergency notification system and EM Facebook page.
- Providing presentations and information on preparedness at schools, special facilities, and public events.
- Participation in the NWS Severe Weather Awareness Weeks and SKYWARN Storm Spotter Training
- Outreach to vulnerable populations

CodeRED® Ready

SKYWARN WEATHER.GOV

Mitigation Preparedness & Response Support

Examples:

- Acquire generators for backup power of critical infrastructure and key facilities
- Update of county EOP
- Conduct local and regional shelter planning
- Preparation for extended power outages and evacuation of vulnerable populations.
- Testing of outdoor warning sirens.
- Participate in regional EM planning, training, and exercising

Discussion Question #3

Do you have any ideas for specific mitigation activities for implementation at the county or local level?

Next Steps — Following Planning Team Meeting #1

Development of Local Mitigation Surveys

Representatives from Grant County and each city jurisdiction will participate in filling out Local Mitigation Survey forms. These forms include:

- Local hazard identification & risk prioritization.
- Local vulnerabilities (critical infrastructure, populations or assets)
- Local-level capabilities (programs, polices, staff, funding)
- Identify local mitigation projects.

Questions?

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

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

U-SPATIAL
UNIVERSITY OF MINNESOTA DULUTH
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HUNDRIESER CONSULTING LLC

PRESENTER: STACEY STARK

Grant County HMP Planning Team Meeting #2
11/15/24 Meeting Summary & Documentation

Summary: On Friday, November 15, 2024, Grant 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 Grant County Hazard Mitigation Plan (HMP). The purpose of the meeting was to formally convene the Grant 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: Grant 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 provided in *Appendix F Steering Committee Meetings*.

Meeting Participants: A total of **22** people attended the meeting. Representation included elected officials and departmental staff from Grant County and the cities of Ashby, Hoffman, and Wendell. The cities of Barret, Elbow Lake, Herman, and Norcross 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:

	Name	Organization	Job Title
1	Miah Ulrich	Grant County Emergency Management	Emergency Management Director
2	Reed Peterson	Grant County Environmental Services	Assistant Administrator Environmental Services
3	Reuben Anderson	Grant County	Environmental Services Tech
4	Shelley Svec	Horizon Public Health	Health Educator/PHEP Coordinator
5	Jeff Merrick	Grant County	Facilities Manager
6	Greg Lillemon	Grant County Environmental Services	Administrator
7	Troy Johnson	Grant County	Commissioner
8	Mike Thormodson	City of Ashby	Clerk/Treasurer
9	Janee Strunk	City of Hoffman	City Administrator
10	Tanya Bakken	City of Wendell	City Clerk
11	Manda ` Westrom	Roseville Township	Clerk
12	Lisa Villcheck	HSEM	RPC
13	Paul Thaemert	MN DNR	Hydrologist
14	Jeff McKeever	Otter Tail Power Company	Principal Engineer
15	Dale Schwagel	Traverse Electric	Operations Manager
16	Sue Lundeen	Runestone Electric Association	Manager of Member Services

17	Kari Rude	Western Prairie Human Services	Deputy Director/Human Resources Director
18	Bryan Christensen	MnDOT	Public Engagement
19	Justin Swiers	MnDOT	Maintenance superintendent
20	Kelsey Peterson	Horizon Public Health	Supervisor
21	Tina Lindquist	Pope County	Emergency Management Director
22	Patrick Waletzko	Otter Tail County	Emergency Manager

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.

GRANT COUNTY HMP PLANNING TEAM MEETING #2 DISCUSSION NOTES

Regarding Critical Infrastructure slides

- Tina Lindquist – Noted that there are updated maps for many of these layers. Some of the info displayed is old/not accurate info (i.e. no police departments anymore, some closed hazardous materials facilities) Miah has all the new updated maps/data. We used it for the sara title iii updates/requirements. / Stacey Stark – Noted she will follow up and get the maps updated.

Regarding Landslides

- Bonnie Hundrieser asked the planning team for their feedback regarding areas of concern regarding landslides, as there were not specific areas of concern provided for at-risk areas.

- Tina Lindquist: We have steep bluffs eroding around some of the lakes (i.e. Pelican, Pomme De Terre, Stony Brook Township too... Lightning Lake). Grant County SWCD and Environmental Services would have more related information for that hazard.

- Reed Peterson, Grant County Environmental Services offered to follow up after the meeting with additional information.

Regarding FEMA HMA Grant Funding

Tina Lindquist: In the past, HSEM Mitigation staff told Grant County that culvert resizing, ditching, etc for flood risk reduction was not allowed for mitigation grant funds. In addition, we were told that warning sirens could not be funded with mitigation grant funds... has that changed? Just thought it may be valuable to clarify because many Grant County partners have heard that from HSEM in the past.

Bonnie Hundrieser: Specific flood-related infrastructure projects should be discussed with the state hazard mitigation officer to see if they are possibly eligible. Warning Sirens are eligible under the new BRIC (Building Resilient Infrastructure and Communities) grant program.

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.

Attached are the following documentation items for the Grant County HMP Meeting #2:

- Meeting Invitation to Stakeholders
- PowerPoint Presentation Slides
- Information Handouts

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

From:	Jeremiah Ulrich
To:	Jeremiah Ulrich; Greg Lillemon; jim.standish; Jon Combs; Assessor; Jeff Merrick; Aaron Beyer; shelleys@horizonph.org; stacy.hennen@westernprairiemn.us; Troy Johnson; Dwight Walvatne; Ken Johnson; Bill LaValley; Doyle Sperr; ashbycit@prtel.com; mayoramyjohnson@gmail.com; e_risbrudt@hotmail.com; barrett@runestone.net; bcc.jenson@runestone.net; jcpuc@runestone.net; cityhall@runestone.net; dahengel05@icloud.com; Nporter519@gmail.com; ctyhrmn@runestone.net; lakesideseed@plantpioneer.com; chrisvlaminck@gmail.com; hoffmn@runestone.net; cityofhoffman@runestone.net; stbergie@icloud.com; cityofnorcross@outlook.com; brandon__lennox@hotmail.com; wendellcity@runestone.net; tanner.davison@yahoo.com; bizzers@runestone.net; smbiss@runestone.net; bizzers@runestone.net; bppasche@runestone.net; gnelson@prtel.com; amund307@gmail.com; Reuterma79@hotmail.com; a_clauson@hotmail.com; ronhovdefarms@gmail.com; Mwvolker77@gmail.com; doug@delawaremutual.com; boonecarlson@gmail.com; beavjohnson@gmail.com; Aaron Weinandt; mandajo@runestone.net; jcpuc@runestone.net; blumeelectric@hotmail.com; Lisa.Villcheck@state.mn.us; Reed Peterson; ryan.haspel@usda.gov; jeff.scholten@usda.gov; shiloh.wahl@state.mn.us; Jared House; bdswd@runestone.net; Shannon.olson@usda.gov; Micayla.nelson@pdtriver.org; emily.siira@state.mn.us; Michael.a.palmer@state.mn.us; Michele.heaver@usc.salvationarmy.org; Nicole.bathgate2@redcross.org; cityshop@runestone.net; thrdlicka@otpco.com; Sue.lundeen@runestoneelectric.com; Jhuhnstock@traverseelectric.com; Brian.zavesky@mrenergy.com; dschaefer@eastriver.coop; jmoore@ashbyps.org; rbleichner@hncs.k12.mn.us; pbrownlow@isd2342.org; mark@wcif.org; missyb@wcmca.org; Katie.ennen@westernprairiemn.us; lynn.siegel@co.traverse.mn.us; donagreiner@co.stevens.mn.us; bkoval@co.wilkin.mn.us; pwaletzk@co.ottertail.mn.us; juliea@co.douglas.mn.us; Tina.Lindquist@popecountymn.gov
Cc:	hundrieserconsulting@outlook.com; slstark@d.umn.edu
Subject:	GRANT COUNTY HAZARD MITIGATION PLAN UPDATE MEETING INVITE
Date:	Friday, September 27, 2024 11:07:18 AM
Attachments:	image001.png image002.png image003.png image004.png image005.png
Importance:	High

GRANT COUNTY
HAZARD MITIGATION PLAN UPDATE – MEETING INVITATION

Greetings,

Your presence is requested at the **2nd Planning Team Meeting** for the update of the **Grant 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:	Friday, November 15, 2024
Time:	10:00 a.m. – 11:30 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 Grant 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 Grant

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,

Jeremiah Ulrich
Emergency Manager
Office 218-685-8224
Cell 320-304-0350
www.co.grant.mn.us
jeremiah.ulrich@grantcountymn.gov
15 Central Ave N / PO BOX 1006
Elbow Lake, MN 56531

Grant County
Hazard Mitigation Plan Update 2024
Planning Team Meeting #2

November 15, 2024

Grant County Minnesota

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

Grant County Project Lead

- Jeremiah Ulrich, Grant County Emergency Management Director

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

PRESENTER: STACEY STARK

Zoom Logistics

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ASK TO SPEAK:

PRESENTER: STACEY STARK

Meeting Purpose & Agenda

This meeting formally convenes the Grant 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

- Welcome & Introductions
- 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

Grant 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 2017.

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.

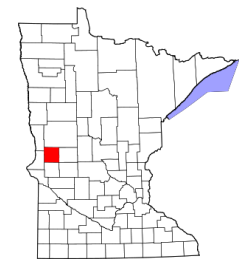
PRESENTER: BONNIE HUNDRIESER

Who the Plan Covers

Grant County Minnesota

This is a **multi-jurisdictional plan** that covers Grant 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, other agencies & 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

HMP Deliverables

PDF document:

- Contains FEMA required elements
- Limited figures & Images
- Links to Website integrated
- Summary of Hazard Identification
- Local Mitigation Summary Report
- Plans & Programs in Place
- Past Mitigation Action Review
- Planning Team Meetings
- Public Outreach & Engagement Documentation
- Mitigation Actions by Jurisdiction

Website companion:

- Links to PDF components and document
- Interactive maps and context
- Simple, concise explanations
- Multiple ways to navigate the content
- Public input form on site

PRESENTER: STACEY STARK

Prioritization of Hazards for Grant County

Prioritization of hazards by the Grant County planning team included consideration of:

- 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
Winter Storms	High
Windstorms	High
Flooding	High
Hailstorms	Moderate
Tornadoes	Moderate
Landslides	Moderate
Extreme Cold	Moderate
Extreme Heat	Moderate
Drought	Moderate
Lightning	Low
Wildfire	Low
Dam Failure	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 jurisdictional vulnerability
- Informs Mitigation Actions in the HMP

PRESENTER: STACEY STARK

Website Demo

z.umn.edu/GrantHMP

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.

FEMA Mitigation Grant Funding

FEMA

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.

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)

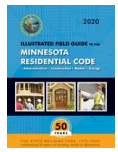
Local Planning & Regulations

NATIONAL FLOOD INSURANCE PROGRAM

Grant County Examples:

- Enforcement of ordinances that reduce impacts of high rain events.
- Participation in regional watershed planning with SWCD and area WD's (1W1P).
- Implementation of watering restrictions during periods of extreme drought.
- Encourage all new development to follow state building codes to help withstand impacts of severe weather to structures.

CLEAN WATER LAND & LEGACY AMENDMENT



Structure & Infrastructure Projects

Grant County Examples:

- Installation of new outdoor warning sirens
- Construction of tornado safe rooms
- Burying powerlines to reduce power failure
- Conducting property buyouts for flooding
- Stormwater management improvements (culverts, drainage systems, curb & gutter)
- Road and bridge improvements

Natural Systems Protection

Grant County Examples:

- Conduct vegetation management along roads to reduce the risk of downed trees and branches resulting from heavy snow, ice, or high winds.
- Other examples:
  - Planting Living Snow Fences to reduce snow drifting
  - Installing Rain Gardens to reduce impacts of high rain events

Education & Awareness Programs

CodeRED®

Ready

SKYWARN WEATHER.GOV

Grant 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, and extended power outages.
- Tornado Shelter in Place awareness
- Extreme Cold – avoiding frozen pipes
- Drought – water use restrictions / water conservation tips

Mitigation Preparedness & Response Support

Grant County Examples:

- Acquire generators for backup power of critical infrastructure and key facilities
- Update of county EOP
- Conduct local and regional shelter planning
- Preparation for extended power outages and evacuation of vulnerable populations.
- Testing of outdoor warning sirens.
- Participate in regional EM planning, training, and exercising

Comments and Questions?

Next Steps

November, 2024

EM + Local Gov't Review of Draft Plan and Public Review & Comment Period

Following Planning Team Mtg. #2

- EM + Local government review of draft plan
- Public review & comment period (News Release #2)
- Document local postings
- Document public feedback & incorporate as appropriate

Next Steps

December, 2024

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**

Questions?

What questions do you have for U-Spatial@UMD about the draft MHMP or next steps ?

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
Hundrieser Consulting LLC
hundrieserconsulting@outlook.com
218-343-3468

HUNDRIESER CONSULTING LLC

State of Minnesota
Department of Public Safety
Division of Homeland Security and Emergency Management
445 Minnesota Street, Suite 223
St. Paul, MN 55101-6223

HAZARD MITIGATION ASSISTANCE

Hazard Mitigation Assistance (HMA) grant programs provide funding with the aim to reduce or eliminate risk to property and loss of life from future natural disasters. HMA programs are typically a 75%/25% cost share program. The federal share is 75% of total eligible project reimbursement costs. The local applicant is responsible for 25% of the project costs. The amount of HMGP funds availability is based on a percent of Public Assistance provided by Federal Emergency Management Agency (FEMA).

- Hazard Mitigation Grant Program (HMGP) funds assists in implementing long-term hazard mitigation measures following a Presidential major disaster declaration.
- Pre-Disaster Mitigation (PDM) provides funds for hazard mitigation planning and projects on an annual basis.
- Flood Mitigation Assistance (FMA) provides funds on an annual basis to reduce or eliminate risk of flood damage to buildings that are insured under the National Flood Insurance Program (NFIP).

Who is eligible for grant funding?
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

What types of projects can be funded?
All projects must be eligible, technically feasible, and cost-effective. All projects are subject to environmental and cultural resource review. Examples of projects include:

- **Advance Assistance** may be used to develop mitigation strategies and obtain data, including for environmental and historic preservation compliance considerations, and develop complete project applications in a timely manner.

- **Aquifer Storage and Recovery** (ASR) projects serve primarily as a drought management tool, but can also be used to reduce flood risk and restore aquifers that have been subject to overdraft. The concept is to capture water when there is an abundant supply, store the water in subsurface aquifers, and recover water from the storage aquifer when needed. Storing water underground can help protect it from pollutants, evaporation, and weather events.

- **Floodplain and stream restoration** (FSR) projects are used primarily to reduce flood risk and erosion by providing stable reaches, and may also mitigate drought impacts. FSR projects restore and enhance the floodplain, stream channel and riparian ecosystem's natural function. They provide base flow recharge, water supply augmentation, floodwater storage, terrestrial and aquatic wildlife habitat, and recreation opportunities by restoring the site's soil, hydrology and vegetation conditions that mimic pre-development channel flow and floodplain connectivity.

- **Flood Diversion and Storage** (FDS) projects often are used to reduce flood risk, but also can be used to mitigate drought and improve ecosystem services. These projects involve diverting floodwaters from a stream, river, or other body of water into a conduit such as a canal, pipe, or wetland and storing them in an above-ground storage facility. Water is then slowly released, reducing flood risk.

- **Green Infrastructure Methods** are a sustainable approach to natural landscape preservation and storm water management. Include in *eligible hazard mitigation activities* as well as provide additional ecosystem benefits**.** Ecosystem-based approach to replicate a site's pre-development, natural hydrologic function. Benefits include: Increase water supply, improved water quality, can be scaled to size and designed to fit site conditions.

- **Property Acquisition and Structure Demolition or Relocation –** The voluntary acquisition of an existing at-risk structure and the underlying land, and conversion of the land to open space through the demolition or relocation of the structure. The property must be deed-restricted in perpetuity to open space uses to restore and/or conserve the natural floodplain functions.

- **Retrofit Flood-Prone Residential Structures** are changes made to an existing structure to reduce or eliminate the possibility of damage to that structure from flooding, erosion, or other hazards. Examples of this mitigation are primarily elevation of structures above flood levels and floodwalls.

- **Safe Room Construction** - Safe room construction projects are designed to provide immediate life-safety protection for people in public and private structures from tornado and severe wind events. Includes retrofits of existing facilities or new safe room construction projects, and applies to both single and dual-use facilities

- **Minor Localized Flood Reduction Projects** - Projects to lessen the frequency or severity of flooding and decrease predicted flood damages, such as the installation or up-sizing of culverts, and stormwater management activities, such as creating retention and detention basins. These projects must not duplicate the flood prevention activities of other Federal agencies and may not constitute a section of a larger flood control system.

- **Infrastructure Retrofit** - Measures to reduce risk to existing utility systems, roads, and bridges.

- **Soil Stabilization -** Projects to reduce risk to structures or infrastructure from erosion and landslides, including installing geotextiles, stabilizing sod, installing vegetative buffer strips, preserving mature vegetation, decreasing slope angles, and stabilizing with rip rap and other means of slope anchoring. These projects must not duplicate the activities of other Federal agencies. *New tools for Bioengineered Shoreline Stabilization, Bioengineered Streambank Stabilization.*

- **Wildfire Mitigation** - Projects to mitigate at-risk structures and associated loss of life from the threat of future wildfire through: Defensible Space for Wildfire, Application of Ignition-resistant Construction and Hazardous Fuels Reduction. *New tool for Bioengineered Wildfire Mitigation.*

- **HMGP only - 5 Percent Initiative Projects** – These projects, which are only available pursuant to an HMGP disaster, provide an opportunity to fund mitigation actions that are consistent with the goals and objectives of approved mitigation plans and meet all HMGP program requirements, but for which it may be difficult to conduct a standard Benefit-Cost Analysis (BCA) to prove cost-effectiveness.

How do I apply?
Start by submitting a Notice of Interest, available on HSEMs website at:
https://dps.mn.gov/divisions/hsem

Where can I obtain further information?
For additional information about the HMA grant program, you can refer to the FEMA website:
http://www.fema.gov/hazard-mitigation-assistance

Mitigation Strategies & Action Types

Following are the five types of mitigation strategies that will be used in the update of the Multi-Hazard Mitigation Plan with examples of related mitigation actions. Minnesota HSEM recommends the use of these mitigation strategies to be in alignment with the State plan and those recommended by FEMA. The first four strategies listed are taken from the FEMA publications *Local Mitigation Planning Handbook* (2013) and *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* (2013). The fifth strategy type was determined by Minnesota HSEM for use within the state.

These strategies will provide the framework for identification of new jurisdictional-level mitigation actions for implementation over the next 5-year planning cycle.

Mitigation Strategy	Description	Example Mitigation Actions
Local Planning 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 • Mobile home park compliance for storm shelters
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.	• Property Acquisitions and elevations of structures in flood prone areas • Utility undergrounding • Structural retrofits (i.e., metal roofs) • Floodwalls and retaining walls • Detention and retention structures • Culvert Installation/Modification • Roads & Bridge risk reduction • Safe Room (New construction or facility retrofit) • Green Infrastructure Methods *Many of these types of actions are projects eligible for funding through FEMA HMA grant programs.*

Mitigation Strategy	Description	Example Mitigation Actions
Natural Systems Protection	These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.	• Soil stabilization for sediment and erosion control • Floodplain and Stream corridor restoration • Slope management • Forest management (defensible space, fuels reduction, sprinkler systems) • Conservation easements • Wetland restoration and preservation • Aquifer Storage & Recovery • Flood Diversion and Storage *Many of these types of actions are projects eligible for funding through FEMA HMA grant programs.*
Education and Awareness Programs	These are actions to inform and educate citizens, 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 that support life safety and lessen property damage.	• Radio or television spots • Websites with maps and information • Social media outreach • Promotion of sign-up for emergency warnings • Real estate disclosure • Promotion of NFIP insurance to property owners • Presentations to school groups or neighborhood organizations • Mailings to residents in hazard-prone areas. • NWS StormReady Program • Firewise Communities *Some of these types of actions may be projects eligible for funding through the FEMA HMA "5 Percent Initiative Program".*
Mitigation Preparedness and Response Support	This is a State of Minnesota mitigation strategy with the intent of covering emergency preparedness actions that protect life and property prior to, during, and immediately after a disaster or hazard event. These activities are typically not considered mitigation, but support reduction of the effects of damaging events.	• Emergency Operations Plan • Flood fight plans and preparedness measures • Dam emergency action plans • Emergency Warning Systems (i.e., CodeRed, warning sirens) • Generator backup power • NWS Storm Spotter Training • Training and education for local elected officials and key partners.

Appendix G – Public Outreach & Engagement Documentation

Grant County MHMP News Release #1
Record of Public Input & Incorporation

Overview: On **June 7, 2023**, Grant County Emergency Management put out a news release titled "**Public Input Wanted as 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. Grant 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?
- 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 public was strongly encouraged contact Grant County Emergency Management to submit comments, concerns, or questions regarding natural disasters and potential mitigation actions to be included into the plan update process. The public was also able to post comments electronically on county or city Facebook sites where the news release was posted.

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 Grant 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 to the news release and how their input will be incorporated into the plan update, and if not relevant to be addressed, why.

> **No Public Input:** Grant County Emergency Management and local jurisdictions did not receive any public input following News Release #1.

From:	Tina Lindquist
To:	Greg Lillemon; Jim Standish; Jon Combs; Assessor; Jeff Merrick; Aaron Beyer; "shelleys@horizonph.org"; WP-Stacy.Hennen; Troy Johnson; Dwight Walvatne; Ken Johnson; Bill LaValley; Doyle Sperr; "ashbycit@prtel.com"; "mayoramyjohnson@gmail.com"; "e_risbrudt@hotmail.com"; "barrett@runestone.net"; "bcc.jenson@runestone.net"; "jcpuc@runestone.net"; "cityhall@runestone.net"; "dahengel05@icloud.com"; "Nporter519@gmail.com"; "ctyhrmn@runestone.net"; "lakesideseed@plantpioneer.com"; "chrisvlaminck@gmail.com"; "hoffmn@runestone.net"; "cityofhoffman@runestone.net"; "stbergie@icloud.com"; "cityofnorcross@outlook.com"; "brandon__lennox@hotmail.com"; "wendellcity@runestone.net"; "tanner.davison@yahoo.com"; "bizzers@runestone.net"; "smbiss@runestone.net"; "bizzers@runestone.net"; "bppasche@runestone.net"; "gnelson@prtel.com"; "amund307@gmail.com"; "Reuterma79@hotmail.com"; "a_clauson@hotmail.com"; "ronhovdefarms@gmail.com"; "Mwvolker77@gmail.com"; "doug@delawaremutual.com"; "boonecarlson@gmail.com"; "beavjohnson@gmail.com"; Aaron Weinandt; "mandajo@runestone.net"; "jcpuc@runestone.net"; "blumeelectric@hotmail.com"; "Lisa.Villcheck@state.mn.us"; Reed Peterson; "ryan.haspel@usda.gov"; "jeff.scholten@usda.gov"; "shiloh.wahl@state.mn.us"; Jared House; "bdswd@runestone.net"; "Shannon.olson@usda.gov"; "Micayla.nelson@pdtriver.org"; "emily.siira@state.mn.us"; "Michael.a.palmer@state.mn.us"; "Michele.heaver@usc.salvationarmy.org"; "Nicole.bathgate2@redcross.org"; "cityshop@runestone.net"; "jmoore@ashbyps.org"; "rbleichner@hncs.k12.mn.us"; "pbrownlow@isd2342.org"; "mark@wcif.org"; "missyb@wcmca.org"; WP-Katie.Ennen; "lynn.siegel@co.traverse.mn.us"; "donagreiner@co.stevens.mn.us"; "bkoval@co.wilkin.mn.us"; "pwaletzk@co.ottertail.mn.us"; "juliea@co.douglas.mn.us"; "kim.joos@popecountymn.gov"
Cc:	"Bonnie K Hundrieser"
Subject:	Grant County Hazard Mitigation News Release
Date:	Tuesday, June 6, 2023 4:36:52 PM
Attachments:	1st press release Grant County HMP.pdf

Greetings,

Grant County Emergency Management is commencing work on the update of the Grant County Hazard Mitigation Plan (HMP). Attached is a news release for your information.

Your assistance is requested to post this news release to help notify the public about the plan update and to have an opportunity to provide feedback. If you have a website and/or Facebook page we encourage you to post the news release electronically to those places. You may also post a hardcopy of the news release in locations such as City Hall, the Post Office, or other common area. We welcome as many of ways of posting that you can cover. As part of the plan update we must document the public outreach that was conducted. Please send me an email with information on your posting as follows:

- ***Websites/Facebook Postings:*** Please send me an email detailing the date, location, and link of the posting. We will need to get a screenshot of the posting online.

- ***Hardcopy Postings:*** Please send me an email detailing the date and location of where the news release was posted (i.e., City Hall bulletin board).

All city governments within the county are requested to participate in order to meet FEMA requirements. Townships, businesses, and other agencies or organizations are also strongly encouraged to participate.

If you receive any return public feedback, please notify me so we may document this and incorporate this feedback into the plan update.

The timely return of your posting documentation is appreciated. We will be working to wrap this up

before the end of June.

I look forward to your participation in the Grant County HMP update.

If you have any questions, please let me know.

Thank you,

Tina

Christina L. Lindquist

Grant County Emergency Management
Office: 218-685-8224
Cell: 320-304-0350

Don’t be scared. Be prepared.

~Leadership is not about being the best. Leadership is about making everyone else better.~

From:	Tina Lindquist
To:	"Jake@grantcountyherald.com"
Cc:	"Ashton Hagen"
Subject:	Grant County Hazard Mitigation News Release
Date:	Tuesday, June 6, 2023 4:40:12 PM
Attachments:	Grant County Hazard Mitigation Plan News Release #1.docx

Greetings,

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The timely return of your posting documentation is appreciated. We will be working to wrap this up before the end of June.

I look forward to your participation in the Grant County HMP update.

If you have any questions, please let me know.

Thank you,

Tina

Christina L. Lindquist

Grant County Emergency Management
Office: 218-685-8224
Cell: 320-304-0350

Don’t be scared. Be prepared.

~**Leadership is not about being the best. Leadership is about making everyone else better**.~

GRANT COUNTY
BOARD OF COMMISSIONERS

10 Second Street N.E.
Elbow Lake, Minnesota 56531-4400
Ph: 218-685-8236 • Fax: 218-685-4521

GRANT COUNTY NEWS RELEASE
June 7, 2023

Public Input Wanted as County Updates Hazard Mitigation Plan

Grant 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 their ideas on how to reduce local impacts in the future.

The Grant County Office of Emergency Management is working with U-Spatial at the University of Minnesota Duluth to update the county's Hazard Mitigation Plan (HMP). 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.

The Grant County HMP is a multi-jurisdictional plan that covers Grant County, including the cities of Ashby, Barrett, Elbow Lake, Herman, Hoffman, Norcross, and Wendell. The Grant County HMP also incorporates the concerns and needs of townships, school districts, and area agencies or organizations participating in the plan. The plan will be updated by a planning team made up of representatives from county departments, local municipalities, school districts and other key stakeholders. When completed, the plan will be submitted to the Minnesota Department of Homeland Security and Emergency Management and the Federal Emergency Management Agency (FEMA) for approval.

"Hazard mitigation planning is a central part of our emergency management program," said Christina Lindquist, Grant 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. Hazard mitigation helps us to break the cycle of damage and repair caused by things like flooding, ice storms, and severe wind events that can damage property, stress economies, and threaten life safety in our county."

Examples of hazard mitigation include:

- Conducting public outreach on severe weather awareness and preparedness
- Limiting or restricting development in floodplain areas
- Removing existing buildings from flood or erosion prone hazard areas
- Using snow fences to limit blowing and drifting of snow over road corridors
- Constructing tornado safe rooms in vulnerable areas such as mobile home parks
- Burying overhead powerlines that may fail due to heavy snow, ice, or windstorms

Some mitigation activities may be eligible for future FEMA Hazard Mitigation Assistance grant funding.

GRANT COUNTY
BOARD OF COMMISSIONERS

10 Second Street N.E.
Elbow Lake, Minnesota 56531-4400
Ph: 218-685-8236 • Fax: 218-685-4521

Public input is an essential part of the plan update. As part of the planning process, Grant County is seeking feedback from residents and businesses from across the county to incorporate into the plan:

- What are the natural hazards you feel pose the greatest risk to your community?
- 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?

Comments, concerns, or questions regarding natural disasters and potential mitigation actions to be included into the plan update should be submitted to Grant County Emergency Management by phone, email, or by posting a comment via a social media posting of this article.

There will be additional opportunities for public feedback throughout the planning process. A draft of the plan will be made available for public review prior to submission of the plan to the State of Minnesota. Future news releases will be shared with the media to notify the public of these opportunities.

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.

Contact
Christina Lindquist
Grant County Emergency Management Director
Phone: (218) 685-8224
Email: tina.lindquist@co.grant.mn.us

Grant County HMP News Release #1 – June 6, 2023
Chart Documentation of News Release Postings

Jurisdiction or Agency	Posting Representative	Date & Location of News Release Posting
Grant County	Tina Lindquist, Grant County EMD	6/6/23, Grant County website and Facebook Page
City of Ashby	Mike Thormodson, City Clerk	6/7/23, City Hall bulletin board and City Facebook page
City of Barrett	Marita Rude, City Clerk,	6/7/23, City Facebook page
City of Elbow Lake	Jeff Holsen, City Clerk	6/14/23, City Hall bulletin board
City of Herman	Amanda Blume, City Clerk	6/14/23, City Hall/Community Center bulletin board, Post Office, and Kensington Bank.
City of Hoffman	Janae Strunk, City Clerk	6/16/23, City Facebook page and City Hall bulletin board
City of Norcross	Stephanie Bartell, City Clerk	6/21/23, front door of City Hall and at the local coffee shop
City of Wendell	Tanya Bakken, City Clerk	6/19/23, City Hall public notice board
Grant County Herald	Ashton Hagen, Editor	6/21/23, Grant County Herald printed news article

Grant County HMP News Release #2
Record of Public Input & Incorporation

Overview: On December 11, 2024 Grant 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 Grant 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 12/11/24 – 12/27/24 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 Grants, 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. (A copy of the Jurisdictional Contact List can be found in Appendix F). 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 Grant 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 Grant County news release and how the input will be incorporated into the plan update, and if not relevant to be addressed, why.

- **No public input was received via the online feedback form, directly by Grant County or local jurisdictions.**

From:	Jeremiah Ulrich
To:	Jeremiah Ulrich; Greg Lillemon; jim.standish; Jon Combs; Assessor; Jeff Merrick; Aaron Beyer; shelleys@horizonph.org; stacy.hennen@westernprairiemn.us; Troy Johnson; Dwight Walvatne; Ken Johnson; Bill LaValley; Doyle Sperr; ashbycit@prtel.com; mayoramyjohnson@gmail.com; e_risbrudt@hotmail.com; barrett@runestone.net; bcc.jenson@runestone.net; jcpuc@runestone.net; cityhall@runestone.net; dahengel05@icloud.com; "Chris Lohse"; ctyhrmn@runestone.net; lakesideseed@plantpioneer.com; chrisvlaminck@gmail.com; hoffmn@runestone.net; cityofhoffman@runestone.net; stbergie@icloud.com; cityofnorcross@outlook.com; brandon__lennox@hotmail.com; wendellcity@runestone.net; tanner.davison@yahoo.com; bizzers@runestone.net; smbiss@runestone.net; bizzers@runestone.net; bppasche@runestone.net; gnelson@prtel.com; amund307@gmail.com; Reuterma79@hotmail.com; a_clauson@hotmail.com; ronhovdefarms@gmail.com; Mwvolker77@gmail.com; doug@delawaremutual.com; boonecarlson@gmail.com; beavjohnson@gmail.com; Aaron Weinandt; mandajo@runestone.net; jcpuc@runestone.net; blumeelectric@hotmail.com; Olmstead, Lisa (DPS); Reed Peterson; ryan.haspel@usda.gov; jeff.scholten@usda.gov; shiloh.wahl@state.mn.us; Jared House; bdswd@runestone.net; Shannon.olson@usda.gov; Micayla.nelson@pdtriver.org; emily.siira@state.mn.us; Michael.a.palmer@state.mn.us; Michele.heaver@usc.salvationarmy.org; Nicole.bathgate2@redcross.org; cityshop@runestone.net; thrdlicka@otpco.com; Sue.lundeen@runestoneelectric.com; Jhuhnstock@traverseelectric.com; Brian.zavesky@mrenergy.com; dschaefer@eastriver.coop; jmoore@ashbyps.org; rbleichner@hncs.k12.mn.us; pbrownlow@isd2342.org; mark@wcif.org; missyb@wcmca.org; Katie.ennen@westernprairiemn.us; lynn.siegel@co.traverse.mn.us; donagreiner@co.stevens.mn.us; bkoval@co.wilkin.mn.us; pwaletzk@co.ottertail.mn.us; juliea@co.douglas.mn.us; Tina.Lindquist@popecountymn.gov; Reuben Anderson
Cc:	Bonnie K Hundrieser; slstark@d.umn.edu
Subject:	Grant County Hazard Mitigation Plan Review and Comment
Date:	Wednesday, December 11, 2024 9:03:36 AM
Attachments:	image011.png image012.png image013.png image014.png image015.png 12-11-24 Grant County News Release HMP Public Review.docx 12-11-24 Grant County News Release HMP Public Review.pdf

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Greetings,

The public review and comment period is now open for the Grant County Hazard Mitigation Plan. Please see the attached news release.

The public review period will run for 17 days from **December 11 to December 27,** prior to submission of the plan to FEMA.

Grant County and the cities of Ashby, Barrett, Elbow Lake, Herman, Hoffman, Norcross, and Wendell are requested to please post the release. Townships and other related stakeholders involved in the plan update are also encouraged to share the news release. Please post the news release to areas such as your website, Facebook page, bulletin boards, or other locations.

Please email me to let me know the date and location(s) of where the news release was posted.

Your review of the plan is strongly encouraged. Please note that there are website links as well as a QR code in the news release that will take you to PDF of the plan, interactive website, and mitigation action charts. There is also an online feedback form where you are encouraged to provide any comments, questions, or other feedback. If you review the plan, please let me know.

Your prompt attention to this is appreciated.

Thank you

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15 Central Ave N / PO BOX 1006
Elbow Lake, MN 56531

GRANT COUNTY EMAIL NOTICE:

******* All Grant County email addresses will be updated to firstname.lastname @grantcountymn.gov starting September 1, 2024. Please update contact information as this update will occur on September 1st. Thank you *******

GRANT COUNTY
BOARD OF COMMISSIONERS

10 Second Street N.E.
Elbow Lake, Minnesota 56531-4400
Ph: 218-685-8236 • Fax: 218-685-4521

GRANT COUNTY NEWS RELEASE

December 11, 2024

Public Comment Sought for Grant County's Hazard Mitigation Plan

Grant County has completed an updated draft of its Hazard Mitigation Plan (HMP) and is now seeking public feedback. Like all Minnesota counties, Grant 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 17 days through December 27, 2024. The public can access the plan using the following hyperlinks:

Grant County HMP Website Homepage (feedback form at the bottom of page)

Grant County Mitigation Action Charts (feedback form at the bottom of page)

The Grant County HMP is a multi-jurisdictional plan that covers Grant County, including all cities and townships within the county. The Grant 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 Grant 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 infrastructure projects for areas that experience repetitive flooding; 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 Grant County and other jurisdictions protect their residents. Working with local communities through the process helps identify vulnerabilities and develop strategies to reduce or eliminate the effects of a potential hazard. In addition, increasing public awareness of natural disasters and encouraging personal preparedness helps to create a community that is resilient to disaster, and breaks the cycle of response and recovery.

GRANT COUNTY

BOARD OF COMMISSIONERS

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Updating the plan further allows Grant County and its jurisdictions to be eligible to apply for future FEMA Hazard Mitigation Assistance grant program funding for projects that help to reduce or eliminate the impacts of future natural hazard events.

Community feedback is vital to the success of the plan. Grant 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 Grant County Emergency Management.

Contact:
Jeremiah Ulrich
Grant County Emergency Manager
Phone: 218-685-8224
Email: jeremiah.ulrich@grantcountymn.gov

Please scan the following QR code to go directly to the Grant County Hazard Mitigation Plan interactive website:

Grant County HMP News Release #2 (12/11/24)
Chart Documentation of News Release Postings

Jurisdiction or Agency	Posting Representative	Date & Location of News Release Posting
Grant County	Jeremiah Ulrich, Grant County EMD	12/11/24 posted to Grant County Website and Grant County Civic Alerts
City of Ashby	Mike Thormodson, City Clerk	12/11/24 Posted to City Hall community bulletin board
City of Barrett	Marita Rude, City Clerk	12/11/24 Posted to City Facebook Page
City of Elbow Lake	Jeff Holsen, City Clerk	12/11/24 Posted to City Hall community bulletin board
City of Herman	Amanda Blume, City Clerk	12/11/24 City Hall/Community Center bulletin board
City of Hoffman	Janae Strunk, City Clerk	12/11/24 Posted to City Hall bulletin board and at the Post Office
City of Norcross		
City of Wendell	Tanya Bakken, City Clerk	12/13/24, City Hall public notice board
Grant County Herald	Ashton Hagen, Editor	12/18/24 Posted to Grant County Herald online
Horizon Public Health	Shelley Svec, Horizon Public Health Preparedness Coordinator	12/17/24 posted to Horizon Public Health website

Appendix H – Mitigation Actions by Jurisdiction

CITY OF ASHBY — 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 2025-2030	City Admin / City EM	We post information on our city website and Facebook page. We also post information on bulletin boards at City Hall, the Senior Center and at the Post Office. We will work to share information we receive from Grant County Emergency Management during the NWS Severe Weather Awareness weeks that occur in April and November each year.	City Funding
2	All-Hazards	Education & Awareness Programs	Encourage residents in our community to sign up for the county's emergency notification system.	Existing High 2025-2030	City Admin / City EM	The city will work with Grant County Emergency Management to help us get a link put up on our website to the county page where residents can sign up.	City Funding
3	Severe Winter & Summer Storms	Local Planning & Regulations	Ensure new development is built to guidelines to reduce risk of damage or failure from extreme storm events.	Existing High 2025-2030	City Admin	The city's planning and zoning department enforces the MN State Building Code and the City Code zoning requirements for new development.	City Funding
4	Severe Summer Storm	Mitigation Preparedness & Response Support	Continue to ensure that our outdoor warning siren is maintained and functioning.	Existing Moderate 2025-2030	City EM	The city works with Grant County to test our outdoor warning siren on the first Wednesday of each month to ensure it is working properly.	City Funding
5	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish watering restrictions during drought conditions and raise public awareness of water conservation measures.	New Moderate 2025-2030	City Admin	The city will establish watering restrictions as per MN DNR guidelines during periods of severe drought. The city will do local outreach to help make residents aware of the ordinance and the limitations on non-essential water usage.	City Funding

CITY OF BARRETT — 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 2025-2030	City Admin / City EM	We post information on our city website and Facebook page. We also post information on bulletin boards at the Bank, Post Office and City Hall. We also use the local newspaper. Our city works with the county to participate in the National Weather Service's annual Severe Winter/Spring Weather Awareness Week by posting severe weather awareness information out on our city Facebook page, bulletin board and local newspaper. Our local School, Care Center and Assisted Living practices tornado drills on a regular basis.	City Funding
2	All-Hazards	Education & Awareness Programs	Encourage residents in our community to sign up for the county's emergency notification system.	Existing High 2025-2030	City Admin / City EM	We have a place on the homepage of our city website with a link to the county's code red sign-up page. We include information on emergency notification on our Facebook page annually.	City Funding
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase portable generators for our Fire Department and Community Center (community shelter location).	New High 2025-2030	City Admin / City EM	The city will work to purchase generators as funding is available.	City Funding
4	Severe Summer Storms	Structure & Infrastructure Projects	Replace the city's outdoor warning siren with a new one.	New Moderate 2025-2030	City Admin / City EM	The City's outdoor warning siren is older and does not reach all sections of town. The city will work with Grant County Emergency Management to seek assistance on this effort. Outside grant funding would be necessary to make this project possible.	City Funding, Other Grant funding (TBD)

CITY OF BARRETT — Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
5	Severe Summer Storms	Structure & Infrastructure Projects	Construct storm shelters at the city campground and the Barrett Lakeside Pavilion.	New High 2025-2030	City Admin / City EM / City Public Works	These are locations where residents and visitors are vulnerable to high wind and damaging storm events. The city will seek to work with Grant County Emergency Management to evaluate our options for how to best construct these storm shelters. The city may also look into possible FEMA grant funding for a tornado safe room at one or both locations if that is our best option.	City Funding, Possible FEMA grant funding
6	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish watering restrictions during drought conditions and raise public awareness of water conservation measures.	New Moderate 2025-2030	City Admin	The city will establish watering restrictions as per MN DNR guidelines during periods of severe drought. The city will do local outreach to help make residents aware of the ordinance and the limitations on non-essential water usage.	City Funding
7	Flooding	Local Planning & Regulations	Continue to address stormwater management planning to handle future high-rain events that impact the city.	Existing High 2025-2030	City Public Works	The City recently completed a street reconstruction project which included adding more storm sewer and enlarged the size of storm water holding pond. All our sewer lift stations have all had cellular alarms installed. A permanent generator at our main lift station was also installed. The city will continue to assess and address if /where stormwater management improvements need to be made.	City Funding

CITY OF ELBOW 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 2025-2030	City Admin / City EM	We use the city website, Facebook, radio and TV to share information with our residents. The city works to share information we receive from Grant County Emergency Management during the NWS Severe Weather Awareness weeks that occur in April and November each year.	City Funding
2	All-Hazards	Education & Awareness Programs	Encourage residents in our community to sign up for the county's emergency notification system.	Existing High 2025-2030	City Admin / City EM	The city will work with Grant County Emergency Management to help us get a link put up on our website to the county page where residents can sign up.	City Funding
3	Severe Winter & Summer Storms	Structure & Infrastructure Projects	Reduce the risk of downed power lines and extended power outages from the impacts of heavy snow, ice, or high wind events.	Existing High 2025-2030	Elbow Lake Municipal Power	The city has converted many blocks to underground. Our city is probably 79% underground now and we are trying to put everything underground except the major transmission lines. This is an ongoing effort by the city to reduce risk of power outages by downed powerlines.	City Funding
4	Severe Summer Storm	Mitigation Preparedness & Response Support	Continue to ensure that our outdoor warning siren is maintained and functioning.	Existing Moderate 2025-2030	City EM	The city works with Grant County to test our outdoor warning siren on the first Wednesday of each month to ensure it is working properly.	City Funding
5	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish watering restrictions during drought conditions and raise public awareness of water conservation measures.	New Moderate 2025-2030	City Admin	The city will establish watering restrictions as per MN DNR guidelines during periods of severe drought. The city will do local outreach to help make residents aware of the ordinance and the limitations on non-essential water usage.	City Funding
6	Flooding	Local Planning & Regulations	Continue to address stormwater management planning to handle future high-rain events that impact the city.	Existing Moderate 2025-2030	City Utilities & Streets Dept.	Our city Utilities & Streets Superintendent continues to address stormwater system improvements as needed.	City Funding

CITY OF HERMAN — 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 2025-2030	City Admin / City EM	We post information on Local Facebook pages, newspaper, and the radio if needed. We also post information on bulletin boards at City Hall, Post Office, and Bank. We make announcements at City Council meetings and post flyers on our community bulletin board outside of City Hall. We will work to share information we receive from Grant County Emergency Management during the NWS Severe Weather Awareness weeks that occur in April and November each year.	City Funding
2	All-Hazards	Education & Awareness Programs	Encourage residents in our community to sign up for the county's emergency notification system.	Existing High 2025-2030	City Admin / City EM	We will work with Grant County Emergency Management to help us post a flyer on it at City Hall, the Post Office, Bank and to promote sign up on our local Facebook pages.	City Funding
3	Extreme Cold	Education & Awareness Programs	Encourage residents to be prepared for periods of extreme cold and potential power outages. notify residents to avoid freezing pipes during sub-zero weather.	New High 2025-2030	City Admin / City EM	We will use our local Facebook pages and utility bills to provide information to our residents.	City Funding
4	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Acquire a portable generator for our Community Center, which is our designated community mass care shelter.	New High 2025-2030	City Admin / City EM	The city will work to purchase a generator as funding is available.	City Funding
5	Severe Summer Storms	Structure & Infrastructure Projects	Upgrade the city's outdoor warning siren.	New High 2025-2030	City Admin / City EM	The city will work with Grant County Emergency Management on this effort. It would be necessary to find significant outside grant funding to assist with this measure. We will ask GCEM to assist us in trying to identify potential grant funds.	City Funding, Other (TBD)

CITY OF HERMAN — Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
6	Severe Summer Storms	Structure & Infrastructure Projects	Construct a storm shelter for the city's municipal campground to protect visitors from severe storm events.	New High 2025-2030	City EM / City Public Works	The city will assess what opportunities exist to build a storm shelter for the campground and plan for the budget and implementation. Such a project may be part of a larger plan for campground improvements.	City Funding
7	Flooding	Structure & Infrastructure Projects	Continue to address stormwater management planning to handle future high-rain events that impact the city.	Existing Moderate 2025-2030	City Public Works	Our public works department continues to work with the city administration and the Grant County engineer on local flood reduction measures as needed.	City Funding
8	Flooding	Local Planning & Regulations	Enforce the city's sump pump ordinance to minimize impacts to the city's stormwater system.	Existing High 2025-2030	City Admin	The city continues to make residents aware of this ordinance via announcements at City Council meetings and reminders on our city Facebook pages.	City Funding
9	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish watering restrictions during drought conditions and raise public awareness of water conservation measures.	New Moderate 2025-2030	City Admin	The city will establish watering restrictions as per MN DNR guidelines during periods of severe drought. The city will do local outreach to help make residents aware of the ordinance and the limitations on non-essential water usage.	City Funding

CITY OF HOFFMAN — 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 2025-2030	City Admin / City EM	We post information on our city website and Facebook page. We also post information on bulletin boards at the post office and grocery stores. We will work to share information we receive from Grant County Emergency Management during the NWS Severe Weather Awareness weeks that occur in April and November each year.	City Funding
2	All-Hazards	Education & Awareness Programs	Encourage residents in our community to sign up for the county's emergency notification system.	Existing High 2025-2030	City Admin / City EM	We include information on signing up for CodeRED emergency notifications annually with our utility bills. City residents can sign up to receive CodeRed Alerts that are sent out via the Grant County Sheriff's Office.	City Funding
3	Extreme Cold	Education & Awareness Programs	Encourage residents to be prepared for periods of extreme cold and potential power outages.	Existing High 2025-2030	City Admin / City EM	This is an ongoing part of our public outreach to residents about winter safety. We will continue to use our city website, Facebook page, bulletin boards and city council meetings to share information with residents when we get into our extreme winter weather periods.	City Funding
4	Severe Summer Storms	Structure & Infrastructure Projects	Add an additional warning siren at the municipal campground and upgrade the existing storm shelter.	New High 2025-2030	City Admin / City EM	The city will work with Grant County Emergency Management on this effort. It would be necessary to find significant outside grant funding to assist with this measure. We will ask GCEM to assist us in trying to identify potential grant funds.	City Funding, Other (TBD)
5	Severe Summer Storms	Structure & Infrastructure Projects	Construct storm shelter on 8th street for those residents that live in a slab-on-grade home. Develop evacuation and sheltering plan with those residents.	New High 2025-2030	City Admin / City EM / City Public Works	The city will work to assess what our options are for construction of a possible storm shelter facility, or an alternative evacuation site for temporary sheltering during a severe storm event.	City Funding

CITY OF HOFFMAN — Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
6	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish watering restrictions during drought conditions and raise public awareness of water conservation measures.	New Moderate 2025-2030	City Admin	The city will establish watering restrictions as per MN DNR guidelines during periods of severe drought. The city will do local outreach to help make residents aware of the ordinance and the limitations on non-essential water usage.	City Funding
7	Flooding	Local Planning & Regulations	Enforce the city's sump pump ordinance to minimize impacts to the city's stormwater system.	Existing High 2025-2030	City Admin	The city continues to make residents aware of this ordinance via announcements at City Council meetings and reminders on our city Facebook page.	City Funding
8	Flooding	Structure & Infrastructure Projects	Address stormwater management and drainage improvement to reduce the impacts of high rain events.	Existing High 2025-2030	City Public Works	Our public works department continues to work to address our city park and a city lift station that is prone to flooding during high rain events. We need to update the drainage at our Fire Department Building as this location is typically used as a hub for emergency services during a hazard. We may look to apply for MN DNR The Flood Risk Reduction Grant Assistance Program or FEMA HMA grant funding.	City Funding, Possible MN DNR FDR or FEMA grant funding

CITY OF NORCROSS — 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 2025-2030	City Admin / City EM	We do not have a city website or Facebook page, primarily we share information with residents at our city council meetings or by posting informational flyers. We will work to share information we receive from Grant County Emergency Management during the NWS Severe Weather Awareness weeks that occur in April and November each year.	City Funding
2	All-Hazards	Education & Awareness Programs	Encourage residents in our community to sign up for the county's emergency notification system.	Existing High 2025-2030	City Admin / City EM	We direct residents to go to the Grant County website to sign up for CodeRED and will continue to do so.	City Funding
3	Extreme Cold	Education & Awareness Programs	Encourage residents to be prepared for periods of extreme cold and potential power outages.	Existing High 2025-2030	City Admin / City EM	This is an ongoing part of our public outreach to residents about winter safety. We share information with residents when we get into our extreme winter weather periods.	City Funding
4	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish watering restrictions during drought conditions and raise public awareness of water conservation measures.	New Moderate 2025-2030	City Admin	The city will establish watering restrictions as per MN DNR guidelines during periods of severe drought. The city will do local outreach to help make residents aware of the ordinance and the limitations on non-essential water usage.	City Funding
5	Flooding	Structure & Infrastructure Projects	Continue to address stormwater management planning to handle future high-rain events that impact the city.	Existing Moderate 2025-2030	City Public Works	Our public works department continues to work with the city administration and the Grant County engineer on local flood reduction measures as needed.	City Funding

CITY OF WENDELL — 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 2025-2030	City Admin / City EM	We share information on our city website, our city Facebook page, by posting information flyers at City Hall and by making announcements at City Council meetings. We will work to share information we receive from Grant County Emergency Management during the NWS Severe Weather Awareness weeks that occur in April and November each year. Our city website includes a link for residents to get signed up for city alerts.	City Funding
2	All-Hazards	Education & Awareness Programs	Encourage residents in our community to sign up for the county's emergency notification system.	Existing High 2025-2030	City Admin / City EM	We will work with Grand County Emergency Management to help us to get a link for residents to sign up on the county website for CodeRED. We will also share information with residents via posted information at City Hall and other locations, as well as via occasional announcements at City Council meetings.	City Funding
3	Extreme Cold	Education & Awareness Programs	Encourage residents to be prepared for periods of extreme cold and potential power outages.	Existing High 2025-2030	City Admin / City EM	This is an ongoing part of our public outreach to residents about winter safety. We will continue to use our city website, Facebook page, bulletin boards and city council meetings to share information with residents when we get into our extreme winter weather periods.	City Funding
4	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish watering restrictions during drought conditions and raise public awareness of water conservation measures.	New Moderate 2025-2030	City Admin	The city will establish watering restrictions as per MN DNR guidelines during periods of severe drought. The city will do local outreach to help make residents aware of the ordinance and the limitations on non-essential water usage.	City Funding

CITY OF WENDELL — Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
7	Flooding	Structure & Infrastructure Projects	Continue to address stormwater management planning to handle future high-rain events that impact the city.	Existing Moderate 2025-2030	City Public Works	Our public works department continues to work with the city administration and the Grant County engineer on local flood reduction measures as needed.	City Funding