

WADENA COUNTY MINNESOTA



2023

Hazard Mitigation Plan



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UNIVERSITY OF MINNESOTA DULUTH

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WADENA COUNTY MINNESOTA

HAZARD MITIGATION PLAN

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Section 1 – Introduction

1.1 Introduction

Hazard mitigation is defined as any sustained action to reduce or eliminate long-term risk to human life and property from hazard events. 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, 2015).

Since 1980, damages due to natural disasters in the U.S. exceeded \$2.295 trillion. 2017 was the costliest year on record with \$306 billion in damage, and while the costliest disasters may occur in coastal states, in 2020, wildfires, hailstorms, drought, and tornadoes caused a record amount of billion-dollar disasters across the nation (Smith, 2022). 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 wellbeing 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. For communities to be eligible for future mitigation funds, they 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).

Wadena County is vulnerable to a variety of natural hazards that threaten the loss of life and property in the county. Hazards such as tornadoes, flooding, wildfires, blizzards, straight-line winds, and droughts have the potential for inflicting vast economic loss and personal hardship.

This HMP represents the efforts of Wadena County and its local governments to fulfill the responsibility of hazard mitigation planning. The intent of the plan is to limit the damages and losses caused by specific hazards.

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

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



[Wadena County HMP website](#)

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

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 Wadena County Emergency Management to facilitate an update to the 2015 Wadena 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 Wadena 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 Wadena County, including the cities of Aldrich, Menahga, Nimrod, Sebeka, Staples, Verndale, and Wadena. The Wadena 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 Wadena County after final approval by FEMA (see Appendix B).

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

- Include more recent data documenting the critical infrastructure and hazards faced by Wadena County.
- Reformat and reorganize the plan to reflect definitions of hazards as expressed in the 2019 Minnesota State Hazard Mitigation Plan.
- Reflect current hazard mitigation priorities in Wadena County.
- Encourage recipients and sub-recipients of hazard mitigation grants to consider climate change adaptation and resiliency 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 Wadena County HMP planning team is headed by the Wadena County emergency manager, who is the primary point of contact. Members of the Wadena County HMP planning team include representatives from the public and governmental sectors. Table 1 identifies the planning team individuals and the organizations they represent.

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

Jurisdictional representatives were contacted throughout the HMP process to help facilitate local participation and provide feedback on the hazards of concern to their communities. This feedback was used to develop local mitigation actions that they would seek to implement upon plan adoption (see Section 5.3 and Appendix H).

Table 1. Hazard Mitigation Planning (HMP) Team

Name	Agency/Organization	Participant Title
Tyler Wheeler	Wadena County Sheriff's Office	Emergency Management Director/Deputy Sheriff
Bryan Savaloja	Wadena County Sheriff's Office	Sergeant/Deputy Emergency Management Director
Michael Carr	Wadena County Sheriff's Office	County Sheriff
Cindy Pederson	Wadena County Public Health Department	PH Director
Erica Keppers	Wadena County Public Health Department	PH Director
Deana Malone	Wadena County Planning & Zoning Department	Zoning Administrator
Ryan Odden	Wadena County	County Coordinator
Murlyn Kreklau	Wadena County	County Commissioner
Jon Kangas	Wadena County	County Commissioner
Michael Weyer	Wadena County	County Commissioner
Sheldon Monson	Wadena County	County Commissioner
Adam Gunderson	City of Menahga Police Department	Chief of Police
Keith Frame	City of Nimrod	Mayor
Cheryl Hahn	City of Sebeka	City Administrator
Tighe Lane	City of Sebeka Police Department	Chief of Police
Jerel Nelsen	City of Staples	City Administrator
Scott Grabe	City of Staples	Public Works Director
Missi Birkholtz	City of Staples Police Department	Chief of Police

Name	Agency/Organization	Participant Title
Cole Yungbauer	City of Staples Fire Department	Fire Chief
Matt Uselman	City of Verndale	Public Works Manager
Melissa Current	City of Verndale	City Clerk/Treasurer
Tara Erckenbrack	City of Verndale	Mayor
Kim Schroeder	City of Wadena	City Administrator
George Deiss	City of Wadena	Mayor
Naomi Plautz	City of Wadena Police Department	Chief of Police/Emergency Manager
David Evans	City of Wadena	Interim City Administrator
Andrew Browne	City of Wadena Fire Department	Secretary-Firefighter
Janelle VanAlst	Bullard Township	Township Clerk
Marion Hansen	Meadow Township	Township Clerk
Jeannie Arthur	Red Eye Township	Township Clerk
Larry Huotari	Red Eye Township	Township Chairperson
Tyler Fisher	Todd-Wadena Electric Cooperative	Operations Manager
Lisa Villcheck	MN Department of Homeland Security and Emergency Management	HSEM Region 4 Regional Program Coordinator
Josh Hanson	USDA Natural Resources Conservation Service	District Conservationist
Chad Emery	Cass County Sheriff's Office	Deputy Sheriff/Emergency Management Coordinator
Scott Williams	Hubbard County Sheriff's Office	Deputy Sheriff/Emergency Manager
Patrick Waletzko	Otter Tail County	Emergency Management Director

2.2 Review of Existing Plans, Capabilities & Vulnerabilities

Wadena 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 2019 Minnesota All-Hazard Mitigation Plan was consulted.

In the development of the Wadena 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 Wadena 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 Wadena 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 Wadena County to support mitigation.

Local Mitigation Surveys: As part of Wadena County’s 2023 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 Wadena County LMS report, see Appendix C).

2.3 Planning Process Timeline and Steps

In order to update the 2015 Wadena County HMP, U-Spatial consultants worked in coordination with Wadena County Emergency Management and members of the planning team. The updated plan includes new data documenting the types of hazards faced by Wadena County residents and emergency planning officials as well as new thinking on how to address these hazards.

2.3.1 WADENA COUNTY STAKEHOLDER COORDINATION

Two planning team meetings took place via Zoom video conference hosted by U-Spatial. Meeting participants included representatives from Wadena 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 opportunity for public input, Wadena 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. The public feedback period for the draft plan was

open from 1/9/23 to 1/23/23, for a period of 15 days.

Table 2 documents dates of Hazard Mitigation update meetings and public outreach. Appendix G provides documentation of the public outreach for feedback on the draft plan by Wadena County and jurisdictions.

Table 2. Wadena County Hazard Mitigation Update meetings and public outreach

Event	Date	Appendix
Kickoff Webinar	7/29/21	Appendix F, Planning Team Meetings
News Release #1	9/8/21	Appendix G, Public Outreach & Engagement Documentation
Planning Team Meeting #1	1/13/22	Appendix F, Planning Team Meetings
Planning Team Meeting #2	10/28/22	Appendix F, Planning Team Meetings
News Release #2	1/9/23	Appendix G, Public Outreach & Engagement Documentation

At the close of the public outreach period, the U-Spatial consultants worked with the Wadena County Emergency Manager and members of the planning team to incorporate feedback from the public 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, Wadena 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 Wadena 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 Wadena 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 Wadena 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 Wadena 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. Wadena 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 the participation of each city that took part in the Wadena County HMP update planning process, with reference to the location of 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
Wadena County (14,061)	X	X	X	X	X	X
City of Aldrich (35)	X		X	X		X
City of Menahga (1,324)	X	X	X			X
City of Nimrod (88)	X	X	X		X	X
City of Sebeka (732)	X	X	X	X		X
City of Staples (900)	X	X	X	X	X	X
City of Verndale (504)	X	X	X	X	X	X
City of Wadena (4,203)	X	X	X	X	X	X
Neighboring Jurisdictions:						
Hubbard County		X			X	
Cass County		X			X	
Todd County						
Otter Tail County		X				
Becker County						

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.

[See a list of all natural hazards covered in the 2023 HMP](#)

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

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.

3.1 Hazard Identification and Prioritization

The cornerstone of the risk assessment is identification of the hazards that affect jurisdictions. Listed below are the natural hazards addressed in the 2019 Minnesota State Hazard Mitigation Plan:

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

3.1.1 HAZARD PRIORITIZATION

As part of the plan update process, the planning team reviewed, updated, and prioritized the hazards faced by residents of Wadena County, updated the existing mitigation actions published in the 2015 HMP, and proposed new mitigation actions.

The team examined the hazards identified in the 2015 HMP and adjusted to reflect the definitions of natural hazards used in the 2019 Minnesota State Hazard Mitigation Plan.

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

Table 4. Prioritization of hazards for 2023 Wadena County HMP update

Natural Hazards	2023 Priority
Flooding	High
Wildfire	High
Windstorms	High
Tornadoes	Moderate
Winter Storms	Moderate
Hail	Moderate
Extreme Cold	Moderate
Drought	Moderate
Dam/Levee Failure	Low – but included
Extreme Heat	Low
Lightning	Low

The prioritization of hazards for the Wadena 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.

3.1.2 FEMA- AND MINNESOTA-DECLARED DISASTERS AND ASSISTANCE

Another historical perspective is derived from FEMA-declared disasters. Twelve major disasters and three emergency declarations in Wadena County have been made between 1957 and December 2022; details of these can be viewed on the [Wadena 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). Wadena County was not 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 which reduce disaster losses and protect life and property from future disaster damages (FEMA, 2021a). Table 5 lists the projects in the county funded by a hazard mitigation assistance program.

Table 5. Historical hazard mitigation funding awarded in Wadena County

Project Identifier	Sub-Grantee	Project Type	Federal Share (%75)
DR-1900-0007-R	Wadena-Deer Creek Public Schools	Safe Room (Tornado and Severe Wind Shelter) - Public Structures	\$950,462
DR-1982-0005-P	Wadena County	Local Multihazard Mitigation Plan	\$17,120

SOURCE: (MN HSEM, 2022)

3.2 Population 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)

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

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 who may need support in preparing for hazardous or recovering from disaster. The CDC SVI is created at the census tract level using American Community Survey (ACS) five-year data.

3.3 Climate Change

Minnesota’s climate is currently changing in ways that are pushing us to adapt to weather patterns and extreme events that pose major threats to our health, homes, environment, and livelihoods. These events cost our state millions in property loss, damaged infrastructure, disrupted business, medical care, and support services, and put residents and responders at risk. Understanding how our weather is changing now and into the future will help planners and decision-makers in emergency management and supporting fields extend our progress in climate adaptation and lead to more resilient communities (MDH, 2018).

[Climate Change and Natural Hazards](#)

The National Climate Assessment suggests that infrastructure planning (particularly water resources infrastructure) should “be improved by incorporating climate change as a factor in new design standards and asset management and rehabilitation of critical and aging facilities, emphasizing flexibility, redundancy, and resiliency” (Georgakakos, et al., 2014).

Federal, state, and tribal governments are increasingly integrating climate change adaptation into existing decision-making, planning, or infrastructure-improvement processes (Georgakakos, et al., 2014). Definite predictions are difficult to make, as changes may vary depending on geographical location, even within Minnesota. Intense study of these topics is ongoing.

Rural communities are particularly vulnerable to climate change, due to their dependence upon natural resources, physical isolation, limited economic diversity, higher poverty rates and aging populations. According to *Climate Change Impacts in the United States: The Third National Climate Assessment*,

Warming trends, climate volatility, extreme weather events, and environmental change are already affecting the economies and cultures of rural areas. Many rural communities face considerable risk to their infrastructure, livelihoods, and quality of life from observed and projected climate shifts. These changes will progressively increase volatility in food commodity markets, shift the ranges of plant and animal species, and, depending on the region, increase water scarcity, exacerbate flooding and coastal erosion, and increase the intensity and frequency of wildfires across the rural landscape (Hales et al., 2014).

The Assessment also notes that transportation systems in rural areas are more vulnerable to risks such as flooding since there are typically fewer transportation options and infrastructure redundancies. In addition, power and communication outages due to severe weather events typically take longer to repair in rural areas, which can increase the vulnerability of elderly populations. Rural area populations are also more vulnerable since they typically have limited financial resources to deal with the effects of climate change.

The composition of the region's forests is expected to change as increasing temperatures shift tree habitats northward. While forests in the Midwest are currently acting as a net absorber of carbon, this could change in the future due to projected increases in insect outbreaks, forest fires, and drought, which will result in greater tree mortality and carbon emissions (Pryor et al., 2009).

3.4 Jurisdictional Change in Risk or Vulnerability Assessment

Jurisdictions in Wadena 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 5 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, Wadena 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. Following are examples of common responses related to noted local vulnerabilities (as preserved in Appendix C: Part A, Question 3) for each jurisdiction. 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.

Wadena County

Extreme Cold: Residents are susceptible to dangers from extreme cold, especially if the power goes down during winter storm events. We have a high population of seniors and also low-income residents who are more vulnerable during these events.

In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold.

Thunderstorm, Tornado, Windstorm, Ice Storm, Blizzard: A vast majority of electrical infrastructure in Wadena County is above ground. These lines are prone to failure in ice storms and blizzards with heavy snowfall and high wind events that may bring down trees and branches onto power lines.

We have a mobile home park within the county jurisdiction that does not have a storm shelter and residents are vulnerable to high wind and tornado events.

The county's parks along the Crow Wing River do not have severe weather sirens or shelters, which leaves residents, guests, and visitors vulnerable to severe weather.

Flooding: Area flooding encroaches upon and often overtops township and county roads, wearing away soils of the roadbed and creating significant erosion if not a complete washout of the roadway. Often times this alters public safety and transportation systems.

Most of Wadena County cities have their own utility systems. Flood/flash flooding has and could continue to pose problem to each city's sewer and well service.

Wildfire: Wadena County has heavily wooded and grassland areas especially on the Northeastern portion of the county near and around the Huntersville State Forest. Wadena County has suffered from several large wildfires in the past which has destroyed homes and impacted other infrastructure, and businesses.

City of Menahga

Extreme Cold: Water mains along with private water lines are susceptible to extreme cold temperature.

Windstorms: All powerlines in the city are vulnerable when some weather event happens that could cause power outages in the city and failure to the operation of the city water and wastewater collections systems.

City of Sebeka

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: We have 1 mobile home park within the city that does not have a storm shelter and residents are vulnerable to high wind and tornado events.

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

Many homes in are built on slab with no basement. These residents are at greater risk during severe wind events.

Extreme Cold: Residents are susceptible to dangers from extreme cold, especially if the power goes down during winter storm events. We have a high population of senior citizens and also low-income residents who are more vulnerable during these events.

In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold.

The city has also experienced damages to roads from spring frost heaves and frozen culverts that cause localized flooding.

City of Staples

Windstorm, Tornadoes: Damage to structures, trees, etc. Mobile Home Parks and campground are areas vulnerable to high wind events.

Ice Storm: Some 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.

The city is served by two substations. If we lost the feed to the South Sub, the North Sub could be overloaded unless steps were taken to reduce load.

Dower Lake Campground needs plans for shelter in place.

Extreme Cold: There are several homes that are served by shallow water service lines and are susceptible to freezing.

Many of the City's water mains are cast iron and are susceptible to breaking.

The city is served by two substations. If we lost the feed to the South Sub, the North Sub could be overloaded unless steps were taken to reduce load.

City of Verndale

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: We have 1 mobile home park within the city that does not have a storm shelter and residents are vulnerable to high wind and tornado events.

Extreme Cold: Residents are susceptible to dangers from extreme cold, especially if the power goes down during winter storm events.

In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold.

City of Wadena

Ice Storms, Flooding, Windstorms, Tornadoes: Some city buildings are vulnerable to these natural hazards, with the most vulnerable being our wastewater treatment plant; because it is so critical to the city’s infrastructure.

We need a few more storm shelters in our city. We have a few mobile home parks (2 in the city and one on the edge). With the railroad, at times it is difficult to get to the one storm shelter/safe room in a timely manner.

Lightning, Winds: Our overhead electrical lines and substations are vulnerable to these natural hazards, along with underground lines too.

Flooding: With our water we have aging infrastructure which would not be able to hold up under extreme conditions.

3.4.2 FUTURE DEVELOPMENT

Because Wadena 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. Wadena 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 Wadena 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. Following is a compilation of common responses as noted in Appendix C: Part A, Question 5.

Wadena County

Wadena County's campgrounds along the Crow Wing River and remote/rural locations have grown in popularity over recent years. These populations that enjoy the campgrounds are vulnerable to severe weather as there are no storm shelters close by or outdoor warning sirens.

City of Sebeka

With the construction of a new assisted living facility, there are now two large concentrations of senior residents in one location that will need assistance during a disaster event.

City of Staples

Regularly freezing service lines can lead to damage to the line and possibly to the water main. Multi-unit housing built without basements for shelter.

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 Wadena 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 Wadena 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. A capabilities assessment was also conducted by the county to review the plans and programs that are in place or that are lacking (program gaps or deficiencies) for the implementation of 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](#)

Hazards that were deemed by Wadena County to be of moderate to high risk are addressed in the following hazard profiles. Hazards that were determined to be of low risk or without substantive mitigation actions to address them are not required to be included.

4.1 Flooding

Flooding is the most significant and costly natural hazard in Minnesota. Ten of the 15 federal disaster declarations in Wadena County included flooding.

4.1.1 PROBABILITY OF OCCURRENCE

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. The county’s depth grids were modeled in Hazus using the EQL method. The resulting Hazus 1% annual chance floodplain is shown in the Flood Vulnerability dashboard on the Wadena County HMP website (Figure 1), where it is available in an interactive form.

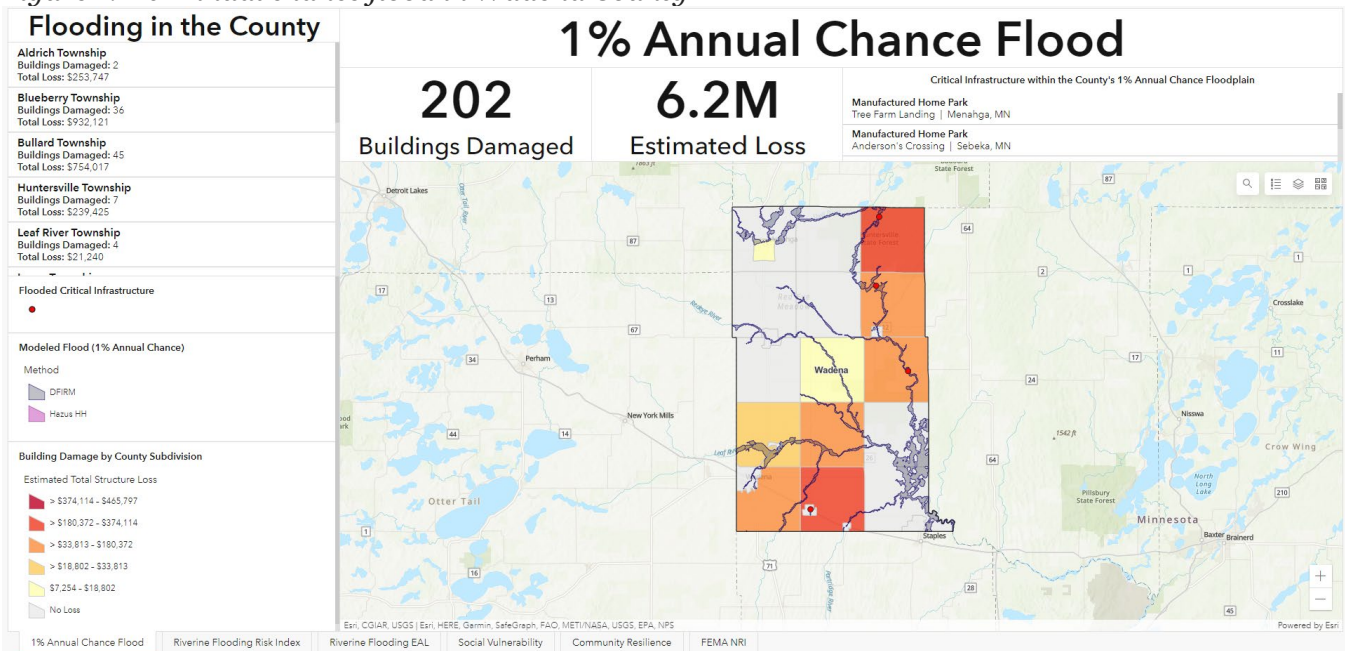
[View interactive maps and see information about flooding history, risk, and vulnerability](#)

4.1.2 VULNERABILITY

Potential economic loss estimates were based on county-specific building data. Wadena 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 Wadena County](#)

Figure 1. 1% Annual chance flood in Wadena 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, 13,483 points were input to Hazus to represent buildings with a total estimated building plus contents value of \$1.9 billion. Approximately 65% of the buildings (and 54% of the building value) are associated with residential housing.

The estimated loss by occupancy class for the entire county is shown in Table 6.

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 for the purposes of visualizing the loss (see map [here](#)). 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.

Table 6. 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	8,793	\$1,038,144,638	243	\$32,087,700	182	\$5,773,763
Commercial	631	\$163,185,200	3	\$241,000	3	\$22,646
Other	4,059	\$737,860,452	48	\$7,997,400	17	\$413,567
Totals	13,483	\$1,939,190,290	294	\$40,326,100	202	\$6,209,976

SOURCE: (FEMA, 2021B)

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 Wadena 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 Wadena 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, 2018).

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. None of Wadena County's critical infrastructure was determined to be in the 1% chance flood boundary using the available facility data. However, four manufactured home parks were found to be at risk in the 1% annual chance flood in Menahga, Sebeka, and Verndale (2). These are vulnerable sites and have been mapped in the [Wadena County HMP website](#). No other information is available.

Community Vulnerability

Potential economic losses were estimated by Census Minor Civil Division. Shell River and Thomastown Townships would suffer significant estimated losses in the 1% annual chance flood. All jurisdictions with buildings identified in the 1% annual chance flood zone can also be viewed on the Wadena 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 of localized vulnerabilities to specific hazards.

4.1.3 PROGRAM GAPS AND DEFICIENCIES

Wadena County Emergency Management identified several 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:

Increasing Culverts and Raising Roads: Some roads, bridges, and culverts within Wadena County continue to need improvements as they are impacted by annual high rain events. The county needs funding assistance to improve roads and culverts that experience repetitive flooding.

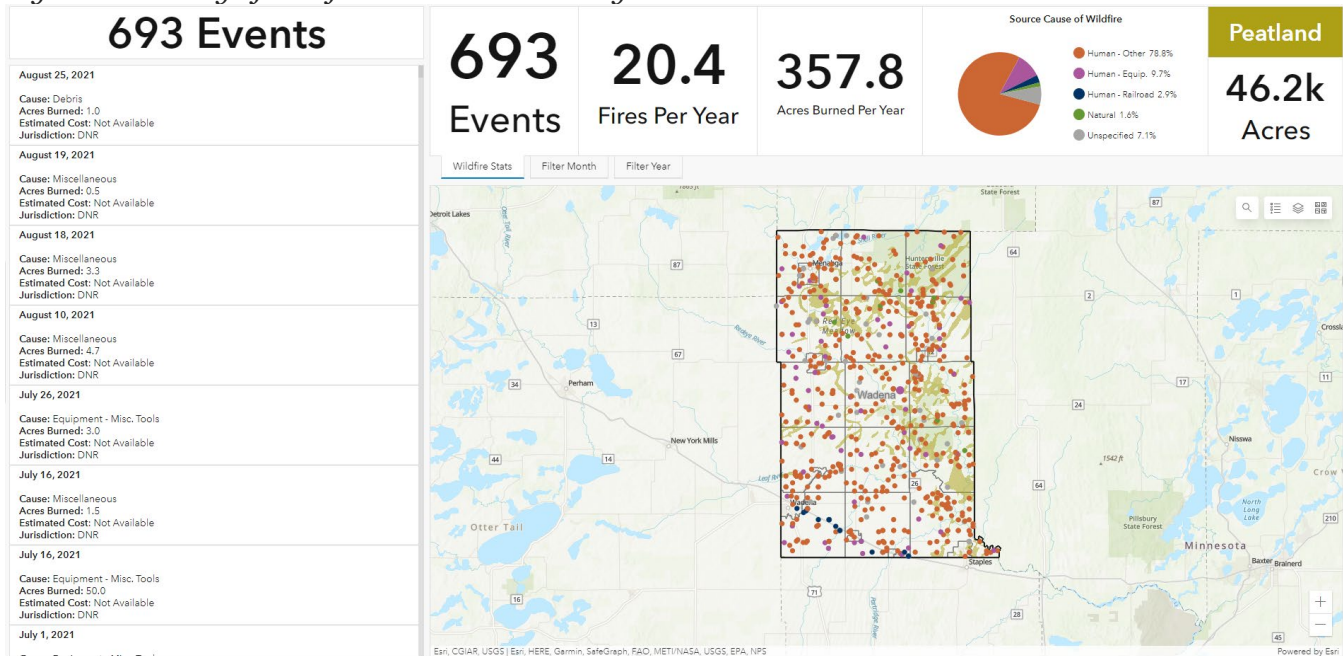
Road Infrastructure: Flood mitigation for county and township roads (e.g., culvert replacements, road repair) is an ongoing need. The county and many of our townships have limited funding for road infrastructure. Wadena County continues to provide assistance on road infrastructure mitigation projects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

4.2 Wildfires

A wildfire is an uncontrolled fire spreading through vegetative fuels, posing danger and destruction to property. Minnesota experienced an average of 1,400 wildfires each year between 1985 and June 2021 (MN DNR, 2021b). Wildfires occur throughout the spring, summer and fall; however, most wildfires in Minnesota take place in March, April and May. The history of wildfire in Wadena County is shown in Figure 2; an interactive map is available on the Wadena County HMP website.

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

Figure 2. History of wildfire in Wadena County



4.2.1 PROBABILITY OF OCCURRENCE

To determine the probability of future wildfires Wadena County, records of previous wildfire events in were summed and divided by the dataset’s period of record, resulting in the annual relative frequency of wildfires during the period of record. Based on Minnesota DNR records, from January 1985 to June 10, 2021, the relative frequency of wildfire events in the county is 20-21 per year (MN DNR, 2021c). This relative frequency can be used to infer the probability of these events occurring in the future.

4.2.2 VULNERABILITY

Wildfires jeopardize the built environment, health, and wellbeing of individuals living near its fuel source. Some residents are more vulnerable to air quality conditions of wildfire, including children, older adults, and those with respiratory issues (AirNow, 2021).

Structures located in areas near undeveloped wildland are vulnerable to wildfires. The SILVIS Lab at University of Wisconsin–Madison created a dataset documenting the changes of the wildland–urban interface (WUI) in the United States from 1990 to 2010. Radeloff et al. (2018) define WUI as the area where structures and other human development meet or intermingle with wildland vegetation. With the increase of development in metropolitan fringes and rural areas, the WUI is growing. The expansion of the WUI in recent decades has significant implications for wildfire management and impact as it creates an environment in which fire can readily move between structural and vegetation fuels. Its expansion has increased the likelihood that wildfires will threaten structures and people (Radeloff et al., 2018).

There are two main types of WUI: intermix and interface. Intermix WUI are areas where housing and wildland vegetation intermingle; interface WUI are areas where housing are adjacent to wildland vegetation (Radeloff et al., 2018). Table 7 shows the change of total WUI (intermix and interface) in the county from 1990 to 2010, and the percent of the county’s land, housing, and population located in the WUI area.

Table 7. Wildland-Urban Interface (WUI), Wadena County, 1990–2010

	Total WUI 1990	Total WUI 2000	Total WUI 2010	% Change (1990–2010)
Land Area	3.8%	4.0%	4.4%	+15.8%
Housing	24.4%	26.4%	28.3%	+15.9%
Population	21.8%	24.5%	26.3%	+20.6%

SOURCE: (RADELOFF ET AL., 2019)

The cities of Wadena and Aldrich have significant total WUI within its borders. The cities of Menahga, Sebeka, Nimrod, Staples, Aldrich, and Wadena; as well as the communities of Blueberry and Thomastown have significant intermix. These communities along with others in WUI areas are more vulnerable to wildfires.

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

4.2.3 PROGRAM GAPS AND DEFICIENCIES

Wadena County Emergency Management identified existing program gaps and deficiencies that make its residents more vulnerable to wildfire. These gaps should be addressed with new mitigation efforts to reduce vulnerability, outlined as follows:

Community Wildfire Protection Plan: Wadena County does not have a Community Wildfire Protection Plan (CWPP) in place. Wadena County should consider the opportunity to work with the MN DNR Firewise Program and local fire departments to conduct a coordinated, comprehensive risk assessment for wildfire risk and identify High-Risk Wildfire Areas and targeted wildfire mitigation activities. Having

a CWPP in place will also allow the county and communities to be eligible to apply for MN DNR Firewise grant funding for eligible wildfire mitigation activities.

Rural Water Access for Wildland Firefighting: There are areas within Wadena County where improved water access is needed for fighting wildfire. These areas are rural and not supported by a municipal water source. Local fire departments have the opportunity assess their needs and to work with the MN DNR to evaluate the potential for dry hydrant/well access projects.

Public Awareness: Raising public awareness of wildfire safety and dangerous conditions is an on-going effort of Wadena County Emergency Management, local fire departments, and the MN DNR.

Firewise Assessments: Level-1 Firewise assessments should be encouraged for homeowners living in rural, woodland high-risk wildfire areas.

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

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

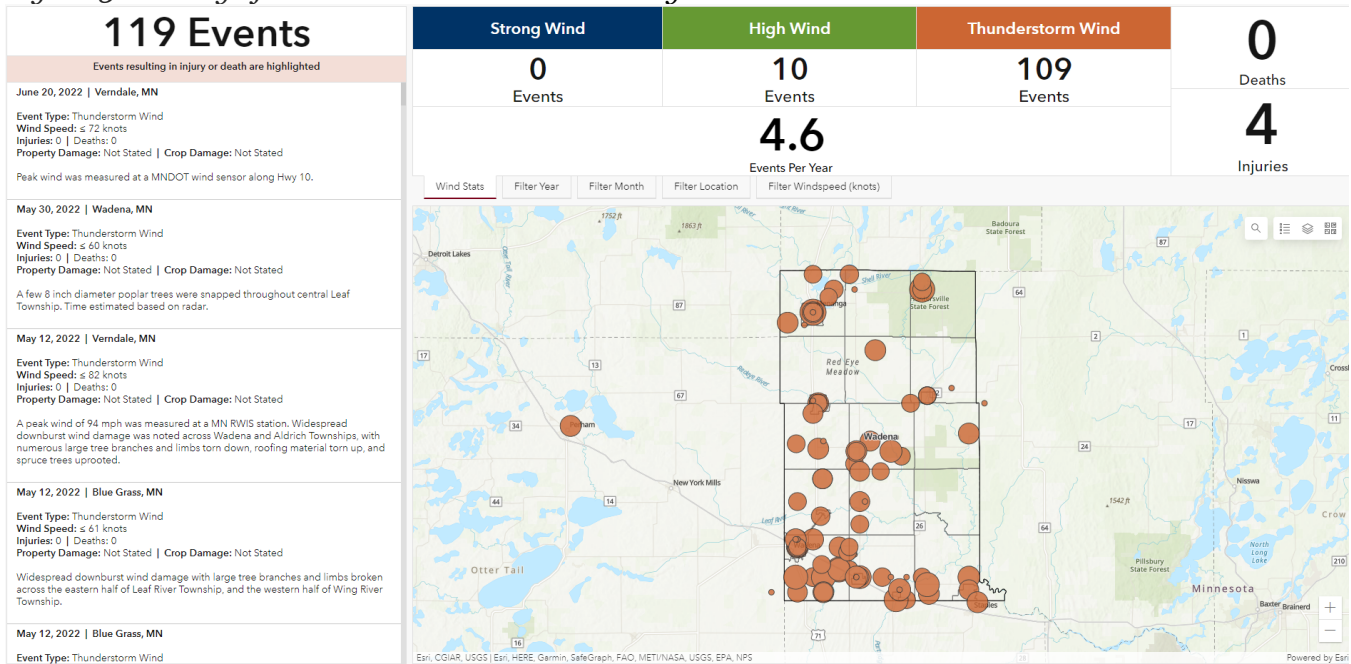
4.3.1 PROBABILITY OF OCCURRENCE

To determine the probability of future wind-related events in Wadena County, records of previous wind-related events (strong wind, high wind, and thunderstorm wind) in Wadena County were examined since 1996, the period of record all wind events have in common. The relative frequency of all wind-related events since January of 1996 is 4.6 per year. 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 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.

Figure 3. History of windstorms in Wadena County



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 of localized vulnerabilities to specific hazards.

4.3.3 PROGRAM GAPS AND DEFICIENCIES

Wadena County Emergency Management identified several 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 Wadena County are above ground, exposing them to impacts/damage from high wind events, potentially leading to localized or extensive power outages.

Public Education: Continued public education needs to be conducted during tornado season to inform the public on what is a tornado watch/warning and what to do when outdoor warning sirens are activated. Ongoing public education is also needed to encourage residents to be ready for long-term power outages during dangerous spring and summer storm events such as thunderstorms or high wind events.

Storm Shelters and Tornado Safe Rooms: There are areas throughout the county without viable storm shelters or tornado safe rooms where there are populations vulnerable to high wind and storm events, such as campgrounds, resorts, mobile home parks, schools, and other seasonal gathering locations such as the county fairgrounds and county parks that offer camping. 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 appropriate.

4.4 Tornadoes

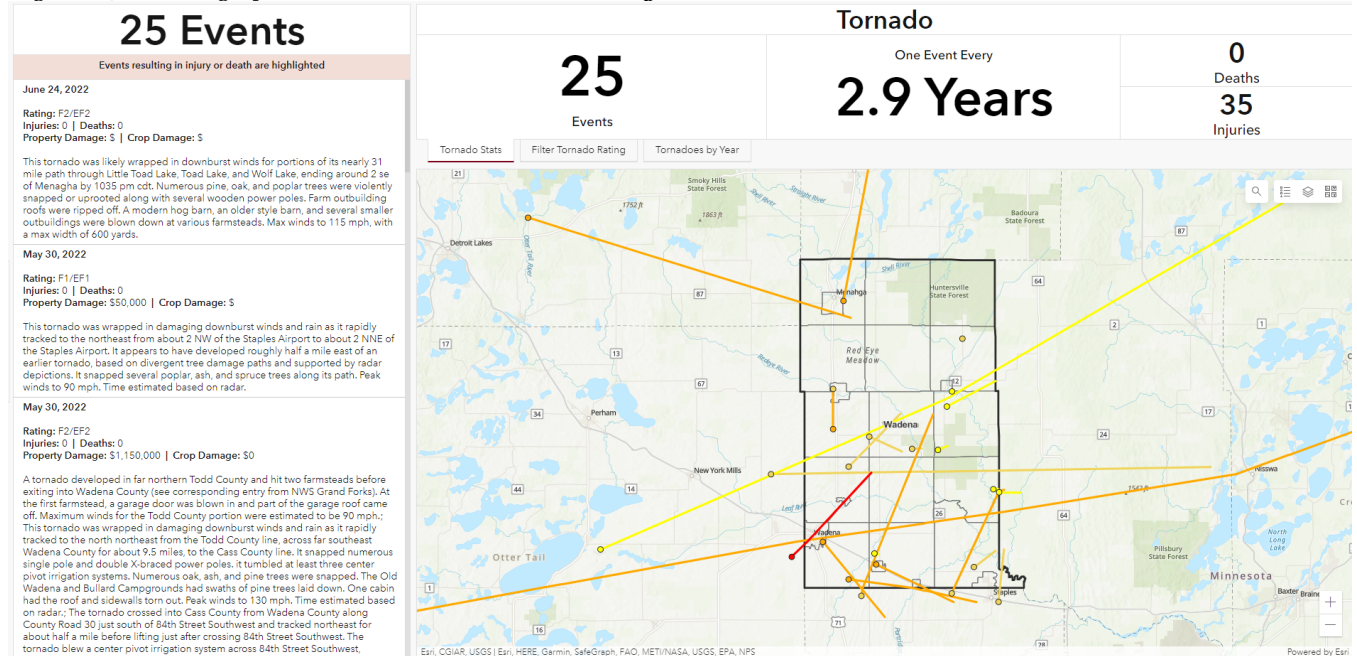
With wind speeds reaching up to 300 mph, tornadoes are one of nature’s most violent storms (Hogeback, 2020). The history of tornadoes in Wadena County is shown in Figure 4; an interactive version of this map can be found on the Wadena County HMP website.

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

4.4.1 PROBABILITY OF OCCURRENCE

Estimating the probability of future tornadoes in Wadena County was done using two methods. The first method summed the total number of tornadoes which 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 February 2020, there has been one tornado every 2.9 years in Wadena County. These 25 tornadic events occurred in 16 of the 70 years on record.

Figure 4. History of tornadoes in Wadena County

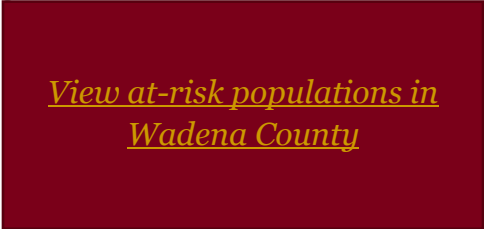


Because tornadoes often cross county lines and tornadic frequency may be better understood using events from a larger area, a second method was used to describe the frequency of tornadic events within a 50-mile radius of any location within the county. A grid of 900 square-meter cells was used to cover 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 Wadena County, there was an annual frequency of 2-3 tornadoes within a 50-mile radius. The historical frequency was only slightly higher in the southeast than the northwest. These relative frequencies can be used to infer the probability of these events occurring in the future.

4.4.2 VULNERABILITY

The likelihood of a tornado does not vary significantly across geography within Wadena 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 of localized vulnerabilities to specific hazards.



People living in mobile homes are particularly vulnerable to tornadoes due to them not being able to withstand the strong winds produced by a tornado. According to NOAA's Storm Prediction Center, from 1985–2002, 49% of tornado fatalities in the United States were people who remained within or attempted to flee from mobile homes (AMS, 2004). While Minnesota law requires most mobile home parks to have storm shelters, many do not (Sepic, 2017).

4.4.3 PROGRAM GAPS AND DEFICIENCIES

Wadena County Emergency Management identified that there are several 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 Wadena County are above ground, exposing them to impacts/damage from high wind events, potentially leading to localized or extensive power outages.

Public Education: Continued public education needs to be conducted during tornado season to inform the public on what is a tornado watch/warning and what to do when outdoor warning sirens are activated. Ongoing public education is also needed to encourage residents to be ready for long-term power outages during dangerous spring and summer storm events such as thunderstorms or high wind events.

Storm Shelters and Tornado Safe Rooms: There are areas throughout the county without viable storm shelters or tornado safe rooms where there are populations vulnerable to high wind and storm events, such as campgrounds, resorts, mobile home parks, schools, and other seasonal gathering locations such as the county fairgrounds and county parks that offer camping. 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 appropriate.

4.5 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, 2019). In 2017, 44% of properties in Minnesota were affected by damaging hail events (Samanta & Wu, 2017). The history of hail in Wadena County is shown in Figure 5; an interactive version of this map can be found on the Wadena County HMP website.

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

4.5.1 PROBABILITY OF OCCURRENCE

To determine the probability of future hailstorms in Wadena County, records of previous hail events in the county were examined for the period of record. From January 1955 through January 2020, the relative frequency of hail events was 2.2 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.

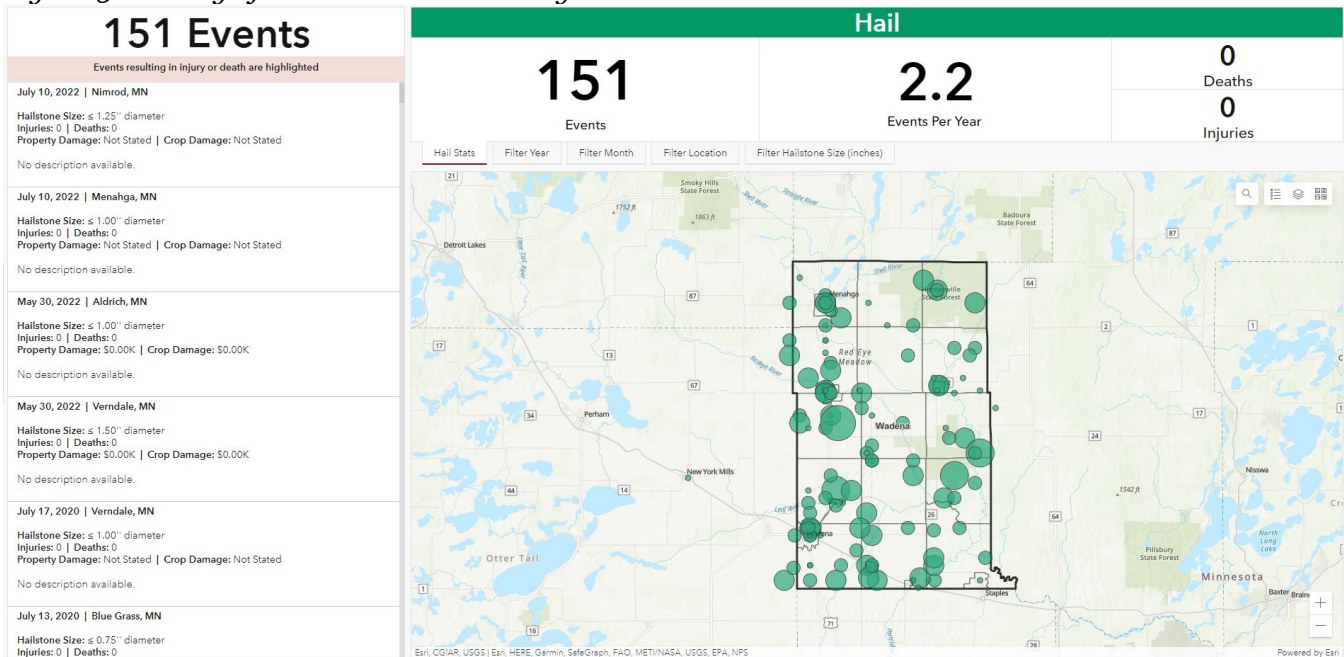
4.5.2 VULNERABILITY

Wadena 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 2018 Wadena County reported \$1,303,314 in hail damages, ranking 79th among Minnesota counties in total hail damages. Wadena County's losses are primarily due to property damages reported at \$705,484, followed by \$597,830 in crop damages. Crop indemnity payments due to hail totaled \$305,718 for the period of record spanning 1989–2018 (CEMHS, 2019).

Within Wadena 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 of localized vulnerabilities to specific hazards.

Figure 5. History of hail in Wadena County



4.5.3 PROGRAM GAPS AND DEFICIENCIES

Wadena County Emergency Management identified that there are several program gaps and deficiencies that make its citizens more vulnerable to summer storms, including hail. The following gaps and deficiencies should be addressed with new mitigation efforts to reduce that vulnerability:

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

Public Education: Continued public education needs to be conducted during tornado season to inform the public on what is a tornado watch/warning and what to do when outdoor warning sirens are activated. Ongoing public education is also needed to encourage residents to be ready for long-term power outages during dangerous spring and summer storm events such as thunderstorms or high wind events.

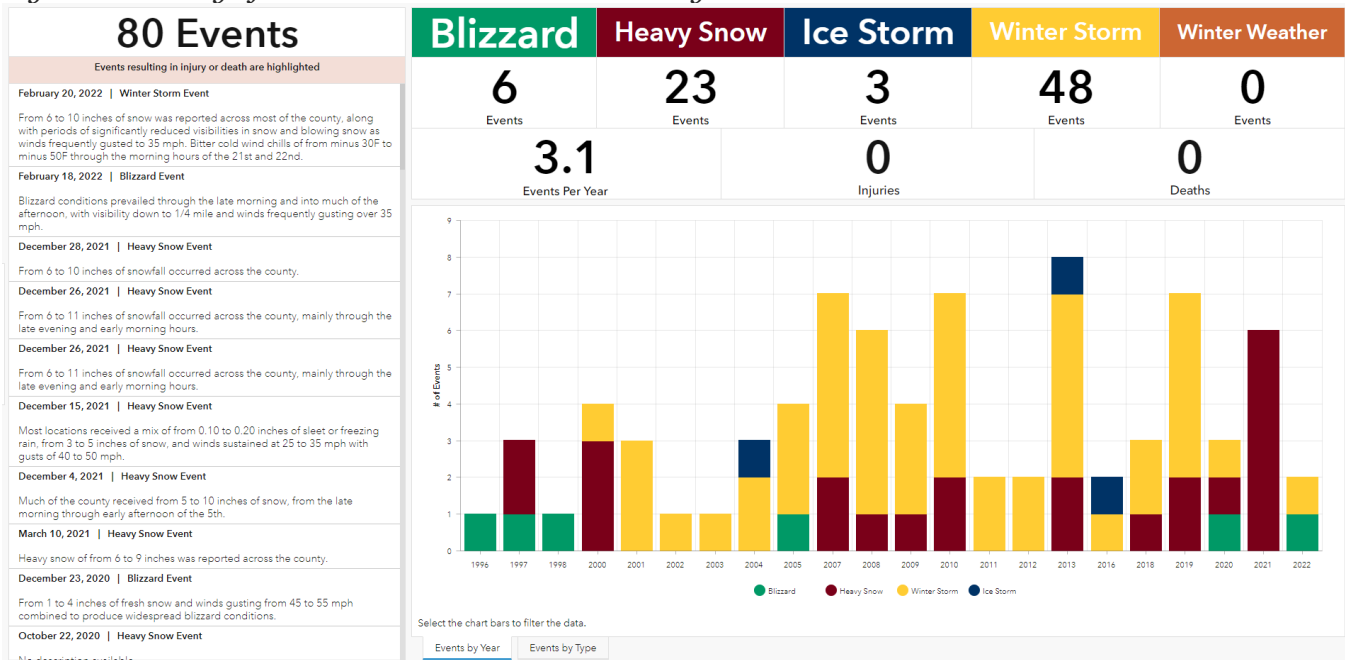
Storm Shelters and Tornado Safe Rooms: There are areas throughout the county without viable storm shelters or tornado safe rooms where there are populations vulnerable to high wind and storm events, such as campgrounds, resorts, mobile home parks, schools, and other seasonal gathering locations such as the county fairgrounds and county parks that offer camping. 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 appropriate.

4.6 Winter Storms

Winter storms encompass a number of 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 \$957 million dollars in damages since 1960 (CEMHS, 2019). The history of winter storms in Wadena County is shown in Figure 6; an interactive version of this map can be found on the Wadena County HMP website.

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

Figure 6. History of winter storms in Wadena County



4.6.2 PROBABILITY OF OCCURRENCE

To determine the probability of future winter-related storm events in Wadena 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 January 2020, the relative frequency of winter-related storm events in Wadena County is 3.1 per year. This relative frequency can be used to infer the probability of these events occurring in the future.

4.6.3 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 of localized vulnerabilities to specific hazards.

4.6.4 PROGRAM GAPS AND DEFICIENCIES

Wadena 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 Wadena 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.

4.7 Extreme Cold

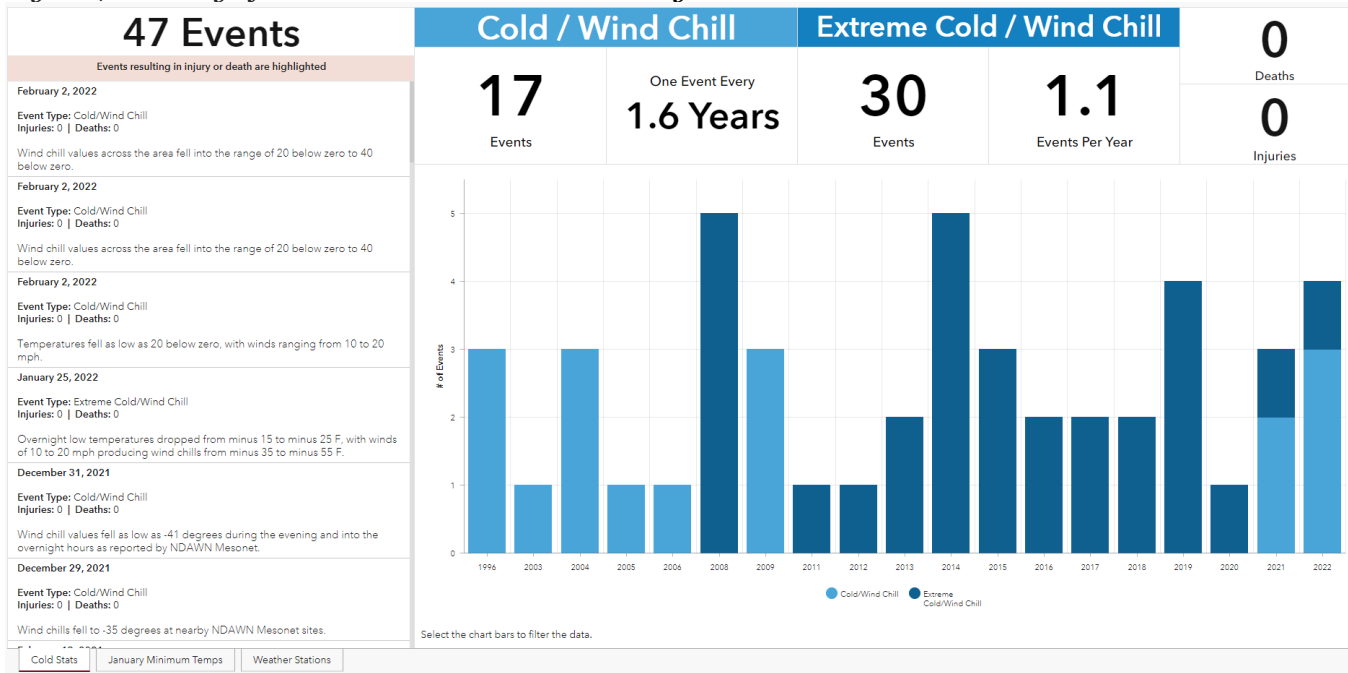
Due to Minnesota's position in the middle of the continent and subsequent climate, the state may experience extremely frigid temperatures in winter. Winter in Wadena County can be especially dangerous when low temperatures and wind create arctic-like wind chills. The history of extreme cold in Wadena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

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

4.7.1 PROBABILITY OF OCCURRENCE

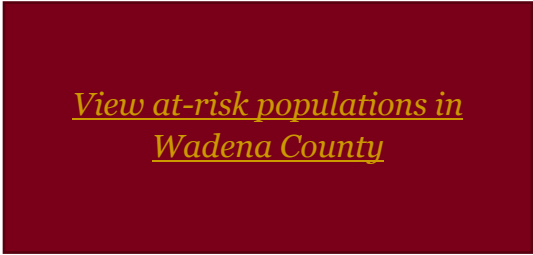
To determine the probability of future cold-related events in Wadena County, records of previous cold/wind chill and extreme cold/wind chill events were summed and divided by the dataset's period of record, resulting in the annual relative frequency. Based on records in the NCEI Storm Events Database through January 2020, the relative frequency of extreme cold/wind chill events in Wadena County is 1.1 per year. (NCEI, 2021). This relative frequency can be used to infer the probability of these events occurring in the future.

Figure 7. History of extreme cold in Wadena County



4.7.2 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)



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 of localized vulnerabilities to extreme cold.

4.7.3 PROGRAM GAPS AND DEFICIENCIES

Wadena 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.

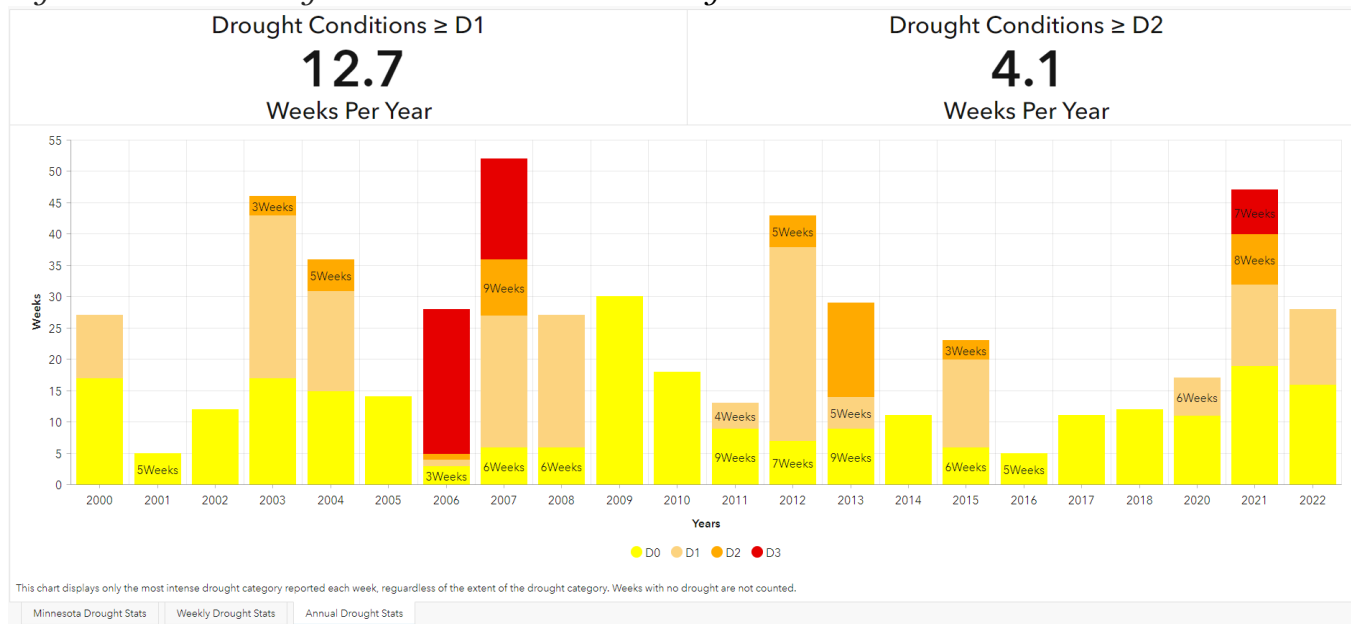
Public Education: Ongoing public education is needed to encourage residents to be prepared for extreme weather, including power outages during periods of extreme cold.

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 8; an interactive version of this dashboard can be found on the Wadena County HMP website.

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

Figure 8. Annual drought statistics in Wadena County since 2000



4.8.1 PROBABILITY OF OCCURRENCE

To determine the probability of future droughts in Wadena 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–August 2, 2021 for any occurrence of drought ≥ D1 in Wadena County, regardless of the duration of the drought. According to the weekly

reported data, the relative frequency of the county experiencing drought conditions $\geq D1$ is 12.7 weeks per year, and the relative frequency of drought conditions $\geq D2$ is 4.1 weeks per year (NDMC et al., 2021). 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 et al., 2021) 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 25 drought incidents impacting six sectors in Wadena County between 2000 and 2022. Since droughts are regional in nature, jurisdictions within Wadena 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, Wadena County’s agriculture sector has been impacted by drought more than once, and with 19% of Wadena 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 1989–2018, Wadena County received \$6,493,992 (2018 ADJ) in crop indemnity payments due to drought, placing it as the 17th-highest-paid county in Minnesota (CEMHS, 2019).

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

4.8.3 PROGRAM GAPS AND DEFICIENCIES

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

4.9 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).

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

Dam Inventory: There is only one dam in Wadena County. The Huntersville Twp 14 Dam is mapped on the Wadena County HMP website.

4.9.1 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. Dam failures are unlikely if the dam is maintained in compliance with Minnesota's Dam Safety Program. The Huntersville Twp 14 Dam in Wadena County has a rating of low hazard potential, and the likelihood of failure in Wadena County is also extremely low.

4.9.2 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 8 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 8. 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)

An Emergency Action Plan (EAP) is a document which 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).

There are no high hazard dams in Wadena County. The one low hazard dam is owned by Wadena County: the Huntersville Twp 14 Dam on the Crow Wing River built for debris control and flood risk reduction. Nimrod is the nearest community downstream from the dam (10 miles). The dam has a low hazard potential and is not required to have an Emergency Action Plan (EAP).

4.9.3 PROGRAM GAPS AND DEFICIENCIES

Wadena 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 Wadena County as related to hazard mitigation.
- Appendix C: As part of the Wadena 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 Wadena 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 9 lists and describes jurisdictional participation in the National Flood Insurance Program (NFIP).

Table 9. NFIP participation in Wadena County

Community Name	Participation in the NFIP	FEMA Map	Description of Participation
Wadena County	Participating	FEMA-mapped high-risk areas	<p>Wadena County’s Planning and Zoning Department maintains the floodplain management ordinance (Ordinance #13, Flood Plain Management Ordinance of Wadena County) and floodplain maps for the county. The Planning and Zoning Dept. is the repository for the National Flood Insurance Program's Digital Flood Insurance Rate Maps (DFIRM), as well as flood boundary and floodway maps for rural Wadena County. The Planning and Zoning Office can assist county residents in determining whether their property is affected by an officially mapped flood area.</p>
Aldich	Not Participating	FEMA-mapped high-risk areas	<p>The city of Aldrich was not aware that they have FEMA mapped high risk areas and do not participate in the NFIP. The city was put in touch with the state NFIP coordinator to learn about their mapped floodplain area, how to enroll in the NFIP and how to develop a floodplain ordinance.</p>
Menahga	Participating	FEMA-mapped high-risk areas	<p>The city noted that they are enrolled in the NFIP, but do not have a floodplain ordinance on file. The city was put in touch with the state NFIP coordinator for assistance in developing an ordinance appropriate for their level of flood risk.</p>
Nimrod	Not Participating	FEMA-mapped high-risk areas	<p>The city of Nimrod was not aware that they have FEMA mapped high risk areas and do not participate in the NFIP. The city was put in touch with the state NFIP coordinator to learn about their mapped floodplain area, how to enroll in the NFIP and how to develop a floodplain ordinance.</p>
Sebeka	Participating	FEMA-mapped high-risk areas	<p>The city enforces requirements of the NFIP through Ordinance 95-01, Floodplain Ordinance in the city’s code of ordinances. This chapter regulates development in the flood hazard areas of the city.</p>

Community Name	Participation in the NFIP	FEMA Map	Description of Participation
Staples	Participating	FEMA-mapped high-risk areas	The city enforces requirements of the NFIP through Chapter 105, Floodplain Management in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city.
Verndale	Not Participating	FEMA-mapped high-risk areas	The city of Verndale was not aware that they have FEMA mapped high risk areas and do not have a specific floodplain ordinance in place. The city has been put in touch with the state NFIP coordinator to learn about their mapped flood areas, how to enroll in the NFIP and how to develop a floodplain ordinance. Although the city does not participate in the NFIP, considerations for regulating development in potential flood prone areas is addressed in Chapter XV – Land Usage in the city's code of ordinances.
Wadena	Participating	FEMA-mapped high-risk areas	The city enforces requirements of the NFIP through Chapter 152, Zoning, Section 152.32 Floodplain District in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city.

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.

There are no RL or SRL properties in Wadena County. For more on the areas that flood repeatedly in Wadena County, see the [Wadena County Flooding page](#).

5.1.2 PLANS AND ORDINANCES

Wadena 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

Wadena 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 Wadena County to support mitigation for the hazards addressed in this plan.

All Hazards

All Hazards Emergency Operations Plan: Wadena County Emergency Management maintains an all-hazards Emergency Operations Plan which lays out concepts and operating guidelines for all incident management and support functions that may be needed to ensure life safety, incident stabilization, and property preservation during an incident and the transition to recovery.

Emergency Notification Systems: Wadena 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 Wadena County Emergency Management website page.

Relationship with National Weather Service: Wadena County has a strong relationship with the National Weather Service – Grand Forks 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: Wadena County utilizes the Wadena County Sheriff’s Office/Emergency Management website page, Wadena County Sheriff’s Office Facebook page and local news media to communicate with residents and visitors on emergency preparedness.

Mass Care Shelter Facilities: In partnership with the American Red Cross, Wadena County has designated facilities throughout the county that could be utilized to provide mass care services to support an evacuation or other incident where temporary housing and basic human services are needed. Wadena County Emergency Management maintains a list of shelters within the county and has trained staff prepared for shelter operations.

NOAA Weather Radios: Wadena County actively promotes the use of NOAA Weather Radios by local residents, businesses, schools, long term care facilities, government buildings, faith communities, and other places of common gathering to encourage their use & functionality.

Weather-Ready Nation Ambassador: Wadena County Sheriff's Office is a NOAA Weather-Ready Nation Ambassador, supporting initiatives to improve readiness, responsiveness, and overall resilience to weather, water, and climate events. As an ambassador, the county promotes weather-ready messages and themes to our stakeholders, engages with NOAA personnel on collaborative opportunities, shares success stories of preparedness and resiliency, and educates employees, partners, and the public on preparedness actions.

StormReady Community Recognition: In September 2022, Wadena County was recognized by the National Weather Service (NWS) as a "StormReady Community" under the NWS StormReady Program. The program encourages communities to take a new, proactive approach to improving local hazardous weather operations by providing emergency managers with clear-cut guidelines on how to improve their hazardous weather operations. To be officially StormReady, a community must: establish a 24-hour warning point and emergency operations center; have more than one way to receive severe weather warnings and forecasts and to alert the public; create a system that monitors weather conditions locally; promote the importance of public readiness through community seminars; and develop a formal hazardous weather plan, which includes training severe weather spotters and holding emergency exercises.

Backup Power: Generator back-up power is in place for the Wadena County Courthouse/Jail building.

School Closings: Schools throughout Wadena County have 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.

Severe Winter Storms

Winter Weather Statements (Watch, Advisory, Warning, etc.): Wadena County relays all winter weather statements received from the National Weather Service via social media platforms and our community partners.

Public Education: Wadena County participates annually in the Winter Hazard Awareness Week campaign sponsored by the National Weather Service and MN Homeland Security and Emergency Management each November. Throughout the week, the county shares information on winter storms, outdoor & indoor winter safety, winter fire safety, and winter driving.

Snow Removal & Ice Control: The Wadena County Highway Department is responsible for the removal of snow and ice control for county roads, as well as some city and township roads based upon agreement. The department completes its snow removal process in accordance with the

Wadena County Hwy Department Snow Removal Policy. MNDOT removes snow from State Highways as well as disperses salt/sand as needed.

Severe Summer Storms

Emergency Notifications: Severe spring and summer storm warnings are initiated by the National Weather Service. Residents receive warnings by NOAA weather radio, local media, CodeRED Emergency Notification System, cell phone apps, and the outdoor warning siren system. Wadena County redistributes all outlook, watch, advisory, and warning statements issued by the NWS.

Outdoor Warning Sirens: There are 6 outdoor warning sirens located in Wadena County which are tested on a monthly basis by the Wadena County Sheriff's Office. Sirens are activated when the National Weather Service notifies Dispatch of high winds or tornado conditions that pose a risk to the public. Warning sirens are owned and maintained by the cities where they are located. All sirens are remotely activated by the Wadena County Sheriff's Office.

Skywarn Program: Wadena 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 local 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.

Public Education: Wadena County participates in the annual Severe Weather Awareness Week campaign sponsored by the National Weather Service and Minnesota Homeland Security and Emergency Management each April. Throughout the week the county shares information on severe weather alerts and warnings, lightning, hail, floods, tornadoes, and extreme heat.

Right of Way Clearance: Wadena County Highway Department and local utility providers regularly maintain and clear their right of ways of trees, vegetation, and debris to prevent the creation of additional hazards or blocking road/site access resulting from severe spring and summer storm events.

Manufactured Home Parks Shelters & Evacuation Plans: The Minnesota Department of Health (MDH) works with licensed manufactured home parks within Wadena County to ensure the requirements of MN Statute 327.20 relating to shelters and evacuation plans are met. Shelter and evacuation plans must be approved by the city or township in which they are located and submitted to the Minnesota Department of Health.

Wildfire

Emergency Notifications: The National Weather Service helps to put out information on wildfire conditions via NOAA weather radios. In events of wildfire, Wadena County Emergency Management works with local law enforcement, local fire departments, and partner agencies to get the word out on wildfire conditions and safety measures via their public information centers, websites, and social media.

Local Fire Departments/Mutual Aid: Local fire departments throughout the county are responsible for wildfires within their department boundaries and work together through mutual aid agreements on larger fires, including wildland fires. The MN DNR is also a cooperating agency to respond to wildfire incidents.

Burning Permits/Restrictions: Burn permits for vegetation are available from the Minnesota Department of Natural Resources. In times of high fire danger, burning restrictions are put in place and enforced.

Extreme Cold

Emergency Notifications: Extreme cold temperature warnings are issued by the National Weather Service (NWS). Wadena County Emergency Management assists with sharing this information with the public.

Extreme Cold Safety Awareness: Wadena County Emergency Management and Wadena County Public Health promote public awareness of personal safety measure to take during periods of extreme cold, such as minimizing exposure and being prepared with survival kits in vehicles during winter.

Drought

Public Awareness & Outreach: In the event of drought conditions, Wadena County works in concert with the NWS, MN DNR, and local communities to raise public awareness of dry conditions and increased danger of wildfire, and recommended water use restrictions, if needed.

Wadena County Soil and Water Conservation District: The Wadena County Soil & Water Conservation District provides access to natural resource management and conservation services and provides technical, financial, and educational assistance to landowners to address natural resource concerns, including those associated with drought.

Wadena County Local Water Management Plan: The Wadena County Water Plan (2016-2026) describes both surface and groundwater water needs and concerns for the county.

Flooding

National Flood Insurance Program (NFIP): Wadena County has FEMA Mapped High Risk Areas and participates in the NFIP.

Floodplain Ordinance and Mapping: Wadena County's Planning & Zoning Department maintains the floodplain management ordinance and floodplain maps for the county. The Planning and Zoning Dept. is the repository for the National Flood Insurance Program's Digital Flood Insurance Rate Maps (DFIRM), as well as flood boundary and floodway maps for rural

Wadena County. The Planning and Zoning Office can assist county residents in determining whether their property is affected by an officially mapped flood area.

National Flood Insurance Program (NFIP): Wadena County and the cities of Menahga, Sebeka, and Wadena have FEMA Mapped High Risk Areas and participate in the NFIP.

Shoreland Regulations: Wadena County Zoning Ordinance, Section 14, Shoreland Overlay District establishes regulations for development near shorelands including stormwater management.

Transportation Improvement Plan: Wadena County Highway Department maintains a 5-year Transportation Improvement Plan that identifies and schedules road improvement projects that include measures for flood mitigation.

Wadena County Local Water Management Plan: The Wadena County Local Water Management Plan (2016-2026) is written and overseen by the Wadena Soil and Water Conservation District and has a 10-year implementation plan. The plan identified the primary water planning concerns, including erosion and sediment control and stormwater management.

Buffer Law: Wadena County has adopted and enforces requirements of the State Buffer Law. The purpose and intent of the law is to protect state water resources from erosion and runoff pollution; to stabilize soils, shores and banks; and to protect or provide riparian corridors.

Dam Failure

No noted plans or programs in place.

5.2 Mitigation Goals

The goals and strategies for natural hazards in the 2019 Minnesota State Hazard Mitigation Plan were adopted for use in the Wadena County Plan. This framework, as outlined below, will allow for integration of the mitigation actions that are listed by Wadena 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). A fifth strategy type was determined by Minnesota HSEM for use within the state: Mitigation Preparedness and Response. The strategies and example actions are listed in Table 10.

Table 10. 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.	<ul style="list-style-type: none"> • 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
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.	<ul style="list-style-type: none"> • Acquisitions and elevations of structures in flood prone areas • Utility undergrounding • Structural retrofits • Floodwalls and retaining walls • Detention and retention structures

Mitigation Strategy	Description	Example Mitigation Actions
	<p>This type of action also involves projects to construct manmade structures to reduce the impact of hazards.</p> <p>Many of these types of actions are projects eligible for funding through the FEMA Hazard Mitigation Assistance program.</p>	<ul style="list-style-type: none"> • Culverts • Safe rooms
Natural Systems Protection	These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • Emergency operations plan • Flood fight plans and preparedness • Dam emergency action plans • Warning • Backup power • Emergency capabilities

Local leaders work together with the Wadena 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 Wadena 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 Wadena 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 Aldrich, Menahga, Nimrod, Sebeka, Staples, Verndale, and Wadena.

Following is an overview the mitigation action charts and 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 that it relates to. Actions that fall under “All-Hazards” relate to both natural and non-natural hazards.

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 10 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 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 2015 Wadena 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 11 provides criteria that were taken into consideration in the process.

Table 11. Criteria for Mitigation Action Priority Ranking

Ranking	Criteria
High Priority	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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.

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.

The Wadena County Mitigation Action Chart is provided in Table 12.

Appendix H provides the mitigation action charts developed for each city participating in the HMP update.

Table 12. Wadena County Mitigation Action Chart (2023–2027)

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage all county residents to sign-up for the county’s CodeRED emergency notification alert system.	Existing High 2023-2028	Wadena County Emergency Management (WCEM)	A link for the CodeRED emergency notification system is located on the Wadena County Emergency Management website and reminders are put out on the Sheriff’s Office Facebook page as well as during the NWS’s Severe Weather Awareness Week.	County
2	All-Hazards	Mitigation Preparedness & Response Support	Ensure the Wadena County Emergency Operations Plan (EOP) is updated and addresses policies & procedures needed to support EM functions prior to, during, and following a disaster.	Existing Moderate 2023-2028	WCEM	WCEM has an EOP that is updated on a regular basis which helps the county be ready to respond to disasters across a range of EM functions. This includes plans in place for sheltering of displaced residents and pet sheltering.	County
3	All-Hazards	Mitigation Preparedness & Response Support	Ensure designated facilities are in place and prepared for providing mass care sheltering and county staff are trained in sheltering operations.	Existing Moderate 2023-2028	WCEM	WCEM maintains a list of shelters within the county and have trained staff for shelter operations. We partner with the American Red Cross to establish agreements with facilities in the county to serve as official shelter locations that meet ARC shelter requirements for space and accessibility. WCEM will continue to work to ensure that all designated shelters are prepared with backup generators where needed.	County
4	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and extended power outages. Coordinate with local jurisdictions to share information locally.	Existing High 2023-2028	WCEM in coord with Local Gov’t	WCEM participates in and promotes the NWS Severe Weather Awareness Weeks in spring and fall each year. We also promote residents to be prepared for emergencies, to have NOAA weather radios, and to sign up for the county’s CodeRED system and Wadena County Sheriff’s Office Facebook page to receive emergency notifications and other information. Wadena County Sheriff’s Office is a NOAA Weather-Ready Nation Ambassador, promoting weather-ready messages to the public. WCEM shares information with local governments and encourages them to use their communication platforms to keep residents informed.	County

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
5	Severe Winter & Summer Storms	Structure & Infrastructure Systems	Work with municipalities / rural electric coops to encourage them to address burying powerlines or strengthening power poles to avoid power outages from high wind events and storms.	Existing High 2023-2028	WCEM in coord with Local Gov't and Rural & Municipal Utility Coops	Todd/Wadena Electric Coop., Minnesota Power, Itasca Mantrap Coop., City of Wadena Light & Water, and the City of Staples Electric Division continue to address where power lines can be strengthened or buried underground. WCEM will assist as needed with future applications to FEMA for eligible projects to reduce risk of power outages by these coops.	Electric Coops, FEMA HMA grant
6	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Acquire generators for emergency backup power for the Wadena County Public Health Dept. and the Wadena County Highway Dept.	New High 2023-2028	WCEM in coord with WCPH and WC Highway Dept.	In the event of a large-scale power outage, WC Public Health needs a backup generator for the vaccine storage equipment. WC Highway Dept. needs a backup generator to protect critical IT functions and to ensure the large overhead doors are operational for maintenance crews. Wadena County will work to purchase said generators as funding allows. FEMA HMA grant funding may be considered if the project is eligible for funding.	County, FEMA HMA grant
7	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Work with local jurisdictions to acquire generator backup power to support critical infrastructure and delivery of essential services during an extended power outage due to storms.	Existing Moderate 2023-2028	WCEM in coord with Local Gov't	WCEM continues to provide assistance to local jurisdictions that need to acquire portable generators to power infrastructure such as lift stations and other key facilities such as City Hall /community shelters in the event of a power outage. In some cases, this may include helping to identify where used portable generators may be obtained or helping to prepare a funding application.	County, Local Gov't
8	Severe Winter & Summer Storms	Natural Systems Protection	Conduct vegetation management along county-owned roads to reduce the risk of downed trees and branches resulting from severe storms.	Existing Moderate 2023-2028	WC Highway Dept.	Wadena County Highway Department and local utility providers regularly maintain and clear their right of ways of trees, vegetation, and debris to prevent the creation of additional hazards or blocking road/site access resulting from severe spring and summer storm events.	County, Utility Coops
9	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	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.	Existing High 2023-2028	WCEM, in coord with Schools & Other Facilities	This is part of WCEM's ongoing outreach for emergency preparedness. WCEM continues to work with school districts and other long-term care facilities across the county to have plans in place for when the need arises.	County, Local Facilities

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
10	Severe Summer Storms	Mitigation Preparedness & Response Support	Ensure there is a network of trained Storm Spotters throughout the county to support situational awareness of and public notification for dangerous storms such as severe thunderstorms and tornadoes.	Existing Moderate 2023-2028	WCEM in coord with NWS & Local Gov't	WCEM works with the NWS to provide SKYWARN storm spotter training on an annual basis to local law enforcement, fire departments, and local residents who wish to participate.	County, NWS
11	Severe Summer Storms	Local Planning & Regulations / Structure & Infrastructure Projects	Provide assistance to local jurisdictions that require purchase & installation of new outdoor warning sirens and ensure they are connected to the county's remote activation system.	Existing High 2023-2028	WCEM in coord with Local Gov't	Numerous cities and townships within Wadena County have identified a need for new or updated warning sirens; however not all are willing or able to fund them. WCEM will work to assist communities that are eligible to apply for funding to the USDA Community Facilities Grant Program which is a source for funding outdoor warning sirens. All new sirens will be connected to the county's remote activation system.	County, Local Gov't, USDA CF Grant Program
12	Severe Summer Storms	Structure & Infrastructure Projects	Address the need for storm shelters and warning sirens for Wadena County Parks along the Crow Wing River where campers are vulnerable to high wind or tornadic events.	New High 2023-2028	WCEM, WC Planning & Parks Dept.	Wadena County Emergency Management Director and Wadena County Parks Administrator will assess which county parks are at most need for warning systems and shelters and determine costs and feasibility for implementation. The county may seek FEMA HMA grant funding for construction of tornado safe rooms if that is the best determination for safe shelter. Any warning sirens would be connected the Sheriff's Office remote activation system.	County, FEMA HMA grant funding
13	Severe Summer Storms	Structure & Infrastructure Projects	Work with jurisdictions to address the need for the construction of storm shelters or tornado safe rooms in mobile home parks or other locations where residents and visitors are vulnerable to high wind events.	Existing High 2023-2028	WCEM in coord with Local Gov't and MHPs	WCEM will provide assistance to help assess need, possible construction options, and assist in applying for possible FEMA grant funding as needed to cities or townships that request assistance to address tornado safe rooms in the community.	County, City, MHP Operator
14	Severe Summer Storms	Mitigation Preparedness & Response Support	Work with neighboring jurisdictions and the National Weather Service to address the gap in area weather radar for issuing tornado warnings.	Existing High 2023-2028	WCEM in coord with NWS	WCEM and neighboring Region 4 EM's have been working together with the NWS to try and address this issue. WCEM will continue to be involved in these efforts to encourage the NWS to improve radar coverage for our area.	County, NWS

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
15	Wildfire	Local Planning & Regulations	Work with MN DNR Firewise and local fire departments to address development of a Community Wildfire Protection Plan (CWPP) for Wadena County.	New Moderate 2023-2028	WCEM in coord with MN DNR Firewise and local FD's	WCEM will work with MN DNR Firewise Program to determine how to move forward with development of a CWPP and identification of wildfire mitigation activities for high-risk wildfire areas within the county. Funding for development of the CWPP may be sought from the Community Wildfire Defense Grant (CWDG).	County, CWDG
16	Wildfire	Education & Awareness Programs	Continue to promote wildfire awareness and local actions to reduce wildfire risk.	New Moderate 2023-2028	WCEM in coord with MN DNR and local FD's	This is an on-going effort of Wadena County Emergency Management, local fire departments, and the MN DNR.	County, MN DNR
17	Wildfire	Local Planning & Regulations	Identify and implement targeted wildland fuels reduction or other mitigation activities in high-risk wildfire areas.	New High 2023-2028	WCEM in coord with MN DNR and local FD's	WCEM and local fire departments will assess and address targeted fuels reduction or other mitigation projects where necessary in the county to reduce wildfire risk. This may include working with willing property owners on conducting Level-1 or Level-2 Assessments and creating defensible space around structures. WCEM may apply for FEMA HMA or MN DNR Firewise grant program funding to support implementation of projects as deemed appropriate.	FEMA HMA, MN DNR Firewise
18	Flooding	Local Planning & Regulations	Participate in the National Flood Insurance Program and enforce policies that address development in high-risk flood areas.	Existing High 2023-2028	AC Envir. Services Dept.	Wadena County's Planning and Zoning Department maintains the floodplain management ordinance (Ordinance #13, Flood Plain Management Ordinance of Wadena County) and floodplain maps for the county. The Planning and Zoning Dept. is the repository for the National Flood Insurance Program's Digital Flood Insurance Rate Maps (DFIRM), as well as flood boundary and floodway maps for rural Wadena County. The Planning and Zoning Office can assist county residents in determining whether their property is affected by an officially mapped flood area.	County
19	Flooding	Local Planning & Regulations	Enforce county policies that regulate zoning for new development, setbacks in shoreline area, and stormwater management.	Existing Moderate 2023-2028	AC Envir. Services	Wadena County Zoning Ordinance, Section 14, Shoreland Overlay District establishes regulations for development near shorelands including stormwater management.	County

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
20	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Plan for and implement measures to address minor localized flood reduction projects for roads, bridges, and culverts throughout the county.	In-Progress High 2023-2028	WC Highway Dept.	The Wadena County Highway Department maintains a 5-year transportation improvement plan that identifies and schedules road improvement projects that include measures for flood mitigation.	County, State, Federal
21	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Work in partnership with the Wadena County Soil & Water Conservation District and local municipalities to address mitigation projects that address erosion and localized flooding.	Existing Moderate 2023-2028	WC in coord with SWCD and Local Gov'ts	The Wadena County local water management plan is written and overseen by the Wadena Soil and Water Conservation District, and has a 10-year implementation plan. The plan identifies the primary water planning concerns, including erosion and sediment control and storm water management. Wadena County also enforces requirements of the State Buffer Law.	County, Local Gov't, SWCD Cost Share Grant Funding
22	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Conduct property buyouts to acquire homes affected by repetitive flooding and physically relocate or remove those homes to eliminate future flood damages.	Existing Low 2023-2028	WCEM in coord with Local Gov'ts	There are currently no projects for conducting property buyouts, however Wadena 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.	County, MN DNR, FEMA HMA, Local Gov't
23	Drought	Public Awareness & Education	Conduct outreach to residents to be aware of water restrictions, water conservation tips, and fire safety during periods of severe drought.	New Moderate 2023-2028	WCEM in coord with Local Gov't.	WCEM continues to provide public outreach and education during heightened drought periods using the county website and Sheriff's Office Facebook page. WCEM further encourages city and townships to promote drought awareness to residents.	County

Section 6 – Plan Maintenance

6.1 Monitoring, Evaluation, and Updating the Plan

The Wadena County Hazard Mitigation Plan 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 Wadena County HMP.

The Wadena 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 Wadena County EMD will work with an emergency managers group to help monitor, review, evaluate, and update the Hazard Mitigation Plan. The group will include township representatives and designated city emergency managers from the cities of Aldrich, Menahga, Nimrod, Sebeka, Staples, Verndale, and Wadena as well as other city elected officials or staff as needed. The Wadena 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 Wadena 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 Wadena 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 Wadena 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 committee deems appropriate and necessary, and as approved by county commissioners.

Throughout the five-year window of the plan, Wadena County EMD will request updates from county departments and jurisdictions on that status of mitigation efforts so that progress notes may be maintained for the next plan update.

6.2 Implementation

Wadena County and its included municipalities share a common Hazard Mitigation Plan and work together closely to develop, revise, and implement it. This HMP provides a comprehensive chart of mitigation actions for Wadena County and its jurisdictions (see Appendix H and Section 5.3). The cities of Aldrich, Menahga, Nimrod, Sebeka, Staples, Verndale, and Wadena 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.

A number of implementation tools are available to address hazards. Many of these tools are below, however, in some cases additional discussion is needed in order to identify what strategies are most appropriate to use. This will be part of an ongoing discussion as Wadena 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 V and the MN Department of 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 Wadena County. Regulation plays a particularly important role for land use, access to structures, and the protection of water resources and public health.

6.3 Continued Public Involvement

Continued public involvement is critical to the successful implementation of the Hazard Mitigation Plan. The Wadena County Emergency Management Director 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.

In order to seek continued public participation after the plan has been approved and during the five-year window of implementation for this plan, Wadena County will take the following measures:

- The plan will be posted on the Wadena County Emergency Management website for the public to read and provide 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, Wadena 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 to keep their local government, schools and community members updated and engaged in the implementation of their respective mitigation action charts (see Appendix H). Each respective jurisdiction will be required to report on the status of mitigation actions in their charts to the Wadena County Emergency Management Director.
- Jurisdictions will use numerous means of public outreach to engage new public stakeholders in providing input on mitigation efforts or concerns on hazards by sharing information at city council/township board meetings, sharing information at special events, working with local schools and partner organizations, and posting information on relevant local or social media that their 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.

The Wadena County HMP website provides opportunities for continued public involvement and feedback

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

References

- AirNow. (2021). *Fires and Your Health*. AirNow; AirNow.gov, U.S. EPA. <https://www.airnow.gov/air-quality-and-health/fires-and-your-health>
- AMS. (2004, October 8). *Mobile Homes and Severe Windstorms*. American Meteorological Society. <https://www.ametsoc.org/index.cfm/ams/about-ams/ams-statements/archive-statements-of-the-ams/mobile-homes-and-severe-windstorms/>
- ATSDR. (2020, September 15). *CDC Social Vulnerability Index (SVI)*. ATSDR. https://www.atsdr.cdc.gov/placeandhealth/svi/at-a-glance_svi.html
- CDC. (2021). *Extreme Cold: A Prevention Guide to Promote Your Personal Health and Safety*. <https://www.cdc.gov/disasters/winter/pdf/extreme-cold-guide.pdf>
- CEMHS. (2019). *Spatial Hazard Events and Losses Database for the United States*. Center for Emergency Management and Homeland Security, Arizona State University. <https://cemhs.asu.edu/sheldus>
- Eaton, J. (2014, January 31). Propane Shortages Leave Many U.S. Homeowners in the Cold. *National Geographic*. <https://www.nationalgeographic.com/science/article/140129-us-propane-shortages-leave-homeowners-in-the-cold>
- FEMA. (2004). *Federal Guidelines for Dam Safety: Hazard Potential Classification System for Dams*. <https://www.ferc.gov/sites/default/files/2020-04/fema-333.pdf>
- FEMA. (2015). *National Preparedness Goal*. https://www.fema.gov/media-library-data/1443799615171-2aae90be55041740f97e8532fc680d40/National_Preparedness_Goal_2nd_Edition.pdf
- FEMA. (2021a). *Hazard Mitigation Assistance Grants*. <https://www.fema.gov/grants/mitigation>
- FEMA. (2021b). *Hazus | FEMA.gov*. <https://www.fema.gov/flood-maps/products-tools/hazus#2>
- FERC. (2020, July 21). *Dam Safety Program*. Hydropower. <https://www.ferc.gov/industries-data/hydropower>
- Hales, D., Hohenstein, W., Bidwell, M. D., Landry, C., McGranahan, D., Molnar, J., & Jadin, J. (2014). *Climate Change Impacts in the United States: The Third National Climate Assessment*. U.S. Global Change Research Program.
- Hogback, J. (2020). *How Do Tornadoes Form?* Encyclopedia Britannica. <https://www.britannica.com/story/how-do-tornadoes-form>
- Huttner, P. (2021, July 29). *Worst air quality on record Thursday in Minnesota*. MPR News. <https://www.mprnews.org/story/2021/07/29/worst-air-quality-on-record-in-minnesota-today>

- MDH. (2020, January 23). *Summary of General Requirements for Manufactured Home Parks: Manufactured Home Parks and Recreational Camping Areas: Environmental Health—Minnesota Dept. Of Health*. Minnesota Department of Health.
<https://www.health.state.mn.us/communities/environment/mhprca/mhpngenreq.html>
- MDH. (2021, February). *Cold-related illness*. Minnesota Department of Health.
https://data.web.health.state.mn.us/web/mndata/cold_related_illness#
- MN DNR. (2020). *Dams and Dam Safety*. MN Department of Natural Resources.
https://www.dnr.state.mn.us/waters/surfacewater_section/damsafety/index.html
- MN DNR. (2021a). *Drought in Minnesota*. Drought in Minnesota.
<https://www.dnr.state.mn.us/climate/drought/index.html>
- MN DNR. (2021b). *Wildfires Tracked by Minnesota DNR*. Minnesota Department of Natural Resources. <https://gisdata.mn.gov/dataset/env-wildfires-tracked-by-mndnr>
- MN DNR. (2021c). *Wildfires Tracked by Minnesota DNR*. Minnesota DNR - Division of Forestry.
<https://gisdata.mn.gov/dataset/env-wildfires-tracked-by-mndnr>
- MN HSEM. (2019). *Minnesota State Hazard Mitigation Plan: Including Recommended Actions for Climate Change Adaptation*. <https://dps.mn.gov/divisions/hsem/hazard-mitigation/>
- MN HSEM. (2022). *Minnesota grant proposals and approved funding for FEMA mitigation funds*. MN Homeland Security and Emergency Management. [by personal communication]
- MPCA. (2018, December 21). *Effects of climate change in Minnesota*. Minnesota Pollution Control Agency. <https://www.pca.state.mn.us/air/effects-climate-change-minnesota>
- Multi-Hazard Mitigation Council. (2019). *Natural Hazard Mitigation Saves: 2019 Report* (p. 658). National Institute of Building Sciences.
https://www.nibs.org/files/pdfs/NIBS_MMC_MitigationSaves_2019.pdf
- NCEI. (2021). *Storm Events Database*. National Centers for Environmental Information, NOAA, Storm Events Database. <https://www.ncdc.noaa.gov/stormevents/>
- NDMC, NOAA, & USDA. (2021). *United States Drought Monitor*. United States Drought Monitor.
<https://droughtmonitor.unl.edu/>
- Normand, A. (2019). *Dam Safety Overview and the Federal Role* (p. 18). Congressional Research Service. <https://crsreports.congress.gov/product/pdf/R/R45981>
- NWS. (2020). *Storm Events Database*. NOAA National Centers For Environmental Information.
<https://www.ncdc.noaa.gov/stormevents/>
- Pielke, R. (2012, February 2). *Windstorm*. Encyclopedia Britannica.
<https://www.britannica.com/science/windstorm>

- Pryor, S. C., Barthelmie, R. J., Young, D. T., Takle, E. S., Arritt, R. W., Flory, D., Gutowski, W. J., Nunes, A., & Roads, J. (2009). Wind speed trends over the contiguous United States. *Journal of Geophysical Research*, *114*(D14), D14105. <https://doi.org/10.1029/2008JD011416>
- Radeloff, V. C., Helmers, D. P., Kramer, H. A., Mockrin, M. H., Alexandre, P. M., Bar-Massada, A., Butsic, V., Hawbaker, T. J., Martinuzzi, S., Syphard, A. D., & Stewart, S. I. (2018). Rapid growth of the US wildland-urban interface raises wildfire risk. *Proceedings of the National Academy of Sciences*, *115*(13), 3314–3319.
- Radeloff, V. C., Mockrin, M. H., & Helmers, D. (2019). *Mapping Change in the Wildland Urban Interface (WUI), 1990-2010, County Summary Statistics*. <http://silvis.forest.wisc.edu/data/wui-change/>
- Samanta, A., & Wu, T. (2017). *Hail: The Hidden Risk. An analysis of property exposure to damaging hail in 2017* (p. 9). https://www.verisk.com/siteassets/media/campaigns/gated/underwriting/2017-hail-the-hidden-risk.pdf?__FormGuid=b105adc4-533b-41a0-8bc3-0ea9c9d1e6d&__FormLanguage=en-US&__FormSubmissionId=e0a36676-fdfc-4904-bof3-37284f4e41b3
- Sepic, M. (2017). *In storm season, mobile home park tenants seek better shelter*. <https://www.mprnews.org/story/2017/06/14/in-storm-season-mobile-home-park-tenants-seek-better-shelter>
- Smith, A. B. (2022). *2021 U.S. billion-dollar weather and climate disasters in historical context | NOAA Climate.gov*. <http://www.climate.gov/news-features/blogs/beyond-data/2021-us-billion-dollar-weather-and-climate-disasters-historical>
- USACE. (2008). *National Inventory of Dams Methodology: State and Federal Agency Manual*. U.S. Army Corps of Engineers. <https://files.nc.gov/ncdeq/Public%20Records%202/DEMLR/NIDmanual2008.pdf>
- USGCRP. (2018). *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II* (p. 1515). U.S. Global Change Research Program. <https://doi.org/10.7930/NCA4.2018>

Appendix B – Adopting Resolutions

Appendix C – Local Mitigation Survey Report

Wadena County

Local Mitigation Survey Report

Overview

As part of Wadena County’s Multi-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 are the responses from the county and jurisdictions that participated in the survey.

LMS Forms

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City of Aldrich (no LMS)	-
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City of Staples	Page 18
City of Verndale	Page 21
City of Wadena	Page 24

WADENA COUNTY

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

- Hazard Identification & Risk Prioritization:** Please fill out the chart below as you feel it relates for your jurisdiction. Please note that hazards that are considered as significant (moderate to high priority) will need to have at least one mitigation action associated with it.

Natural Hazard	Use an "X" to Select 3-5 of the top hazards you feel pose risk to your jurisdiction.	Indicate your priority level of each hazard to your community as <u>Low, Moderate, or High</u> . Consider past events, likelihood of future events, and impacts to community assets.	Note if you feel the risk has increased, decreased, or had no change over the last 5 years.
Winter Storms (Blizzards, Ice Storms)	X	Moderate	No Change
Tornadoes	X	Moderate	No Change
Windstorms	X	Moderate	No Change
Lightning		Low	No Change
Hail	X	Moderate	Increasing
Flooding	X	High	No Change
Extreme Cold	X	Moderate	Increasing
Extreme Heat		Low	No Change
Drought	X	Moderate	Increasing
Wildfire	X	High	No Change
Landslides		Low	No Change
Dam Failure		Low	No Change

- Recent Hazard Events:** Describe any severe weather or disaster events that have occurred over the last 5 years that caused damages in your community.

In March – April of 2019, Wadena County experienced widespread overland flooding. Damage was incurred to county and township roadways resulting in multiple repairs. Extra sandbags were purchased to help protect public infrastructure if needed.

Wadena County has experienced several high wind events in recent years. In 2018 we experience high winds that damaged trees, rooftops, and power lines.

The southeastern part of Wadena County experienced hail up to the size of baseballs causing damage to vehicles and rooftops.

- Local Vulnerabilities:** Use the chart below to identify what specific community assets (i.e., infrastructure, systems, populations) are vulnerable to damages or loss from the hazards that pose risk to your community. Use the blank rows to enter in your answers as they relate to your community.

Natural Hazard (please list)	Vulnerability Assessment Describe <u>specific</u> community assets are susceptible to damage or loss from hazard events.
Extreme Cold	<p>Residents are susceptible to dangers from extreme cold, especially if the power goes down during winter storm events. We have a high population of senior citizens and also low-income residents who are more vulnerable during these events.</p> <p>In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold.</p>
All Wind Events (Thunderstorm, Tornado, Windstorm, Ice Storm, Blizzard, Etc.)	<p>A vast majority of electrical infrastructure in Wadena County is above ground. These lines are prone to failure in ice storms and blizzards with heavy snowfall and high wind events that may bring down trees and branches onto power lines.</p> <p>We have a mobile home park within the county jurisdiction that does not have a storm shelter and residents are vulnerable to high wind and tornado events.</p> <p>The county's parks along the Crow Wing River do not have severe weather</p>
Flooding	<p>severe weather events, which leaves residents, guests, and visitors vulnerable to severe weather events.</p> <p>severe weather events, which leaves residents, guests, and visitors vulnerable to severe weather events. The county's parks along the Crow Wing River do not have severe weather shelters, which leaves residents, guests, and visitors vulnerable to severe weather events.</p> <p>severe weather events, which leaves residents, guests, and visitors vulnerable to severe weather events. The county's parks along the Crow Wing River do not have severe weather shelters, which leaves residents, guests, and visitors vulnerable to severe weather events.</p> <p>severe weather events, which leaves residents, guests, and visitors vulnerable to severe weather events. The county's parks along the Crow Wing River do not have severe weather shelters, which leaves residents, guests, and visitors vulnerable to severe weather events.</p> <p>Most of Wadena County cities have their own utility systems. Flood/flash flooding has and could continue to pose problem to each city's sewer and well service.</p>
Wildfire	<p>Wadena County has heavily wooded and grassland areas especially on the Northeastern portion of the county near and around the Huntersville State Forest. Wadena County has suffered from several large wildfires in the past which has destroyed homes and impacted other infrastructure, and businesses.</p>

4. Reduction in Vulnerability - 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 underway that reduces future risk.

We have encouraged residents and businesses to sign up for the county's CodeRED emergency alert system. Several agencies in the county have used social media to relay important information to Wadena County citizens.

When the new Wadena-Deer Creek High School was built after the Wadena Tornado in 2010, it was built with a FEMA tornado safe room. This room is open to the public whenever a severe thunderstorm is forecasted. The door is able to be opened remotely from Wadena County dispatch and is tested monthly.

Wadena County Highway Department has upgraded several culverts though out the county as well as county drainage ditches.

- 5. Increase in Vulnerability – Describe any current conditions or changes you feel have increased your community’s vulnerability to future severe weather or disaster events. Consider factors such as recent population growth or new development.**

Wadena County’s campgrounds along the Crow Wing River and remote/rural locations have grown in popularity over recent years. These populations that enjoy the campgrounds are vulnerable to severe weather as there are no storm shelters close by or outdoor warning sirens. Typically, when severe weather is imminent, the Sheriff’s Office will go to each campground and warn campers of impending weather.

We have a high number of property’s that are seasonal recreation. Typically, individuals will leave a camper on site and only be onsite during weekends and have no availability of a storm proof shelter.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT.

- 1. Describe what methods you use to provide information to residents on emergencies or personal preparedness for severe weather.**

We use our county website and Facebook page. We also use our CodeRed mass notification system to alert residents of severe weather. The county participates in events such as the annual county fair and wellness fair to distribute information on emergency preparedness.

Wadena County keeps a list of local radio stations and newspapers to get notices out to the public.

- 2. Do you encourage residents to sign up for the county’s emergency notification system and/or a local emergency alert system? If so, how?**

Yes- we have information on our emergency notification system on our county website, we also participate in local events such as fairs and celebrations to encourage our residents to sign up for our system which is CodeRed.

- 3. Does your community participate in the National Flood Insurance Program?**

Yes, Wadena County has FEMA mapped high risk areas and participates in the NFIP. Wadena County’s Planning and Zoning Department maintains the floodplain management ordinance and floodplain maps for the county. The Planning and Zoning Dept. is the repository for the National Flood Insurance Program’s Digital Flood Insurance Rate Maps (DFIRM), as well as flood boundary and floodway maps for rural Wadena County. The Planning and Zoning Office can assist county residents in determining whether their property is affected by an officially mapped flood area.

- 4. Describe any plans, authorities or policies in place that help to reduce risk from natural hazards in your community.**

Wadena County Emergency Management maintains an all-hazards Emergency Operations plan 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.

The Wadena County Highway Department maintains a 5-year transportation improvement plan that identifies and schedules road improvement projects that include measures for flood mitigation.

The Wadena County local water management plan is written and overseen by the Wadena Soil and Water Conservation District, and has a 10-year implementation plan. The plan identifies the primary water planning concerns, including erosion and sediment control and storm water management.

Wadena County has adopted and enforces requirements of the State Buffer Law. The purpose and intent is to protect state water resources from erosion and runoff pollution; to stabilize soils, shores and banks; and to protect or provide riparian corridors.

Wadena County Zoning Ordinance, Section 14, Shoreland Overlay District establishes regulations for development near shorelands including stormwater management.

Wadena County participates in NFIP and has FEMA mapped high risk areas.

Burning permits for vegetation are available and often times required in times of high fire danger. Burning restrictions are put in place and enforced.

The Minnesota Department of Health (MDH) works with licensed manufactured home parks within Wadena County to ensure the requirements of MN Statute 327.20 relating to shelters and evacuation plans are met. Shelter and evacuation plans must be approved by the city or township in which they are located and submitted to MDH.

5. Please describe what staff or partnerships are in place to help accomplish mitigation in your community.

Wadena County staff partner together to help accomplish mitigation goals, these staff include the Emergency Management Director, Sheriff's Office administrative staff, Wadena County Public Works, Wadena County Coordinator, Wadena County Public Health, Wadena County Human Services, Wadena County Public Transit, Wadena County Planning and Zoning, Wadena County Auditor, and Wadena County GIS.

The Wadena County Sheriff's Office is a NOAA Weather-Ready Ambassador, supporting initiatives to improve readiness, responsiveness, and overall resilience to weather, water, and climate events. As an ambassador, the county promotes weather-ready messages and themes to our stakeholders, engages with NOAA personnel on collaborative opportunities, shares success stories of preparedness and resiliency, and educates employees, partners, and the public on preparedness actions.

6. Describe any programs in place that to help accomplish mitigation in your community.

Wadena County Emergency Management participates in and promotes the NWS severe weather awareness weeks in spring and fall each year, and also works with the NWS to provide SKYWARN storm spotter training.

Wadena County Emergency Management promotes the use of NOAA weather radios.

Wadena County Emergency Management utilizes the Wadena County Sheriff's Office social media page to communicate with residents and visitors on Emergency Preparedness. A link to the CodeRED emergency notification system is located on the Wadena County website.

Wadena County Emergency Management participates in regional exercises and meetings with HSEM Region 4.

7. Please describe any agency partnerships, funding or other resources to help accomplish mitigation in your community.

Wadena County and townships within county use the annual budget for mitigation projects. Wadena County Emergency management uses FEMA grant funding to help fund the Emergency Manager Wages, office supplies, and training and exercises.

8. Does your jurisdiction have any plans or policies in place related to resilience and adaptation for climate change? If yes, please describe.

No

9. Who is your local electric provider? (i.e., municipal / rural electric coop / other)

Todd/Wadena Electric, Minnesota Power, Itasca Mantrap Coop., City of Wadena Light and Water, City of Staples Electric Division

10. Do you need back-up generators for specific critical facilities? Please identify them.

Generators we have: The Wadena County Courthouse/EOC has a back-up generator. The Todd-Wadena Electric Cooperative does have a generator that runs the entire facility if power is down.

Generators we need: Wadena County Public Health needs a backup generator for the vaccine storage equipment. Wadena County Highway Department needs a backup generator for two very different reasons. First reason is that the Highway Department is the host for critical IT functions such as the VPN host which is how law enforcement accesses County servers from their patrol units and it is a backup data storage site. Second reason is to have all the large doors operational for the Highway maintenance crew to quickly mobilize their equipment in a disaster event.

PART C: LOCAL MITIGATION PROJECTS

1. Local Mitigation Projects: Describe any specific mitigation activities you think would help to address local vulnerabilities and reduce risk against future hazard events in your community.

Acquire backup generators for county facilities where needed.

Address the need of storm shelters in trailer parks within the jurisdiction of Wadena County as well as siren and tornado safe rooms near our county campgrounds along the Crow Wing River in rural Wadena County.

Partner with American Red Cross to better address shelter locations and conduct shelter training in one of those locations.

Most power lines in Wadena County are above ground, exposing them to impacts/damage from winter high wind and ice events, potentially leading to localized power outages. Explore the options of being able to move some of these lines underground.

Work with Region 4 Emergency Managers and the NWS Grand Forks Office to address the issue of Doppler radar coverage in our region to better notify residents of impending weather that is not always seen by radar with the current coverage.

Address road improvements, ditch maintenance, and bank stabilization projects needed to mitigate against high rain events.

Provide support to cities to update stormwater management plans and identify where critical public infrastructure needs to be protected from future high rain events.

Provide support to communities to identify where storm shelters or tornado safe rooms are needed, and assist in applying for grant funding. (i.e., USDA, FEMA HMA).

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

Funding for tornado saferooms in vulnerable populations/areas. i.e., County Parks, smaller communities or infrastructure without tornado saferooms and trailer parks.

Above-ground powerlines.

Firewise assessments or a community wildfire protection plan.

PART D: SURVEY PARTICIPANTS

Tyler Wheeler, Wadena County Emergency Management Director
Bryan Savaloja, Deputy Emergency Management Director
Ryan Odden, County Coordinator
Abby Harrison, Executive Assistant, Todd-Wadena Electric Cooperative

CITY OF MENAHGA

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

- Hazard Identification & Risk Prioritization:** Please fill out the chart below as you feel it relates for your jurisdiction. Please note that hazards that are considered as significant (moderate to high priority) will need to have at least one mitigation action associated with it.

Natural Hazard	Use an "X" to Select 3-5 of the top hazards you feel pose risk to your jurisdiction.	Indicate your priority level of each hazard to your community as <u>Low, Moderate, or High</u> . Consider past events, likelihood of future events, and impacts to community assets.	Note if you feel the risk has increased, decreased, or had no change over the last 5 years.
Winter Storms (Blizzards, Ice Storms)	X	Moderate	No Change
Tornadoes	X	Moderate	No Change
Windstorms	X	Moderate	No Change
Lightning	X	Moderate	No Change
Hail			
Flooding			
Extreme Cold	X	Moderate	No Change
Extreme Heat			
Drought			
Wildfire	X	High	No Change
Landslides			
Dam Failure			

- Recent Hazard Events:** Describe any severe weather or disaster events that have occurred over the last 5 years that caused damages in your community

Recent - In 2021 lightning struck the water treatment plant. In 2017 lightning struck the lift station.

Beyond 5 years - The 2013 Green Valley Fire destroyed approximately 7,100 acres and Menahga was in its path of destruction.

- Local Vulnerabilities:** Use the chart below to identify what specific community assets (i.e., infrastructure, systems, populations) are vulnerable to damages or loss from the hazards that pose risk to your community. Use the blank rows to enter in your answers as they relate to your community.

Natural Hazard (please list)	Vulnerability Assessment Describe <u>specific</u> community assets are susceptible to damage or loss from hazard events.
Extreme Cold	Water mains along with private water lines are susceptible to extreme cold temperature.

Windstorms & other weather-related storms	All powerlines in the city are vulnerable when some weather event happens that could cause power outages in the city and failure to the operation of the city water and waste water collections systems.
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- 4. Reduction in Vulnerability - 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 underway that reduces future risk.**

In 2017 the city moved the main lift station to a higher elevation. The city has a new generator on order for the water treatment plant.

The city has also increased use of our website page to communicate with residents on emergency preparedness.

- 5. Increase in Vulnerability – Describe any current conditions or changes you feel have increased your community’s vulnerability to future severe weather or disaster events. Consider factors such as recent population growth or new development.**

None noted.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

- 1. Describe what methods you use to provide information to residents on emergencies or personal preparedness for severe weather.**

The city has increased use of our website page to communicate with residents on emergency preparedness.

- 2. Do you encourage residents to sign up for the county’s emergency notification system and/or a local emergency alert system? If so, how?**

We don’t do anything at this time, but we could use our city website in the future.

- 3. Does your community participate in the National Flood Insurance Program?**

The city is enrolled in the NFIP, but we do not have a floodplain ordinance on file. The MN DNR Floodplain Manager was contacted for assistance and has offered to help the city through the process of developing a floodplain ordinance if a past one cannot be found on file. If we do not expect any development in the mapped floodplain area, the MN DNR can provide a much simpler ordinance.

- 4. Describe any plans, authorities or policies in place that help to reduce risk from natural hazards in your community.**

The city has a 5-year Comprehensive Plan that addresses future infrastructure. The city also has a Comprehensive Plan that was updated in 2018 that provides for future growth of the city

5. Please describe what staff or partnerships are in place to help accomplish mitigation in your community.

The city has a Fire Department along with two public works workers and City Hall office staff that respond. The city's engineer is available if needed to assist with the infrastructure. The city is a member of MnWARN and has a Disaster Response Guide – Wadena County Emergency Operations Plan.

6. Describe any programs in place that to help accomplish mitigation in your community.

Through the Disaster Response with Wadena County in Emergency Operations Plan emergency responsibility assignments are defined as to who the primary, support and coordination agencies are. For Notification and Warning the EAS has been established. This Plan encompasses the standard operation procedures for all types of hazards.

7. Please describe any agency partnerships, funding or other resources to help accomplish mitigation in your community.

The city uses its budget to address mitigation projects and works closely with the city engineer.

8. Does your jurisdiction have any plans or policies in place related to resilience and adaptation for climate change? If yes, please describe.

No

9. Who is your local electric provider? (i.e., municipal / rural electric coop / other)

Minnesota Power & Todd-Wadena Electric Coop

10. Do you need back-up generators for specific critical facilities? Please identify them.

The city is in need of backup generators for lift stations and the water treatment plant.

PART C: LOCAL MITIGATION PROJECTS

1. Local Mitigation Projects: Describe any specific mitigation activities you think would help to address local vulnerabilities and reduce risk against future hazard events in your community.

Enhance the use of the city website to provide the community education on emergency preparedness and encourage residents to sign up for the county's emergency notification system.

Obtain backup generators for lift stations and the water treatment plant.

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

Funding is needed to update the things we need such as trash pumps, back generators, etc.

Updates to our emergency plan and comprehensive plan should be addressed.

PART D: SURVEY PARTICIPANTS

Betty J Thomsen, Temporary City Administrator
 Ron Yliniemi, Public Works Director
 Jensine Kurtti-Temp. Administrative Assistant

CITY OF NIMROD

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

- Hazard Identification & Risk Prioritization:** Please fill out the chart below as you feel it relates for your jurisdiction. Please note that hazards that are considered as significant (moderate to high priority) will need to have at least one mitigation action associated with it.

Natural Hazard	Use an "X" to Select 3-5 of the top hazards you feel pose risk to your jurisdiction.	Indicate your priority level of each hazard to your community as <u>Low, Moderate, or High</u> . Consider past events, likelihood of future events, and impacts to community assets.	Note if you feel the risk has increased, decreased, or had no change over the last 5 years.
Winter Storms (Blizzards, Ice Storms)	X	Moderate	Decreased
Tornadoes	X	Moderate	Increased
Windstorms		Moderate	Increased
Lightning		Moderate	Increased
Hail		Low	Increased
Flooding	X	Low	Decreased
Extreme Cold		Low	Decreased
Extreme Heat		Low	Decreased
Drought		High	Decreased
Wildfire		Low	Decreased
Landslides		None	Decreased
Dam Failure		None	Decreased

- Recent Hazard Events:** Describe any severe weather or disaster events that have occurred over the last 5 years that caused damages in your community.

None

- Local Vulnerabilities:** Use the chart below to identify what specific community assets (i.e., infrastructure, systems, populations) are vulnerable to damages or loss from the hazards that pose risk to your community. Use the blank rows to enter in your answers as they relate to your community.

Natural Hazard (please list)	Vulnerability Assessment Describe <u>specific</u> community assets are susceptible to damage or loss from hazard events.
	N/A. We are a very small city with a population of 84.

4. **Reduction in Vulnerability - 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 underway that reduces future risk.**

Repaired the siren. Put in curbs and gutters along the streets.

5. **Increase in Vulnerability – Describe any current conditions or changes you feel have increased your community’s vulnerability to future severe weather or disaster events. Consider factors such as recent population growth or new development.**

N/A

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. **Describe what methods you use to provide information to residents on emergencies or personal preparedness for severe weather.**

Siren.

2. **Do you encourage residents to sign up for the county’s emergency notification system and/or a local emergency alert system? If so, how?**

No

3. **Does your community participate in the National Flood Insurance Program?**

The MN DNR database for Wadena County shows that city does not participate but has FEMA mapped high risk areas. The MN DNR Floodplain Program will be working with the city to review current flood risk for the city and how to get enrolled in the NFIP.

4. **Describe any plans, authorities or policies in place that help to reduce risk from natural hazards in your community.**

N/A

5. **Please describe what staff or partnerships are in place to help accomplish mitigation in your community.**

Wadena County and Sebeka Fire for protection.

6. **Describe any programs in place that to help accomplish mitigation in your community.**

None.

- 7. Please describe any agency partnerships, funding or other resources to help accomplish mitigation in your community.**

Wadena County and Sebeka Fire.

- 8. Does your jurisdiction have any plans or policies in place related to resilience and adaptation for climate change? If yes, please describe.**

County policies are followed.

- 9. Who is your local electric provider? (i.e., municipal / rural electric coop / other)**

Minnesota Power and Light

- 10. Do you need back-up generators for specific critical facilities? Please identify them.**

No.

PART C: LOCAL MITIGATION PROJECTS

- 1. Local Mitigation Projects: Describe any specific mitigation activities you think would help to address local vulnerabilities and reduce risk against future hazard events in your community.**

Work with the MN DNR to learn about enrollment in the NFIP and development of an ordinance.

- 2. Gaps or Deficiencies: Please describe any specific gaps or deficiencies that are a barrier to implementing local mitigation measures.**

Distance and time.

PART D: SURVEY PARTICIPANTS

Keith Frame, Mayor
Aaron Frame, Council Member
Kevin Milbrant, Council Member
Coleman Rydie, Council Member
Patricia Frame, Treasurer
Karen Lepinski

CITY OF SEBEKA

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

- Hazard Identification & Risk Prioritization:** Please fill out the chart below as you feel it relates for your jurisdiction. Please note that hazards that are considered as significant (moderate to high priority) will need to have at least one mitigation action associated with it.

Natural Hazard	Use an "X" to Select 3-5 of the top hazards you feel pose risk to your jurisdiction.	Indicate your priority level of each hazard to your community as <u>Low, Moderate, or High</u> . Consider past events, likelihood of future events, and impacts to community assets.	Note if you feel the risk has increased, decreased, or had no change over the last 5 years.
Winter Storms (Blizzards, Ice Storms)	X	Moderate	No change
Tornadoes			
Windstorms	X	Moderate	No change
Lightning			
Hail			
Flooding	X	Moderate	No change
Extreme Cold	X	Moderate	No change
Extreme Heat			
Drought			
Wildfire			
Landslides			
Dam Failure			

- Recent Hazard Events:** Describe any severe weather or disaster events that have occurred over the last 5 years that caused damages in your community.

We have had high wind events that have damaged trees and powerlines, resulting in power outages. In 2019 our municipal campground experienced damages from a severe thunderstorm with to high winds and falling trees which brought down tree limbs and caused danger to campers.

- Local Vulnerabilities:** Use the chart below to identify what specific community assets (i.e., infrastructure, systems, populations) are vulnerable to damages or loss from the hazards that pose risk to your community. Use the blank rows to enter in your answers as they relate to your community.

Natural Hazard (please list)	Vulnerability Assessment Describe <u>specific</u> community assets are susceptible to damage or loss from hazard events.
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	<p>We have 1 mobile home park within the city that does not have a storm shelter and residents are vulnerable to high wind and tornado events.</p> <p>Our municipal campground is active during summer and fall months with RVs and campers and does not have a storm shelter.</p> <p>Many homes in are built on slab with no basement. These residents are at greater risk during severe wind events.</p>
Extreme Cold	<p>Residents are susceptible to dangers from extreme cold, especially if the power goes down during winter storm events. We have a high population of senior citizens and also low-income residents who are more vulnerable during these events.</p> <p>In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold.</p> <p>The city has also experienced damages to roads from spring frost heaves and frozen culverts that cause localized flooding.</p>

4. Reduction in Vulnerability - 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 underway that reduces future risk.

In 2018 the city completed a street reconstruction project which included adding more storm sewer and catch basins.

We have encouraged business, resident, and area nursing homes to enroll in the county’s emergency notification system so they will be aware of dangerous storm events.

The city has also increased use of our website and Facebook page to communicate with residents on emergency preparedness.

We installed a new (2nd) outdoor warning siren.

Trees have been taken down or taken down near power lines.

5. Increase in Vulnerability – Describe any current conditions or changes you feel have increased your community’s vulnerability to future severe weather or disaster events. Consider factors such as recent population growth or new development.

With the construction of a new assisted living facility, there are now two (2) large concentrations of senior residents in one location that will need assistance during a disaster event.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. Describe what methods you use to provide information to residents on emergencies or personal preparedness for severe weather.

We use our city website and Facebook page. We also post information on bulletin boards at the Community First Bank, Review Messenger, and at the Post Office. We also make announcements at city council meetings to the public during severe weather season. Staff goes to the campground and informs campers when severe weather is approaching.

2. Do you encourage residents to sign up for the county's emergency notification system and/or a local emergency alert system? If so, how?

We do not do this currently, but we will have a link on the city web page to sign up for the county alert system. The city does not have our own system.

3. Does your community participate in the National Flood Insurance Program?

Yes. The city is participating in the NFIP and has FEMA-mapped high-risk areas. The city has a floodplain ordinance (Ordinance 95-01) in place that is enforced.

4. Describe any plans, authorities or policies in place that help to reduce risk from natural hazards in your community.

Our city has a Comprehensive Plan that is designed to plan for future physical growth of the city and appropriate land uses. We have a sump pump ordinance in place to mitigate against overload of the city's I&I system.

5. Please describe what staff or partnerships are in place to help accomplish mitigation in your community.

Our Fire Chief is the city's designated Emergency Manager. Our City Council includes a Public Safety Committee. We have a city engineer and a public works director that address road maintenance issues for flooding (culverts, repetitive flooding). We have partnered with the county to address upgrade of our warning siren and local flood issues.

6. Describe any programs in place that to help accomplish mitigation in your community.

Our local school practices tornado drills on an annual basis. The city conducts monthly civil air defense siren tests. The utility company manages vegetation near power lines to reduce risk of power outages.

7. Please describe any agency partnerships, funding or other resources to help accomplish mitigation in your community.

The city primarily uses its own budget to address mitigation projects, such as replacement of culverts. We have also worked closely with the Wadena County highway engineer on local flood mitigation projects for roads and the county zoning department when we updated our local floodplain ordinance.

- 8. Does your jurisdiction have any plans or policies in place related to resilience and adaptation for climate change? If yes, please describe.**

No

- 9. Who is your local electric provider? (i.e., municipal / rural electric coop / other)**

Minnesota Power

- 10. Do you need back-up generators for specific critical facilities? Please identify them.**

City Hall/Police Department; Water Tower; Lift Station; Fire Hall; City Garage

PART C: LOCAL MITIGATION PROJECTS

- 1. Local Mitigation Projects: Describe any specific mitigation activities you think would help to address local vulnerabilities and reduce risk against future hazard events in your community.**

We need a storm shelter or tornado safe room constructed at the local campground and on the north side of the city.

The city has a need for additional storm sewer upgrades and purchase of additional pumps in the event of flooding.

Public education is a standing need and homeowners would benefit from more information on how to be prepared for bad storms and extended power outages (i.e., generators, food, water, etc.).

We need a portable generator for our City Hall and Fire Hall, which is our designated community mass care shelter.

- 2. Gaps or Deficiencies: Please describe any specific gaps or deficiencies that are a barrier to implementing local mitigation measures.**

Not all of our residents are signed up for the county's emergency notification system. We need to update our city's long-range Comprehensive Plan to address considerations for future hazard events such as flooding. There is new development occurring with most homes being built on slab instead of with basements – this leaves residents more vulnerable in the event of a tornado. We are small city with limited financial and staff resources to address local mitigation projects.

PART D: SURVEY PARTICIPANTS

Cheryl Hahn, City Administrator
Deb Klovstad, Deputy Clerk
Tom Hoppe, PW Superintendent
Tighe Lane, Chief of Police

CITY OF STAPLES

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

- Hazard Identification & Risk Prioritization:** Please fill out the chart below as you feel it relates for your jurisdiction. Please note that hazards that are considered as significant (moderate to high priority) will need to have at least one mitigation action associated with it.

Natural Hazard	Use an "X" to Select 3-5 of the top hazards you feel pose risk to your jurisdiction.	Indicate your priority level of each hazard to your community as <u>Low</u> , <u>Moderate</u> , or <u>High</u> . Consider past events, likelihood of future events, and impacts to community assets.	Note if you feel the risk has increased, decreased, or had no change over the last 5 years.
Winter Storms (Blizzards, Ice Storms)	X	Moderate	No Change
Tornadoes	X	Moderate	No Change
Windstorms	X	Moderate	No Change
Lightning		Low	No Change
Hail		Low	No Change
Flooding		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 Failure		Low	No Change

- Recent Hazard Events:** Describe any severe weather or disaster events that have occurred over the last 5 years that caused damages in your community.

Nothing in the last five years. Prior to that wind events have occurred.

- Local Vulnerabilities:** Use the chart below to identify what specific community assets (i.e., infrastructure, systems, populations) are vulnerable to damages or loss from the hazards that pose risk to your community. Use the blank rows to enter in your answers as they relate to your community.

Natural Hazard (please list)	Vulnerability Assessment Describe <u>specific</u> community assets are susceptible to damage or loss from hazard events.
Wind or Tornado	Damage to structures, trees, etc. Mobile Home Parks and campground are areas vulnerable to high wind events.
Wind or Ice Storm	Some 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.

	<p>The city is served by two substations. If we lost the feed to the South Sub, the North Sub could be overloaded unless steps were taken to reduce load.</p> <p>Dower Lake Campground needs plans for shelter in place.</p>
Extreme Cold	<p>There are several homes that are served by shallow water service lines and are susceptible to freezing.</p> <p>Many of the City’s water mains are cast iron and are susceptible to breaking.</p> <p>The City is served by two substations. If we lost the feed to the South Sub, the North Sub could be overloaded unless steps were taken to reduce load.</p>

4. Reduction in Vulnerability - 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 underway that reduces future risk.

We are working on plans for increasing the capacity of the North Substation. Most of the electric infrastructure improvements are directed at placing the primary conductor underground. Emergency shelter and sirens available to use emergency shelter at Campground coming soon.

5. Increase in Vulnerability – Describe any current conditions or changes you feel have increased your community’s vulnerability to future severe weather or disaster events. Consider factors such as recent population growth or new development.

Regularly freezing service lines can lead to damage to the line and possibly to the water main. Multi-unit housing built without basements for shelter.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. Describe what methods you use to provide information to residents on emergencies or personal preparedness for severe weather.

Facebook, City Website, Code Red, Sirens.

2. Do you encourage residents to sign up for the county’s emergency notification system and/or a local emergency alert system? If so, how?

Website, National Night Out, City Newsletter.

3. Does your community participate in the National Flood Insurance Program?

Yes, we participate in the National Flood Insurance Program in order to allow homeowners to procure flood insurance. Only a very small piece of Staples falls within the floodplain.

4. Describe any plans, authorities or policies in place that help to reduce risk from natural hazards in your community.

The city has an existing Emergency Plan and a Utility Emergency Plan is being developed as a supplement to it.

Campground Storm Shelter grant has been received with plans for construction in 2023.

5. Please describe what staff or partnerships are in place to help accomplish mitigation in your community.

The city operates a municipal electric utility. The Emergency Plan references roles of utility personnel in conjunction with emergency services. Collaboration with Todd & Wadena County Emergency (also Lakewood Health System Emergency Management. Access to EM Trailer and Equipment).

6. Describe any programs in place that to help accomplish mitigation in your community.

Website, Facebook, Code Red, tree trimming near power lines.

7. Please describe any agency partnerships, funding or other resources to help accomplish mitigation in your community.

Staples-Motley School conducts Tornado Awareness Drills.

8. Does your jurisdiction have any plans or policies in place related to resilience and adaptation for climate change? If yes, please describe.

No

9. Who is your local electric provider? (i.e., municipal / rural electric coop / other)

City of Staples and Todd-Wadena Electric Cooperative.

10. Do you need back-up generators for specific critical facilities? Please identify them.

Community Center needs a generator for backup power for emergency sheltering.

PART C: LOCAL MITIGATION PROJECTS

1. Local Mitigation Projects: Describe any specific mitigation activities you think would help to address local vulnerabilities and reduce risk against future hazard events in your community.

A texting option would be the most effective way to reach the largest amount of residents/customers.

Having a generator for the Community Center would allow the option of having an emergency space for people to go after an extreme event.

Getting more of our overhead power lines underground could have a great effect on reducing power outages.

Adding Sirens and updating outdated sirens would help.

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

Continuing to develop our local plans, training employees and residents. We have limited staff and dollars to address some of these issues.

PART D: SURVEY PARTICIPANTS

Jerel Nelsen, City Administrator
 Melissa Birkholtz, Police Chief
 Scott Grabe, Public Works Director

CITY OF VERNDALE

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. Hazard Identification & Risk Prioritization: Please fill out the chart below as you feel it relates for your jurisdiction. Please note that hazards that are considered as significant (moderate to high priority) will need to have at least one mitigation action associated with it.

Natural Hazard	Use an "X" to Select 3-5 of the top hazards you feel pose risk to your jurisdiction.	Indicate your priority level of each hazard to your community as <u>Low, Moderate, or High</u> . Consider past events, likelihood of future events, and impacts to community assets.	Note if you feel the risk has increased, decreased, or had no change over the last 5 years.
Winter Storms (Blizzards, Ice Storms)	X	Moderate	Increased
Tornadoes	X	Low	No Change
Windstorms	X	Moderate	Increased
Lightning			
Hail			
Flooding			
Extreme Cold	X	Low	No Change
Extreme Heat	X	Low	No Change
Drought			
Wildfire			
Landslides			
Dam Failure			

- Recent Hazard Events: Describe any severe weather or disaster events that have occurred over the last 5 years that caused damages in your community.**

None in the last 5 years.

- Local Vulnerabilities: Use the chart below to identify what specific community assets (i.e., infrastructure, systems, populations) are vulnerable to damages or loss from the hazards that pose risk to your community. Use the blank rows to enter in your answers as they relate to your community.**

Natural Hazard (please list)	Vulnerability Assessment Describe <u>specific community assets</u> are susceptible to damage or loss from hazard events.
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	We have 1 mobile home park within the city that does not have a storm shelter and residents are vulnerable to high wind and tornado events.
Extreme Cold	Residents are susceptible to dangers from extreme cold, especially if the power goes down during winter storm events. In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold.

- Reduction in Vulnerability - 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 underway that reduces future risk.**

The City Council approved to give credit on the water/sewer bill for people to run their water during the winter to keep the water and pipes from freezing.

The Fire Department opens the Public Works Building for residents to take shelter in during windstorms/tornadoes.

The city uses back-up generators to power the water treatment plant and lift stations when there isn’t power.

- Increase in Vulnerability – Describe any current conditions or changes you feel have increased your community’s vulnerability to future severe weather or disaster events. Consider factors such as recent population growth or new development.**

None

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

- Describe what methods you use to provide information to residents on emergencies or personal preparedness for severe weather.**

Public Works and the Police Department have Facebook pages to post information on.

2. Do you encourage residents to sign up for the county's emergency notification system and/or a local emergency alert system? If so, how?

No – Don't have the information.

3. Does your community participate in the National Flood Insurance Program?

No, the city of Verndale is not participating in the NFIP. However, the Wadena NFIP status chart shows that the city does have FEMA mapped high-risk areas. The city is working with the MN DNR Floodplain Manager to learn about the city's current floodplain mapping, how to participate in the NFIP and how to develop a floodplain ordinance.

4. Describe any plans, authorities or policies in place that help to reduce risk from natural hazards in your community.

The city has a Comprehensive Plan for future growth, an Emergency Operations Plan and a Wellhead Protection Plan.

5. Please describe what staff or partnerships are in place to help accomplish mitigation in your community.

The city has an Emergency Management Director who serves as a liaison with the Wadena County Emergency Management Director. The city has contacts with the American Red Cross for assistance with home fires or other local disasters. The city also has contacts at Tri-County Health Care for any medical needs. The mayor is responsible for activating an Emergency Response Center and contacting radio stations with Emergency Public Information. The city Council has a safety committee.

6. Describe any programs in place that to help accomplish mitigation in your community.

The school participates in fire and tornado drills at least annually. The city participates in monthly siren and emergency alert system testing.

7. Please describe any agency partnerships, funding or other resources to help accomplish mitigation in your community.

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

8. Does your jurisdiction have any plans or policies in place related to resilience and adaptation for climate change? If yes, please describe.

No

9. Who is your local electric provider? (i.e., municipal / rural electric coop / other)

Minnesota Power

10. Do you need back-up generators for specific critical facilities? Please identify them.

None needed.

PART C: LOCAL MITIGATION PROJECTS

1. Local Mitigation Projects: Describe any specific mitigation activities you think would help to address local vulnerabilities and reduce risk against future hazard events in your community.

The city has a need for a storm shelter or tornado safe room in the trailer park.

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

Residents aren't signed up for the county's Emergency Notification System. The city is small and has limited financial and staff resources to address local mitigation projects.

PART D: SURVEY PARTICIPANTS

Melissa Current, City Clerk/Treasurer
Matthew Uselman, Public Works Supervisor

CITY OF WADENA

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. Hazard Identification & Risk Prioritization: Please fill out the chart below as you feel it relates for your jurisdiction. Please note that hazards that are considered as significant (moderate to high priority) will need to have at least one mitigation action associated with it.

Natural Hazard	Use an "X" to Select 3-5 of the top hazards you feel pose risk to your jurisdiction.	Indicate your priority level of each hazard to your community as <u>Low, Moderate, or High</u> . Consider past events, likelihood of future events, and impacts to community assets.	Note if you feel the risk has increased, decreased, or had no change over the last 5 years.
Winter Storms (Blizzards, Ice Storms)	X	Moderate	No Change
Tornadoes	X	Moderate	No Change
Windstorms	X	Moderate	No Change
Lightning	X	Moderate	No Change
Hail	X	Moderate	No Change
Flooding		Low	No Change
Extreme Cold		Low	No Change

Extreme Heat		Low	No Change
Drought		Low	No Change
Wildfire			
Landslides			
Dam Failure			

2. Recent Hazard Events: Describe any severe weather or disaster events that have occurred over the last 5 years that caused damages in your community.

Summer of 2021, we had drought-like conditions. Spring of 2022 we had a strong wind storm that caused minor damage to a few properties in the city.

3. Local Vulnerabilities: Use the chart below to identify what specific community assets (i.e., infrastructure, systems, populations) are vulnerable to damages or loss from the hazards that pose risk to your community. Use the blank rows to enter in your answers as they relate to your community.

Natural Hazard (please list)	Vulnerability Assessment Describe <u>specific</u> community assets are susceptible to damage or loss from hazard events.
Ice storms, flooding, wind storms & tornados	Some city buildings are vulnerable to these natural hazards, with the most vulnerable being our wastewater treatment plant; because it is so critical to the city's infrastructure. We need a few more storm shelters in our city. We have a few mobile home parks (2 in the city and one on the edge). With the railroad, at times it is difficult to get to the one storm shelter/safe room in a timely manner.
Lightning, winds	Our overhead electrical lines and substations are vulnerable to these natural hazards, along with underground lines too.
Flooding	With our water we have aging infrastructure which would not be able to hold up under extreme conditions

4. Reduction in Vulnerability - 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 underway that reduces future risk.

With the flooding we had a few years ago, FEMA helped build up the city street that was affected by the flooding.

We have also converted our overhead electrical lines to underground with redundancy built in.

Our water plant has better security, water main was recently replaced, and now we have leak detection technology.

Our city also uses Facebook, our website, and radio to inform residents of any emergency immediately. We also use Wadena County's CodeRed system and IPAWS through the Wadena County Sheriff's Office.

- 5. Increase in Vulnerability – Describe any current conditions or changes you feel have increased your community’s vulnerability to future severe weather or disaster events. Consider factors such as recent population growth or new development.**

Aging software and control systems at our water plant. We have a new portable generator but most of our stations are not wired to use the new generator at our sanitary sewer lift stations.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

- 1. Describe what methods you use to provide information to residents on emergencies or personal preparedness for severe weather.**

We share the information on our Facebook page.

- 2. Do you encourage residents to sign up for the county’s emergency notification system and/or a local emergency alert system? If so, how?**

Yes, we have a link on our city’s website, occasionally we send out flyers in with utility bills, and at public relations events we encourage folks to sign up then too.

- 3. Does your community participate in the National Flood Insurance Program?**

The Wadena County NFIP status chart shows that the city of Wadena is participating in the NFIP and has FEMA mapped high-risk areas. The city is working with the MN DNR Floodplain Manager on this matter – the city was under the impression they were not participating and did not have FEMA mapped high risk areas. The city administrator noted that “Wadena County has a Flood Plain Ordinance that applies outside the jurisdiction of a city limit within Wadena County.”

- 4. Describe any plans, authorities or policies in place that help to reduce risk from natural hazards in your community.**

We have our own city EOP. Our city also provides information to new businesses and residents on how to sign up for the emergency notifications.

- 5. Please describe what staff or partnerships are in place to help accomplish mitigation in your community.**

We have a Public Works Director, Water and Electrical Director, Police Chief/EM, and Fire Department.

- 6. Describe any programs in place that to help accomplish mitigation in your community.**

On a monthly basis we participate in checking the warning siren system in the city, and we send out CodeRed alerts. We also check the functionality of the Tornado Safe room located at our High School.

The city participates in Wadena County’s emergency alert system (Code RED) and we promote residents to sign up for it by having a link on our website to the registration site. The city also

has access to an emergency alert system called IPAWS through the Wadena County Sheriff's Office.

Our city participates 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.

Our local school practices tornado drills on an annual basis.

7. Please describe any agency partnerships, funding or other resources to help accomplish mitigation in your community.

We work with Wadena County Emergency Management and Otter Tail County Emergency Management as needed. Our city is located in both counties and is participating in both county MHMP updates.

8. Does your jurisdiction have any plans or policies in place related to resilience and adaptation for climate change? If yes, please describe.

The city primarily uses its own budget to address local mitigation measures, such as replacement of culverts. We work with grant funded projects when applicable. We also work with county funds since we are a city population under 5,000.

9. Who is your local electric provider? (i.e., municipal / rural electric coop / other)

City of Wadena Electrical Department & Todd Wadena Electrical Coop

10. Do you need back-up generators for specific critical facilities? Please identify them.

No, we don't need any.

PART C: LOCAL MITIGATION PROJECTS

1. Local Mitigation Projects: Describe any specific mitigation activities you think would help to address local vulnerabilities and reduce risk against future hazard events in your community.

We need a few more storm shelters in our city. We have a few mobile home parks 2 in the city and one on the edge. With the railroad, at times it is difficult to get to the one storm shelter/safe room in a timely manner.

We also need to upgrade the city utilities in the SW part of town, which is the largest section.

Continue to encourage residents to sign up for emergency notifications. We promote the Wadena County CodeRed System as most of the city is within Wadena County. Residents in the SW quadrant of the city could sign up for Otter Tail County Smart911 alerts if they wished to do so.

- 2. Gaps or Deficiencies: Please describe any specific gaps or deficiencies that are a barrier to implementing local mitigation measures.**

We should upgrade our city's comprehensive plan (to include planning considerations for natural hazards).

PART D: SURVEY PARTICIPANTS

Naomi Plautz, Chief of Police/City Emergency Manager
Dan Kovar, Public Works Director

Appendix D – Plans & Programs in Place

Wadena County

MHMP Plans in Place Form

Planning & Regulatory

<i>Plans/Programs</i>	<i>Yes/No</i>	<i>Comments</i>
Comprehensive/Master Plan	Yes	2013 Comp Plan
Capital Improvements Plan	Yes	
Economic Development Plan	Yes	
Emergency Operations Plan	Yes	EOP updated annually
Climate Adaptation Plan	No	
Continuity of Operations Plan	Yes	Update annually by the Wadena County Sheriff's Office
Transportation Plan	Yes	Wadena County EOP
Stormwater Management Plan	No	Some special projects may require permitting
Community Wildfire Protection Plan	No	MN DNR notes no CWPP for Wadena County
FireWise Program	No	
Comprehensive Water Management Plan	Yes	SWCD
One Watershed, One Plan (1W1P)	Yes	Redeye River
Wellhead Protection Plan	No	Municipalities
Database of dry hydrants/well access	No	
Burning permits/restrictions	Yes	Purchased through MN DNR or local Fire Wardens
Zoning ordinance	Yes	Wadena County Zoning Ordinance, Sept. 2020
Subdivision ordinance	Yes	Within County Zoning Ordinance
Floodplain ordinance	Yes	Outside city limits
Natural hazard specific ordinance (i.e., stormwater, steep slope, wildfire)	Yes	SWCD enforces State Buffer Law
Flood insurance rate maps	Yes	
Acquisition of homes (buyouts) due to repetitive flood damage or imminent risk of failure from erosion	No	
School closing policy/communications plan in event of inclement weather/temperatures	Yes	Schools maintain their own policies.
Mass Care Sheltering Plan	Yes	In County Emergency Operations Plan
Designated Mass Care Sheltering Facilities (list available)	Yes	In County Emergency Operations Plan

Tornado Safe Rooms/Outdoor Storm Shelters (list available)	Yes	Tornado safe room at the High School in Wadena
Outdoor Warning sirens (list all locations)	Yes	Wadena, Verndale, Sebeka, Menahga, Nimrod
SKYWARN Program	Yes	Emergency Management helps promote SKYWARN training and hosts when available
Emergency Mass Notification System (provide type, i.e., CodeRED)	Yes	CodeRED
Severe Weather Awareness Week	Yes	Done annually by EM
Winter Weather Awareness Week	Yes	Done annually by EM
NOAA Weather Radios	Yes	Emergency Management promotes the use of NOAA Weather Radios
THIRA	Yes	Past THIRA but no longer required
<i>Other *please describe</i>		

Administrative & Technical

<i>Administration</i>	<i>Yes/No</i>	<i>Comments</i>
Planning Commission	Yes	
Mitigation Planning Committee	Yes	MHMP Update Planning Team
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	Yes	Highway Dept. ROW maintenance and drainage systems
Mutual aid agreements	Yes	Neighboring Counties and all of HSEM Region IV, American Red Cross
<i>Staff</i>	<i>Yes/No</i>	<i>Comments</i>
Chief Building Official	Yes	For Wadena County Buildings
Floodplain Administrator	Yes	Wadena County Zoning
Emergency Manager	Yes	Tyler Wheeler
County Coordinator	Yes	Ryan Odden
Civil Engineer	Yes	Wadena County Hwy Dept
GIS Coordinator	Yes	Gina Dahms

<i>Technical</i>	<i>Yes/No</i>	<i>Comments</i>
Hazard data and information	Yes	Damage information on file from past storm events
Hazus analysis	No	Will be conducted as part of MHMP update.

Education & Outreach

<i>Program/Organization</i>	<i>Yes/No</i>	<i>Comments</i>
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	Emergency preparedness committee that meets quarterly
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Wadena County EM along with Wadena County public health and human services
Natural disaster or safety related school programs	Yes	ALICE Training practiced county wide
StormReady certification	No	
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	No	
<i>Other *please list & describe</i>		

Appendix E – Past Mitigation Action Review Status Report

Wadena County

Past Mitigation Action Review Status Report

Following is a report on the status of mitigation actions related to natural hazards listed in *Section 5: Mitigation Strategy* of the Wadena County 2015 Hazard Mitigation Plan. This report identifies those actions that have been completed, are being deleted, or are ongoing. Mitigation actions that are noted as “ongoing” will be reviewed & revised as necessary based on the updated risk assessment and local input. This report covers the mitigation actions that were listed for implementation by the county and by city jurisdictions, as applicable.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Tornado	Require storm shelters for all mobile home parks & multiple family dwellings.	Wadena County & All Cities	Ongoing	The MN Dept. of Public Health continues to work with licensed manufactured home parks to ensure the MN State statutes for shelters and evacuation plans are met.
Tornado	Continue to upgrade and improve Emergency Warning Systems.	Wadena County & All Cities	Ongoing	Wadena County and local jurisdictions continue to monitor and maintain outdoor warning sirens and address upgrades as needed.
Tornado	Encourage NOAA weather radio use	Wadena County & All Cities	Ongoing	This is an ongoing part of Wadena County Emergency Management (WCEM) public outreach and education on storm preparedness.
Tornado	Require all warning systems to be radio activated by dispatch and have battery back- up	Wadena County & All Cities	Delete	Not a necessary mitigation action. This is covered under standard WCEM emergency communications procedures.
Tornado	Continue to provide Posters, brochures, media materials to public about tornado safety.	Wadena County & All Cities	Ongoing	WCEM continues to conduct public outreach and education about tornado awareness and safety to the public.
Tornado	Continue to provide information on safer building materials and on structure hardening.	Wadena County & All Cities	Delete	WCEM does not provide this information to construction firms or individual homeowners.
Tornado	Provide information to local communities regarding FEMA grant programs to construct saferooms and or harden structures.	Wadena County & All Cities	Ongoing	WCEM is working with all cities to identify projects that may be eligible for future FEMA HMA grant funding such as tornado safe rooms.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Tornado	Consider constructing saferooms or hardening of existing structures located at or near schools or other critical facilities.	Wadena County & All Cities	Ongoing	WCEM and local jurisdictions continue to identify and address where storm shelters or tornado safe rooms are needed.
Tornado	Encourage wind engineering measures and construction techniques that may include Structural bracing, straps and clips, anchor bolts, impact resistant glass, reinforced pedestrian and garage doors, window shutters, waterproof adhesive sealing strips, and interlocking roof shingles.	Wadena County & All Cities	Delete	This is not done by Wadena County or individual jurisdictions.
Wildfire	Continue to provide public education materials related to the prevention of wildfire.	Wadena County & All Cities	Ongoing	WCEM, MN DNR and local fire departments continue to educate the public on wildfire risk and prevention.
Wildfire	Ensure the strong coordination between local fire departments and associations as well as those from outside areas to provide fire protection, which will reduce the impact of wildfires.	Wadena County & All Cities	Delete	Not a necessary mitigation action. Existing agreements are in place between fire departments.
Wildfire	Promote positive forestry management techniques including the principles of fire adapted communities, firewise program and the removal of dead, dry vegetation and trees which may ignite as a result of lightning or human related causes.	Wadena County & All Cities	Ongoing	Ongoing by MN DNR and local fire departments. Wadena County does not have a CWPP in place. This is something the county will consider to add as part of our MHMP plan update.
Wildfire	Encourage the use of fire adapted communities principles that will minimize the risk of wildfire.	Wadena County & All Cities	Ongoing	MN DNR and local fire departments will continue to promote Firewise principles for communities at higher risk for wildfire.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Wildfire	Continue to encourage the removal of trees and vegetation around electrical lines and if possible bury electrical lines where feasible.	Wadena County & All Cities	Ongoing	Vegetation management is an ongoing effort by local road authorities and electric utilities. Municipal and rural electric coops continue to work to bury powerlines where feasible to reduce power outages.
Wildfire	Consider developing and maintaining a database to track community vulnerability to wildfire.	Wadena County & All Cities	Delete	Wadena County may work with the MN DNR to develop a CWPP to address high-risk wildfire areas in the county.
Wildfire	Encourage the use of non-combustible materials (i.e., stone, brick, and stucco) for new construction in wildfire hazard areas.	Wadena County & All Cities	Delete	This is not done by Wadena County or individual cities.
Wildfire	Consider creating buffers around residential and non-residential structures through the removal or reduction of flammable vegetation, including vertical clearance of tree branches.	Wadena County & All Cities	Ongoing	As part of wildfire education homeowners are continued to develop defensible space around their properties.
Wildfire	Consider performing maintenance including fuel management techniques such as pruning and clearing dead vegetation, selective logging, cutting high grass, planting fire-resistant vegetation, and creating fuel/fire breaks (i.e., areas where the spread of wildfires will be slowed or stopped by the removal of fuels).	Wadena County & All Cities	Ongoing	Wildland fire fuels reduction takes place primarily by MN DNR and Wadena SWCD as deemed necessary.
Extreme Heat	Encourage property owners to install air conditioning systems as they have been demonstrated to be the most effective intervention in reducing heat-related deaths.	Wadena County & All Cities	Ongoing	WCEM promotes residents to be prepared for extreme heat events and safety.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Extreme Heat	Consider constructing centralized cooling centers to increase the public's access to air-conditioned buildings.	Wadena County & All Cities	Ongoing	WCEM and WC Public Health have designated facilities and plans in place for activation of shelters in our emergency operations plan.
Extreme Heat	Encourage the use of building materials that reduce the "heat island" effect in urban areas.	Wadena County & All Cities	Delete	This is not something Wadena County actively endorses. It occurs at the local jurisdictional level and by construction firms in the design process of new development.
Extreme Heat	Consider using cool roofing products that reflect sunlight and heat away from buildings.	Wadena County & All Cities	Delete	This is not something Wadena County actively endorses. It occurs at the local jurisdictional level and by construction firms in the design process of new development.
Extreme Heat	Consider organizing outreach to vulnerable populations, including establishing and promoting accessible heating or cooling centers in the community.	Wadena County & All Cities	Delete	Not a necessary mitigation action. In the event of an extreme heat event WCEM and WCPH have emergency outreach and procedures in place for activation of cooling centers.
Drought	Encourage the wise utilization of water resources regardless of time of year.	Wadena County & All Cities	Ongoing	Revise - Wadena County and local jurisdictions promote public awareness of water conservation during times of drought.
Drought	Implement local regulation of water usage as necessary to alleviate drought.	Wadena County & All Cities	Ongoing	Local ordinances are established and enforced as per MN DNR recommendations or requirements during periods of severe drought.
Drought	Consider gathering and analyzing water and climate data to gain a better understanding of local climate and drought history.	Wadena County & All Cities	Ongoing	MN DNR and Wadena County SWCD measure precipitation and ground water levels in the county to monitor for drought.
Drought	Consider identifying local drought indicators, such as precipitation, temperature, surface water levels, soil moisture, etc.	Wadena County & All Cities	Ongoing	Same as above.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Drought	Consider regularly checking for leaks to minimize water supply losses.	Wadena County & All Cities	Delete	Not a necessary mitigation action.
Flooding & Flash Flooding	Restrict building in floodplain areas that consistently flood	Wadena County, Menahga, Sebeka, Wadena, Staples.	Ongoing	Wadena County and communities that participate in the NFIP have floodplain ordinances in place that restrict where new development can occur.
Flooding & Flash Flooding	Encourage development of parks and open space areas along floodplain areas that consistently flood.	Wadena County, Menahga, Sebeka, Wadena, Staples.	Ongoing	This may apply to different communities as per their interests and local needs to address floodplain management.
Flooding & Flash Flooding	Continue to review Emergency Operations Plan annually, as it pertains to flooding and flash flooding.	Wadena County	Ongoing	WCEM updates the county EOP on a regular basis.
Flooding & Flash Flooding	Encourage early participation of individual landowners in the FEMA National Flood Insurance Program by property owners located within floodplain areas.	Wadena County, Menahga, Sebeka, Wadena, Staples	Ongoing	Ongoing by Wadena County and local jurisdictions as relevant for flooding concerns.
Flooding & Flash Flooding	Consider developing a program to determine and enforce acceptable land uses to alleviate the risk of damage by limiting exposure in flood hazard areas.	Wadena County, Menahga, Sebeka, Wadena, Staples	Ongoing	Addressed under Wadena County and local floodplain ordinances.
Flooding & Flash Flooding	Consider developing a floodplain management plan and updating it regularly.	Wadena County, Menahga, Sebeka, Wadena, Staples	Ongoing	Addressed under Wadena County and local floodplain ordinances.
Flooding & Flash Flooding	Consider mitigating hazards during infrastructure planning. For example, decisions to extend roads or utilities to an area may increase exposure to flood hazards.	Wadena County, Menahga, Sebeka, Wadena, Staples	Ongoing	Localized flood mitigation for at-risk infrastructure continues by Wadena County P&Z Dept, Wadena County Highway Dept. and local jurisdictions as needed.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Flooding & Flash Flooding	Consider establishing watershed-based planning initiatives to address the flood hazard with neighboring jurisdictions.	Wadena County, Menahga, Sebeka, Wadena, Staples	Ongoing	Ongoing by Wadena County in coordination with Wadena SWCD.
Flooding & Flash Flooding	Consider prohibiting or limiting floodplain development through regulatory and/or incentive-based measures.	Wadena County, Menahga, Sebeka, Wadena, Staples	Ongoing	Addressed under Wadena County and local floodplain ordinances.
Flooding & Flash Flooding	Consider limiting the density of developments in the floodplain.	Wadena County, Menahga, Sebeka, Wadena, Staples	Ongoing	Addressed under Wadena County and local floodplain ordinances.
Flooding & Flash Flooding	Consider completing a storm water drainage study for known problem areas.	Wadena County, Menahga, Sebeka, Wadena, Staples	Ongoing	Local jurisdictions continue to develop and implement stormwater management plans
Flooding & Flash Flooding	Continue to provide public education on dangers of flash flooding.	Wadena County, Menahga, Sebeka, Wadena, Staples	Ongoing	Ongoing by WCEM and NWS during periods of high precipitation that may cause flooding.
Flooding & Flash Flooding	Encourage municipalities to require the development of new storm sewer infrastructure capable of handling a ten-to-twenty-year rain event in new developments or subdivisions.	Wadena County, Menahga, Sebeka, Wadena, Staples	Ongoing	Wadena County and local municipalities continue to develop and address mitigation for major high-rain events through local stormwater management planning and associated infrastructure improvements.
Severe Summer Storms (Lightning, Hail, High Winds)	Continue to promote severe summer storm safety through multi-media such as posters, brochures, media materials, social media and mailings.	Wadena County & All Cities	Ongoing	WCEM participates in the annual NWS Severe Weather Awareness Week each April and promotes public awareness and safety for spring and summer storms.
Severe Summer Storms	Provide information on making structures safer: Materials, building storm shelters, etc.	Wadena County & All Cities	Delete	This is a part of ongoing public outreach and education for severe storm events and personal preparedness.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Severe Summer Storms	Recommend that storm shelters exist for all mobile home parks, multiple family dwellings, and patio homes.	Wadena County & All Cities	Ongoing	Ongoing by MN Dept of Health in coordination with MHP operators and communities where they are located.
Severe Summer Storms	Encourage National Weather Service radio use.	Wadena County & All Cities	Ongoing	WCEM continues to promote use of NOAA weather radios
Severe Summer Storms	Continue to upgrade and improve Emergency Warning Systems.	Wadena County & All Cities	Delete	Not a necessary mitigation action. This is covered by WCEM ongoing emergency management planning.
Severe Summer Storms	Recommend that each LUG have storm shelters in place and available to public.	Wadena County & All Cities	Ongoing	Municipalities continue to identify and work to address where storm shelters or tornado safe rooms may be needed.
Severe Summer Storms	Encourage construction measures such as structural bracing, shutters, laminated glass in window panes, and hail-resistant roof coverings or flashing in building design to minimize damage.	Wadena County & All Cities	Delete	This is not done by Wadena County or individual jurisdictions.
Severe Summer Storms	Consider burying power lines whenever possible to provide uninterrupted power after severe winds, considering both maintenance and repair issues.	Wadena County & All Cities	Ongoing	Municipal and rural electric cooperatives continue to identify and address where mitigation measures can be applied for vulnerable power infrastructure.
Severe Winter Weather (Blizzard, Extreme Cold, Ice Storm)	Encourage local utility companies to continue to invest in and harden power infrastructure to withstand ice storms and other severe winter weather conditions.	Wadena County & All Cities	Ongoing	Municipal and rural electric cooperatives continue to identify and address where mitigation measures can be applied for vulnerable power infrastructure.
Severe Winter Weather	Provide information to landowners with Individual Septic Treatment Systems on ways to protect their systems from extreme cold.	Wadena County & All Cities	Ongoing	This is part of regular winter awareness public outreach by Wadena County and local municipalities.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Severe Winter Weather	Encourage local units of government to adopt the International Building Code (IBC) and International Residential Code (IRC).	Wadena County & All Cities	Delete	Not a necessary mitigation action. Already addressed under county and local zoning regulations.
Severe Winter Weather	Encourage the development of living snow-fences or similar devices along roadways to minimize snow accumulation.	Wadena County & All Cities	Ongoing	Ongoing by Wadena SWCD and communities with high snow drift road corridors.
Severe Winter Weather	Continue providing exceptional snow removal, salting, and sanding to minimize the impacts of snow accumulations on roadways.	Wadena County & All Cities	Delete	This is a standard work element of Wadena County Highway Dept. for winter roads treatment.
Severe Winter Weather	Provide information on building materials and practices that increase structural safety, and increase energy conservation in cold weather conditions.	Wadena County & All Cities	Delete	This is not done by Wadena County or individual jurisdictions.
Severe Winter Weather	Provide public education on staying safe during cold weather and winter storm events including information on safety kit items and where to purchase them locally.	Wadena County & All Cities	Ongoing	This is part of WCEM and local jurisdictions regular outreach on winter weather awareness and safety.
Dam & Levee Failure	Maintain contact and coordination with the Minnesota Dam Safety Office.	Wadena County & All Cities	Ongoing	MN Dam Safety Program monitors and reports on any dams within the county as required in their database of dams.
Dam & Levee Failure	Establish a notification procedure in the event of an expected, inevitable dam failure event for all "1" and "2" classified dams within the County.	Wadena County & All Cities	Delete	There are no high-hazard dams within Wadena County.

Appendix F – Planning Team Meetings

Wadena County MHMP Update

Appendix F - Kickoff Meeting Documentation

Overview:

On July 29, 2021, U-Spatial@UMD hosted a kickoff meeting online that was attended by the Wadena 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 Multi-Hazard Mitigation Plan, the planning process, and the projected timeline of the project

Attached Documentation:

- **Project Handout:** "Minnesota 2021-2022 Multi-Hazard Mitigation Plan Update Project Overview".
- **Webinar Slides:** "Minnesota 2021-2022 Multi-Hazard Mitigation Plan Update Project Kickoff Orientation Webinar"

Minnesota 2021-2022 Multi-Hazard Mitigation Plan Update Project Overview

During 2021-2022, U-Spatial from the University of Minnesota Duluth (U-Spatial@UMD) will be working to update Multi-Hazard Mitigation Plans (MHMPs) for 9 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

Big Stone, Douglas, Isanti, Meeker, Morrison, Polk, Wadena, Wright, and Yellow Medicine counties. Cities within each county are required to participate in the planning process.

Overview of Update Process

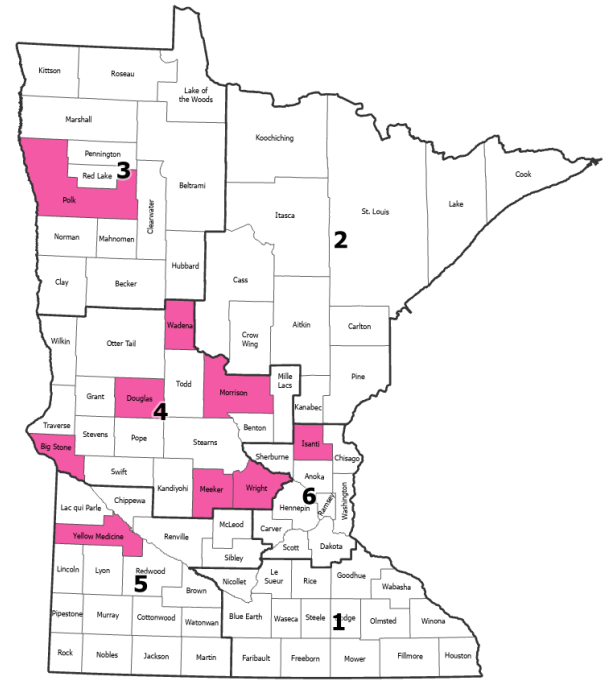
The U-Spatial@UMD team will coordinate with each Emergency Manager throughout the plan update process to engage participating jurisdictions and other stakeholders in the planning process. Following is an overview of key tasks that the U-Spatial@UMD team will facilitate to meet FEMA requirements in the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

- Conduct 2 planning team meetings
- Conduct 2 periods of 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)
- 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)
Phone: (218) 726-7438 / Email: slstark@d.umn.edu



Overview of the MHMP 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 county profile sections and maps
- 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, EM's are required to submit quarterly reports to HSEM on their local 25% match accrued through MHMP activities during that quarter.

Minnesota 2021-2022 Multi-Hazard Mitigation Plan Update Project Kick-off Orientation Webinar



Webinar Purpose & Goals

The purpose of this webinar is to provide an orientation for Emergency Managers participating in 2021-2022 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.

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?

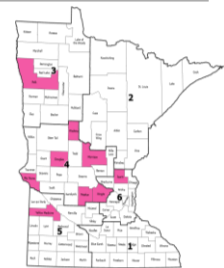
Minnesota HSEM:

Jennifer Davis, MN HSEM
State Hazard Mitigation Officer

Project Overview

9 Counties:

- Big Stone
- Douglas
- Isanti
- Meeker
- Morrison
- Polk
- Wadena
- Wright
- Yellow Medicine



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.

Why U-Spatial@UMD?

> Proven experience

Our updates of 30+ 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.

Overview of MHMP Update Process

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.

MHMP Planning Team

The MHMP planning team must include representation from local government, related stakeholders and neighboring jurisdictions.

- County Government key officials and staff
- Cities – required; Townships – optional
- Other Related Stakeholders (i.e., SWCD, USDA, Schools, Rural & Municipal Electric Coops, MN DNR, etc.)
- Neighboring county/tribal jurisdictions

Key Tasks

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

Key Tasks

- Distribute & document News Release #1.
- Distribute & document News Release #2.
- Conduct other public outreach (optional).

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.

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.

Timeline Overview

- 22-Month total timeline (July 2021 – May 2023)
- 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)	July – November 2021	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)	December 2021 – May 2022	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 2022	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 2022	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

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.

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>

Wadena County MHMP Update

JURISDICTIONAL CONTACT LIST

County Contacts

Name	Title	Phone	Email
Tyler Wheeler	Emergency Management Director	218-631-7795	tyler.wheeler@wcmn.us
Bryan Savaloja	Deputy EM Director	218-631-7600	bryan.savaloja@co.wadena.mn.us
Michael D. Carr	County Sheriff	218-631-7600	mike.carr@co.wadena.mn.us
Ryan Odden	Highway Engineer/County Coordinator	218-631-7636	ryan.odden@wcmn.us
Deana Malone	Planning & Zoning Administrator / Parks Administrator	218-631-7604	deana.malone@co.wadena.mn.us
Erica Keppers	Public Health Director	218-632-8495	erica.keppers@wcmn.us
Sean Uselman	Building Services Supervisor	218-631-7644	sean.uselman@co.wadena.mn.us
Sheldon Monson	County Board Chairman, District 1	218-640-3278	sheldon.monson@co.wadena.mn.us
Mike Weyer	County Board Member, District 2	218-894-1028	Mike.weyer@co.wadena.mn.us
Bill Stearns	County Board Member, District 3	218-631-2351	Bill.stearns.@co.wadena.mn.us
Murlyn Kreklau	County Board Member, District 4	218-837-5352	murlyn.kreklau@co.wadena.mn.us
Jon Kangas	County Board Member & Vice Chair, District 5	218-255-1952	jon.kangas@co.wadena.mn.us

City Contacts

CITY OF ALDRICH

Name	Title	Phone	Email
Justin Genosky	Mayor	(218) 293-4572	
Melissa Ludovissie	Clerk		aldrichcity@outlook.com
Jeff Ludovissie	City Councilor	218-445-5702	
DeEtta Bilek	Deputy Clerk BEST CONTACT	218-445-5475	deebilek@wcta.net

CITY OF MENAHGA

Name	Title	Phone	Email
Curt Kreklau Jr.	City Administrator	(218)564-4557	cmenahga@wcta.net
Tanya Edwards	Deputy Clerk	(218)564-4557	Depclerk@wcta.net
Dave Kicker	Fire Chief	(218)639-8123	davek@wcta.net
Adam Gunderson	Chief of Police	(218)255-7602	Adam.gunderson@co.wadena.mn.us

CITY OF NIMROD

Name	Title	Phone	Email
Keith Frame	Mayor	(218)472-3220	
Karen Lepinski	Clerk	(218)837-5724	cityofnimrod@wcta.net

CITY OF SEBEKA

Name	Title	Phone	Email
David Anderson	Mayor	(218)837-5637	cosmayordavid@gmail.com
Tighe Lane	Chief Of Police/EM	(218)837-5911	sebekapd@hotmail.com
Dean Haman	Fire Chief	(218)837-5580	Dlhaman3@gmail.com
Cheryl Hahn	City Administrator	(218)837-5773	Cityofsebaka@wcta.net

CITY OF STAPLES

Name	Title	Phone	Email
Chris Etzler	Mayor	(218)894-2550	cetzler@ci.staples.mn.us
Melissa Birkholtz	Chief of Police/EM	1-800-794-5733	mbirkholtz@ci.staples.mn.us
Cole Yungbauer	Fire Chief	(218)296-1292	cyungbauer@ci.staples.mn.us
Jerel Nelson	City Administrator	(218)894-2550	jnelson@ci.staples.mn.us

CITY OF VERNDALE

Name	Title	Phone	Email
Melissa Current	City Clerk/Treasurer	(218)445-5400	verncity@scicable.com
Mike Madsen	Fire Chief	(218)639-2723	mpc@wcta.net
Cory Carr	Police Chief	(218)639-8891	Cory.carr@co.wadena.mn.us
Matt Uselman	City maintenance	(218)445-4042	verndalemaintenance@yahoo.com
Tara Erckenbrack	Mayor	(218)445-5638	T2erckenbrack@yahoo.com

CITY OF WADENA

Name	Title	Phone	Email
Naomi Plautz	EM/Chief of Police	(218)631-7700	Naomi.plautz@co.wadena.mn.us
George Deiss	Mayor	(218)631-2607	gdeiss@wadena.org
Cody Yglesias	Fire Chief	(218)639-4218	Cody.yglesias@co.wadena.mn.us
David Evens	Utilities/City Admin	(218)632-2763	cityadmin@wadena.org

Township Contacts

Name of Township	Name & Title	Phone	Email
Aldrich Township	Barbara Johnson, Clerk	(218) 445-5580	d_bjohn@yahoo.com
Blueberry Township	Jayne Pickar, Clerk	(218) 255-1497	jayne.bbtownship@gmail.com
Bullard Township	Janelle VanAlst, Clerk	(218) 472-3165	janellevanalst@gmail.com
Huntersville Township	Judy Salonek, Clerk	(218) 564-5974	huntersville@wcta.net
Leaf River Township	Lisa Schmidt, Clerk	(218) 631-5919	las21514@gmail.com
Lyons Township	Neal Malcore, Clerk	(218) 472-3316	lyonsmnclerk@gmail.com
Meadow Township	Marion Hansen, Clerk	(218) 837-5054	marionha@wcta.net
North Germany Township	Wendy Cannon, Clerk	(218) 837-5083	fullmeasure@wcta.net
Orton Township	Shannon Putikka, Clerk	(218) 639-0429	shannonputikka@gmail.com
Red Eye Township	Jeannie Arthur, Clerk	(218) 539-0183	jeannie.arthur@hotmail.com
Rockwood Township	Reuben Raatikka, Clerk	(218) 837-5325	raatikka5660@hotmail.com
Shell River Township	Bonita Newhouse, Clerk	(218) 564-5046	bonitan@wcta.net

Thomastown Township	Stacy Dukowitz, Clerk	(218) 296-0834	smdukowitz@gmail.com
Wadena Township	Trisha Kraemer, Clerk	(218) 631-1028	wadena_township@live.com
Wing River Township	Lyn Schmidt, Clerk	(701) 367-5221	WRTownship.Clerk@outlook.com

Other Stakeholder Contacts

Contacts to consider including: HSEM RPC, USDA CF Contact, School Districts, Colleges, Rural Electric Coops, MN DNR, etc.

Name of Agency/Org.	Name & Title	Phone	Email
USDA Rural Development Community Programs	Tyler Ray, Area Specialist	(218) 829-5965 x117	tyler.ray@usda.gov
MN Homeland Security & Emergency Management	Lisa Dumont, HSEM Region 4 Regional Program Coordinator	320-429-0348	Lisa.Dumont@state.mn.us
Wadena County Soil & Water Conservation District	Darren Newville, District Manager	218-632-4201	darren.newville@eot.mnswcd.org
National Resource Conservation Service (NRCS)	Joshua Hanson, NRCS District Conservationist	320-632-6606, ext. 102	joshua.hanson@usda.gov
Todd/Wadena Elec Co-op	Abbie Harrison/Admin	(218)631-3120	aharrison@toddwadena.coop
Minnesota Power		(218)722-2625	customerservice@mnpower.com
WDC Schools	Lee Westrum, Superintendent	(218)632-2176	lwestrum@wdc2155.k12.mn.us
Verndale School	Paul Brownlow, Superintendent	(218)445-5184	pbrownlow@verndaleschool.org
Sebeka School	David Fjeldheim, Superintendent	(218)837-5101	dfjeldheim@g.sebeka.k12.mn.us
Menahga School		(218)564-4141	www.menahga.k12.mn.us
Minnesota State Community and Technical College (M State) Wadena	Alyssa Campion, Assistant President	(218)736-1502	
CLC College/ Staples Campus	Kate Adornetto, Director	(218)855-8129	Kate.adornetto@clcmn.edu

Neighboring Jurisdiction Contacts

Name of Jurisdiction	Name & Title	Phone	Email
Hubbard County	Scott Williams, Emergency Management Director	218-732-2588	swilliams@co.hubbard.mn.us
Cass County	Chad Emery, Emergency Management Director	218-547-7437	chad.emery@co.cass.mn.us
Todd County	Mike Wisniewski, Emergency Management Director	320-533-4697	michael.wisniewski@co.todd.mn.us
Otter Tail County	Patrick Waletzko, Emergency Management Director	218-998-8067	pwaletzko@co.ottertail.mn.us

Becker County	Craig Fontaine, Emergency Management Director	218-846-7302, ext. 2146	craig.fontaine@co.becker.mn.us
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Wadena County MHMP Planning Team Meeting #1

January 13, 2022 - Meeting Summary & Documentation

Summary: On Thursday, January 13, 2022 Wadena 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 Wadena County Multi-Hazard Mitigation Plan (MHMP). The purpose of the meeting was to formally present information about the Wadena County MHMP 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: Wadena County Emergency Management invited all stakeholders included on the county's MHMP 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 **30** people attended the meeting. Representation included elected officials and departmental staff from Wadena County and the cities of Menahga, Nimrod, Sebek, Staples, Verndale, and Wadena. The city of Aldrich was unable to attend. Other stakeholders, including neighboring jurisdictions, participated in the meeting. A participant list is included with this meeting summary.

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

- Overview of Hazard Mitigation & the MHMP Update
- Who the Plan Covers & Role of the Planning Team
- Review of Hazards + Overview of Risk Assessment and Vulnerability Analysis
- Update of Risk Priorities
- Review of Mitigation Strategies & Example Actions
- Overview of FEMA HMA grant program
- Discussion of local mitigation ideas
- Discussion of next steps & answer your questions.

Participant Poll: At the start of the meeting participants were presented with an interactive poll asking "Have you participated in Hazard Mitigation Planning previously?" Following are the poll results:

- Yes, I have previously participated in in a hazard mitigation planning process. **(9/24)**
- No, but I am familiar with hazard mitigation planning. **(5/24)**
- No, and this is all new to me. **(10/24)**

Prioritization of Natural Hazards: The planning team was presented with an overview of each of the natural hazards that were covered in the county's last plan and the risk prioritization at that time. Considerations for the current risk prioritization since the last plan was presented for each hazard, such as events recorded since the last plan, NCEI Storm Data, or known existing local vulnerabilities (i.e., number of mobile home parks). It was noted to participants that:

- Hazards deemed to be of high or moderate risk must result in mitigation actions to address them for the jurisdictions that are affected.
- Hazard prioritization may vary for jurisdictions or may not differ countywide.
- Hazards deemed to be low risk and without significant mitigation actions may be dropped from the plan. This excludes the hazard of Dam/Levee failure, which must be addressed per new FEMA guidelines, even if risk is deemed low.

Following is a chart reflecting the 2015 risk priorities for Wadena County and any changes to the current risk prioritization for the plan update. This discussion served as an introduction to updating the risk prioritization and will be followed up with further information gathered from the county and local jurisdictions during the planning process. Any changes to the risk prioritizations will be noted.

HAZARD	EXISTING PLAN	2022 PLAN
Flooding	High	High
Wildfire	High	High
Windstorms	High	High
Tornadoes	Moderate	Moderate
Winter Storms	Moderate	Moderate
Hail	Moderate	Moderate
Extreme Cold	Moderate	Moderate
Drought	Moderate	Moderate
Extreme Heat	Low	Low
Lightning	Low	Low
Dam/Levee Failure	Low	Low
Landslides	N/A	Low

Comments, Questions or Mitigation Ideas – Following are the questions, comments or mitigation ideas that were shared by participants and how they will be addressed for the plan update.

Meeting Participant	Comment, Question or Mitigation Idea Submitted	Facilitator Feedback / How to be Addressed in Plan Update
Cindy Peterson, Wadena County Public Health Director	Regarding collecting data on location of mobile home parks in the county: “Mobile home parks licensure is now through the MN Dept. of Health.”	Stacey Stark: Noted that MDH is the resource for information on licensed MHPs in the county.

Meeting Participant	Comment, Question or Mitigation Idea Submitted	Facilitator Feedback / How to be Addressed in Plan Update
Tyler Wheeler	Regarding areas of vulnerability in the county to high wind and tornado events: "There are some townships where there are a lot of campgrounds located along the Crow Wing River on the eastern side of our county. There are not a lot of safe rooms located outside of municipalities (Nimrod, Huntersville area, Menahga)."	Bonnie Hundrieser: Noted for gathering further information for the Wadena County Local Mitigation Survey report and development of the county's mitigation action chart.

Following the discussion, participants were encouraged to fill out and return the "Mitigation Ideas" worksheet that they were provided with to Wadena County Emergency Management to submit any specific local concerns and related mitigation ideas. The meeting concluded with an overview of next steps and estimated timeline for completion.

Attached are the following documentation items for the Wadena County MHMP Meeting #1:

- 1-13-22 Mtg. #1 Email Invitation
- 1-13-22 Mtg. #1 List of Participants
- 1-13-22 Mtg. #1 Power Point Slides
- 1-13-22 Mtg. #1 Handouts

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

Tyler Wheeler

From: Tyler Wheeler
Sent: Wednesday, December 1, 2021 01:07 PM
To: Bryan Savaloja; Mike Carr; Ryan Odden; Deana Malone; Cindy Pederson; Erica Keppers; Sean Uselman; Sheldon Monson; Mike Weyer; Bill Stearns; Murlyn Kreklau; Jon Kangas; 'aldrichcity@outlook.com'; 'Depclerk@wcta.net'; davek@wcta.net; Adam Gunderson; 'cityofnimrod@wcta.net'; 'cosmayordavid@gmail.com'; 'sebekapd@hotmail.com'; dlhaman3@gmail.com; 'Cityofsebekawcta.net'; 'verncity@scicable.com'; 'mpc@wcta.net'; Cory Carr; 'verndalemaintenance@yahoo.com'; 'T2erckenbrack@yahoo.com'; Chief Naomi Plautz; 'gdeiss@wadena.org'; Cody Yglesias; 'cityadmin@wadena.org'; 'd_bjohn@yahoo.com'; 'jayne.bbtownship@gmail.com'; 'janellevanalst@gmail.com'; 'huntersville@wcta.net'; 'las21514@gmail.com'; 'malcore@wcta.net'; 'marionha@wcta.net'; 'fullmeasure@wcta.net'; 'shannonputikka@gmail.com'; 'jeannie.arthur@hotmail.com'; 'raatikka5660@hotmail.com'; 'bonitan@wcta.net'; 'smdukowitz@gmail.com'; Trisha Wadena Township (wadena_township@live.com); 'rdkern@wcta.net'; 'tyler.ray@usda.gov'; 'Villcheck, Lisa (DPS)'; 'darren.newville@eot.mnswcd.org'; 'joshua.hanson@usda.gov'; 'Abby Harrison'; 'customerservice@mnpower.com'; 'lwestrum@wdc2155.k12.mn.us'; 'pbownlow@verndaleschool.org'; 'dfjeldheim@g.sebeka.k12.mn.us'; 'Kate.adornetto@clcmn.edu'; 'swilliams@co.hubbard.mn.us'; 'chad.emery@co.cass.mn.us'; 'michael.wisniewski@co.todd.mn.us'; 'pwaletzk@co.ottertail.mn.us'; 'craig.fontaine@co.becker.mn.us'
Subject: Wadena County Multi-Hazard Mitigation Plan Update- Meeting Invitation

WADENA COUNTY

MULTI-HAZARD MITIGATION PLAN UPDATE – MEETING INVITATION

Greetings,

Your presence is requested at a Planning Team Meeting for the update of the **Wadena County Multi-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, January 13, 2022

Time: 1:00 – 3:00 p.m.

Zoom Link: https://umn-private.zoom.us/webinar/register/WN_oVqW4ifNRAyCfrreHu01KQ

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. Please be sure to include the name, title and representation (jurisdiction/agency) for all persons planning to attend the meeting.

About the Plan

The update of the Wadena County Multi-Hazard Mitigation Plan (MHMP) 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 Wadena County and will result in the identification of mitigation actions 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 projects 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 Wadena 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,

Deputy Tyler Wheeler #4108

Emergency Management Director

Wadena County Sheriff's Office

415 Jefferson St S

Wadena, MN 56482

218-631-7600 (phone)

218-632-6057 (fax)



[Sheriff's Office](#) | [Wadena County, MN - Official Website](#)

[Wadena County Sheriff's Office Facebook - Home](#)

Wadena County

1/13/22 MHMP Planning Team Meeting #1

List of Participants (30)

	First Name	Last Name	Organization	Job Title
1	Tyler	Wheeler	Wadena County Sheriff's Office	Emergency Manger/Deputy Sheriff
2	Cindy	Pederson	Wadena County Public Health	PH Director
3	Bryan	Savaloja	Wadena County Sheriff's Office	Sergeant
4	Murlyn	Kreklau	Wadena county	Commissioner
5	Jon	Kangas	Wadena County	Commissioner
6	Michael	Weyer	Wadena County	County commissioner
7	Michael	Carr	Wadena County Sheriff's Office	Sheriff
8	Adam	Gunderson	City of Menahga Police Dept.	Chief of Police
9	Keith	Frame	City of Nimrod	Mayor
10	Cheryl	Hahn	City of Sebeka	City Administrator
11	Tighe	Lane	City of Sebeka Police Dept.	Chief of Police
12	Jerel	Nelsen	City of Staples	City Administrator
13	Scott	Grabe	City of Staples	Public Works Director
14	Missi	Birkholtz	City of Staples Police Dept.	Chief of Police
15	Melissa	Current	City of Verndale	City Clerk/Treasurer
16	Tara	Erckenbrack	City of Verndale	Mayor
17	George	Deiss	City of Wadena	Mayor
18	Naomi	Plautz	City of Wadena	Chief of Police / City Emergency Manager
19	David	Evans	City of Wadena	Administrator
20	Andrew	Browne	City of Wadena Fire Dept.	Secretary-Firefighter
21	Janelle	VanAlst	Bullard Township	Clerk
22	Marion	Hansen	Meadow township	Clerk
23	Jeannie	Arthur	Red Eye Township	Clerk
24	Larry	Huotari	Red Eye Township	Chairperson
25	Todd	Miller	Todd-Wadena Electric Cooperative	Operations Manager
26	Lisa	Villcheck	MN Homeland Security and Emergency Management	Region 4 Regional Program Coordinator
27	Josh	Hanson	USDA-NRCS	District Conservationist-Customer Service Team Leader
28	Chad	Emery	Cass County Sheriff's Office	Deputy Sheriff / Emergency Management Coordinator
29	Scott	Williams	Hubbard County Sheriff's Office	Deputy Sheriff/Emergency Manager
30	Patrick	Waletzko	Otter Tail County	Emergency Management Director

WADENA COUNTY Multi-Hazard Mitigation Plan Update 2022 Planning Team Meeting #1

January 13, 2022



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

Wadena County Project Lead

- Tyler Wheeler, Wadena County Emergency Management Director, Sheriff's Office



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

PRESENTER: STACEY STARK

Zoom Logistics

If you haven't yet, please type your name 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 **Wadena County MHMP Planning Team** for a presentation of the plan update and discussion of key items.

Agenda:

- Overview of Hazard Mitigation & the MHMP Update
- Who the Plan Covers & Role of the Planning Team
- Review of Hazards + Overview of Risk Assessment and Vulnerability Analysis
- Review of Hazard Risk Prioritization
- Review of Mitigation Strategies & Actions
- Overview of FEMA HMA grant program
- Discuss local mitigation ideas
- Discuss next steps & answer your questions.

PRESENTER: STACEY STARK

About your Project Team

U-SPATIAL
UNIVERSITY OF MINNESOTA DULUTH
Driven to Discover

U-Spatial at the University of Minnesota Duluth was contracted by MN HSEM to facilitate the development of this plan and to conduct spatial analysis, mapping and research for the plan.

Working with U-Spatial@UMD is **Bonnie Hundrieser**, who specializes in hazard mitigation planning.

We Bring:

- *Proven experience in county/tribal plan updates and State MHMP*
- *Advanced capabilities in GIS, HAZUS, and research*
- *Ability to expedite plan development and approval through consistent & proven approach*

PRESENTER: STACEY STARK

What is Hazard Mitigation?

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



Hazard Mitigation Planning:

- identifies risks and vulnerabilities
- develops a plan of action built on capabilities and partnerships.
- breaks the cycle of disaster and reconstruction.
- builds stronger & more resilient communities.

PRESENTER: BONNIE HUNDRIESER

MHMP Overview & Timeline



City of Wadena Flooding, July 16, 2016

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

Wadena County MHMP Update 2022

- ✓ The development of a local government plan is required in order to maintain eligibility for FEMA hazard mitigation grant programs.
 - ✓ Plans must be updated every 5 years.
 - ✓ Must address all jurisdictions and engage key stakeholders.
 - ✓ Planning process must give an opportunity to the public to provide feedback.
- Last plan adopted in 2015.
 - The updated plan will cover a 5-year window for implementation.
 - Documentation of county and local-level government participation is required for plan approval.

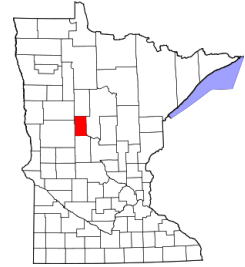
PRESENTER : BONNIE HUNDRIESER

Who the Plan Covers



The Wadena County MHMP is a multi-jurisdictional plan that covers the county as well as all city & townships within the county.

- ✓ County and city governments are required to adopt the plan.
- ✓ Townships are covered under the umbrella of the county, but may elect to adopt.
- ✓ City-level participation in the plan update must be documented for local adoptions to be approved.



PRESENTER : BONNIE HUNDRIESER

MHMP Planning Team



Wadena County Planning Team

- Wadena County Emergency Management
 - Key County Officials & Staff
 - City & Township Officials & Staff
 - Neighboring Jurisdictions
 - Other Related Agency or Organizational Stakeholders
- Participate in 2 planning team meetings.
 - Assist with public outreach (2 news releases) using websites, social media & bulletin boards.
 - Provide information to inform plan update.
 - Help develop & review local mitigation action charts.
 - Review the draft plan.
 - Facilitate local-level adoptions.

PRESENTER : BONNIE HUNDRIESER

What Hazards are Addressed in the Plan?



- 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 for Minnesota MHMPs.

PRESENTER : BONNIE HUNDRIESER

Comments and Questions?

Hazard Risk Assessment and 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)



2018 Blizzard-Wind Storm



3/24/2021 storm road damage

PRESENTER : STACEY STARR

Wadena County Review of Existing Hazard Risk Prioritization

HAZARD	EXISTING PLAN	2022 PLAN
Flooding	High	
Wildfire	High	
Windstorms	High	Please consider any changes for these priorities in 2022 based on:
Tornadoes	Moderate	
Winter Storms	Moderate	• Increase or decrease in risk over the last 5 years (probability + severity)
Hail	Moderate	
Extreme Cold	Moderate	• Local vulnerabilities (people, systems, infrastructure)
Drought	Moderate	
Extreme Heat	Low	• New development
Lightning	Low	
Dam/Levee Failure	Low	
Landslides	N/A	

Updated hazard priorities for 2022 should seek to be clearly identified as High, Moderate or Low.

Flooding (High)



- A potential economic loss model is run for 1% annual chance flood
- Use of FEMA Flood Insurance Rate Map (FIRM)
- Use of property values from county assessor
- Critical Infrastructure locations from GIS and EM input

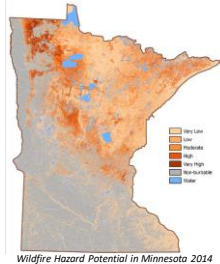


PRESENTER : STACEY STARK

Wildfire/Wildland Fire (High)



- Wadena County experiences an average of 18 fires/year with an average of 14 ac/fire.
- Top 20% of MN Counties for normalized cost per year



Wildfire Hazard Potential in Minnesota 2014

PRESENTER : STACEY STARK

Windstorms, Hail, Lightning (High to Low)



- Each addressed individually
- There were 35 wind-related events since 2012. The relative frequency of all wind-related events since January of 1996 is 4 per year.
- There were 35 hailstorms with hail greater or equal to 1-inch since 2012 (5.3/yr). The relative frequency of all hail events is 15 per year.
- Hazards deemed low risk and without significant mitigation actions, can be dropped from the plan.



June 24, 2016 Wadena County Stormfront



Hail, Southeast portion of Wadena County

PRESENTER : STACEY STARK

Tornadoes (Moderate)



- Based NCEI Storm Events Database through 2021, the relative frequency of tornadoes is .3 per year (19 total)
- The last tornado occurred in 2016 (EF0)
- Identify mobile home locations



June 17, 2010 EF4 tornado - City of Wadena

PRESENTER : STACEY STARK

Winter Storms (Moderate)



- 24 winter weather related events (blizzards, heavy snows, ice storms, winter storms, and winter weather) have occurred since January 2012 (2.4 year)
- Based on all records in the NCEI Storm Events Database, the relative frequency of winter-related storm events is 2.4 per year.



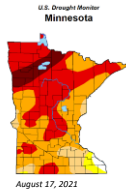
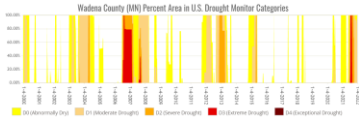
Wadena County March 2020 Blizzard

PRESENTER : STACEY STARK

Drought (Moderate)



- From 2000 – 2018, Wadena County was in at least Moderate (D1) Drought 25% - 27% of the time. There was a period of extreme drought (D3) in 2021.



PRESENTER : STACEY STARK

Extreme Cold (Moderate)



- From 2012 - 2021, daily low temperatures < -18 °F were recorded 55 times at Sebeka station. Wadena County experiences an average of 6-7 extreme cold days each year.
- -34°F recorded by the Sebeka weather station on January 2, 2022

PRESENTER : STACEY STARK

Extreme Heat (Low)



- From 2012 - 2021, daily high temperatures > 90 °F were recorded 49 times at Sebeka station. Wadena County experiences an average of 6-7 extreme heat days each year.
- 99°F recorded by the Artichoke Lake station on June 2 and July 3, 2020.

Dam Failure (Low)



- No high hazard potential dams in Wadena County
- The Huntersville Township Dam in Nimrod is the only dam in the DNR database, and has a “low” hazard potential rating
- Must state any mitigation actions if the county wishes to be eligible for the High Hazard Potential Dam Rehabilitation Grant Program

Wadena County Review of Hazard Risk Prioritization

HAZARD	EXISTING PLAN	2022 PLAN
Flooding	High	
Wildfire	High	
Windstorms	High	
Tornadoes	Moderate	
Winter Storms	Moderate	
Hail	Moderate	
Extreme Cold	Moderate	
Drought	Moderate	
Extreme Heat	Low	
Lightning	Low	
Dam/Levee Failure	Low	
Landslides	N/A	

High to moderate priority hazards will be addressed in the 2022 plan update and will require mitigation actions.

PRESENTER : STACEY STARK

Mitigation Strategies & Example Actions



See Handout: Mitigation Strategies & Action Types

PRESENTER : BONNIE HUNDRIESER

#1 - Local Planning & Regulations



These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built.

EXAMPLES:

- Establishing & enforcing floodplain & shoreland ordinances
- Participating in the NFIP
- Developing stormwater management plans
- Long-term planning for infrastructure improvements
- Working with MHP operators to be in compliance with State statutes for storm shelters & evacuation plans.



PRESENTER : BONNIE HUNDRIESER

#2 – Structure and Infrastructure Projects



These actions involve modifying existing structures to protect them from a hazard or remove them from a hazard area. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.

EXAMPLES:

- Property acquisitions (repetitive flooding/erosion risk)
- Structural elevations (flooding)
- Constructing floodwalls & retaining walls
- Improving culverts, roads & bridges
- Green infrastructure projects
- Tornado Safe Rooms
- Utility undergrounding



PRESENTER : BONNIE HUNDRIESER

Tornado Safe Rooms

- Are eligible for FEMA HMA grant funding
- Include new construction or retrofit of existing facilities
- Should be considered for vulnerable areas such as MHPs, schools, parks, and campgrounds



1998 Tornado damage to MHP in Le Center, MN.



Warba, MN mobile home park tornado safe room, FEMA grant funded



1st School-based tornado safe room, Wadena, MN [2012] following June 17, 2010 tornado damage

PRESENTER : BONNIE HUNDRIESER

Utility Undergrounding

- Converting vulnerable overhead powerlines to underground is eligible for FEMA HMA grant funding.
- Include municipal and rural electric cooperatives in the planning process to document participation and establish eligibility for potential future project applications.



PRESENTER : BONNIE HUNDRIESER

#3 – Natural Systems Protection



These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.

EXAMPLES:

- Slope management for soil stabilization
- Shoreland restoration
- “Living Fences” for wind/erosion reduction or snow buffer
- Forest management for wildfire mitigation (fuels reduction)
- Flood diversion and storage



PRESENTER : BONNIE HUNDRIESER

#4 – Education & Awareness Programs

These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them.

EXAMPLES:

- Promoting sign-up for emergency notifications
- Educate on use of outdoor warning sirens and response
- Participation in the NWS Severe Weather Awareness Weeks
- SKYWARN Storm Spotter Training
- Turn Around Don't Drown
- Promoting personal & family emergency preparedness (i.e. Ready.gov)



PRESENTER : BONNIE HUNDRIESER

#5 – Mitigation Preparedness & Response Support

These are actions that help to 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.

EXAMPLES:

- Emergency Notification Systems
- Emergency Operations Plans
- Outdoor warning sirens
- Shelter Planning
- Flood fight plans & equipment
- Training local elected officials in EM responsibilities
- Obtaining backup generators for critical facilities



PRESENTER : BONNIE HUNDRIESER

FEMA HMA Grant Program

See Handout: HSEM HMA Grants Program Overview

- ✓ All applicants must have or be covered under an approved MHMP.
- ✓ Eligible applicants: State & local governments, Tribal Communities, and certain private non-profit organizations or institutions.
- ✓ Cost Share: Federal 75%/ Applicant 25%
- ✓ Eligible projects must be identified in the local MHMP.

Examples of Eligible Activities

- Property Acquisition/Relocation
- Tornado Safe Room Construction
- Minor Localized Flood Risk Reduction
- Green Infrastructure
- Infrastructure Retrofits
- Soil Stabilization
- Wildfire Mitigation
- 5% Initiative Projects

PRESENTER : BONNIE HUNDRIESER

Historical Projects in Wadena County Resulting from HMA Funding since 2010

Project	SubGrantee	Project Amt	Federal Share	Year
206.2: Safe Room (Tornado and Severe Wind Shelter) - Public Structures	WADENA-DEER CREEK PUBLIC SCHL	\$ 1,267,282	\$ 950,462	2010
91.1: Local Multihazard Mitigation Plan	Wadena (County)	\$ 23,560	\$ 17,120	2011

PRESENTER : BONNIE HUNDRIESER

Mitigation Ideas

See Handout: Mitigation Ideas Worksheet

Do you have questions or ideas to share about local hazards, vulnerabilities and proposed mitigation actions?

PRESENTER : BONNIE HUNDRIESER



January – April, 2022

Completion of EM Tasks and Local Mitigation Survey (LMS) Forms

Lead: Bonnie Hundrieser

- **EM Tasks:** Plans in Place Form, Capabilities Assessment, and Past Mitigation Action Review
- **LMS Forms (County/City)**
 - Local hazard identification & risk prioritization.
 - Local vulnerabilities (critical infrastructure, populations or assets)
 - Local-level capabilities (programs, polices, staff, funding)
 - Identify local mitigation projects.

PRESENTER : BONNIE HUNDRIESER



(Concurrent) January – June, 2022

Critical Infrastructure Inventory, Risk Assessment and Vulnerability Analysis

Lead: U-Spatial

- Updated risk assessment & vulnerability analysis
- Update of CI inventory
- Development of hazard profiles (history, probability, impacts of climate change)
- GIS mapping
- HAZUS analysis

PRESENTER : BONNIE HUNDRIESER



April – June, 2022

Development of Local Mitigation Action Charts

Lead: **Bonnie Hundrieser**

- County and City-Specific MACs
- 5-year window
- Mitigation actions must address high and moderate risk hazards.
- Mitigation actions must incorporate local capabilities & planning mechanisms.
- Include projects eligible for FEMA HMA grant funding.

PRESENTER : BONNIE HUNDRIESER



July – August, 2022

Hold Planning Team Meeting #2

Lead: **U-Spatial & Bonnie Hundrieser**

- **Planning Team Mtg. #2**
 - Outreach to stakeholders
 - Presentation of risk assessment & vulnerability analysis, hazards prioritizations
 - Overview of Mitigation Action Charts and FEMA grant funding.
 - Finalize draft MACs

PRESENTER : BONNIE HUNDRIESER



Sept. – Oct., 2022

EM review of Draft Plan + Public Review & Comment Period

Lead: **U-Spatial & Bonnie Hundrieser**

- EM initial review of draft plan
- **News Release #2**
 - Disseminate & document news release by county and jurisdictions.
 - Document and incorporate feedback as appropriate.

PRESENTER : BONNIE HUNDRIESER



Nov. – Dec., 2022 to Spring, 2023

Draft Plan Submission to HSEM & FEMA for Approval

Lead: **U-Spatial**

- 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 and submission to HSEM (Spring, 2023)
- Final Letter of Approval

PRESENTER : BONNIE HUNDRIESER

Questions?

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

PRESENTER : STACEY STARK

Contact Information

Stacey Stark, MS, GISP

U-Spatial@UMD

slstark@d.umn.edu

218-726-7438

Bonnie Hundrieser, Consultant

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U-SPATIAL
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HUNDRIESER
CONSULTING LLC

PRESENTER : STACEY STARK

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.	<ul style="list-style-type: none"> • 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	<p>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.</p> <p>This type of action also involves projects to construct manmade structures to reduce the impact of hazards.</p>	<ul style="list-style-type: none"> • 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 <p><i>Many of these types of actions are projects eligible for funding through FEMA HMA grant programs.</i></p>

Mitigation Strategy	Description	Example Mitigation Actions
<p>Natural Systems Protection</p>	<p>These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.</p>	<ul style="list-style-type: none"> • 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 <p><i>Many of these types of actions are projects eligible for funding through FEMA HMA grant programs.</i></p>
<p>Education and Awareness Programs</p>	<p>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.</p>	<ul style="list-style-type: none"> • 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 <p><i>Some of these types of actions may be projects eligible for funding through the FEMA HMA "5 Percent Initiative Program".</i></p>
<p>Mitigation Preparedness and Response Support</p>	<p>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.</p>	<ul style="list-style-type: none"> • 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.



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 IDEAS WORKSHEET

Please use the following worksheet to list your ideas for mitigation actions that you feel will help reduce the impact of future natural hazard events to the county or to your jurisdiction. Following the MHMP planning team meeting, please return this form via email to your county Emergency Manager to submit your feedback.

NAME OF JURISDICTION:

CONTACT INFORMATION

Name:

Phone:

Email:

Hazard	Description of Concern or Proposed Mitigation Action

Wadena County MHMP Planning Team Meeting #2

October 28, 2022 - Meeting Summary & Documentation

Summary: On Friday, October 28, 2022, Wadena 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 Wadena County Multi-Hazard Mitigation Plan (MHMP). The purpose of the meeting was to formally convene the Wadena County MHMP 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: Wadena County Emergency Management invited all stakeholders included on the county's MHMP 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 **23** people attended the meeting. Representation included elected officials and departmental staff from Wadena County and the cities of Nimrod, Staples, Verndale, and Wadena. The cities of Aldrich, Menahga, and Sebeka were not available to attend. Other stakeholders, including neighboring jurisdictions, participated in the meeting. A participant list is included with this meeting summary.

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
- Prioritization of Hazards
- Hazards Risk Assessment (Critical Infrastructure, Population Vulnerability Factors, and Review of High/Moderate Priority Natural Hazards)
- Development of Mitigation Actions
- FEMA HMA Grant Funding
- Overview of Mitigation Action Charts and Discussion
- 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.

Discussion Notes: Following is an overview of key discussion points, questions, or mitigation ideas that were shared during the presentation and how they will be incorporated into the plan update.

Meeting Participant	Comment, Question or Mitigation Idea Submitted	Facilitator Feedback / How to be Addressed in Plan Update
Erica Keppers, Wadena County Public Health Director	Regarding Vulnerability Assessment Slides: We use the Social Vulnerability Index (SVI) at Public Health to determine high-risk populations.	Stacey Stark – Great. Yes, a lot of the information we glean about risk to vulnerable populations comes from the Minnesota Department of Health, that is how we identify what risks are hazardous to what populations, so thanks for that comment.
Marion Hansen, Meadow Township Clerk	Regarding Wildfire Hazard Profile: Can irrigation wells in the county be tapped into for firefighting? If yes, should the locations be in the plan?	Stacey Stark: I am not familiar with irrigation wells, but we’ve had a similar question about dry hydrants. Those locations are not identified in the plan here, we don’t have a map source for that information. We could certainly put information in the narrative, but we don’t have a way to map them so that is not something we typically do. But if information exists, we can seek to include it.

There were no other questions or comments during or following the presentation.

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

Attached are the following documentation items for the Wadena County MHMP Meeting #2:

- 10-28-22 Mtg. #2 Email Invitation
- 10-28-22 Mtg. #2 List of Participants
- 10-28-22 Mtg. #2 Power Point Slides
- 10-28-22 Mtg. #2 Handouts

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

From: [Tyler Wheeler](#)
To: [Bryan Savaloja](#); [Mike Carr](#); [Ryan Odden](#); [Deana Malone](#); [Erica Keppers](#); [Sean Uselman](#); [Sheldon Monson](#); [Mike Weyer](#); [Bill Stearns](#); [Murlyn Kreklau](#); [Jon Kangas](#); [aldrichcity@outlook.com](#); [deebilek@wcta.net](#); [cmenahga@wcta.net](#); [Depclerk@wcta.net](#); [davek@wcta.net](#); [Adam Gunderson](#); [cityofnimrod@wcta.net](#); [cosmayordavid@gmail.com](#); [sebekapd@hotmail.com](#); [Dlhaman3@gmail.com](#); [Cityofsebek@wcta.net](#); [cetzler@ci.staples.mn.us](#); [mbirkholtz@ci.staples.mn.us](#); [cyungbauer@ci.staples.mn.us](#); [jnelson@ci.staples.mn.us](#); [vernicity@scicable.com](#); [mpc@wcta.net](#); [Cory Carr](#); [verndalemaintenance@yahoo.com](#); [T2erckenbrack@yahoo.com](#); [Chief Naomi Plautz](#); [gdeiss@wadena.org](#); [Cody Yglesias](#); [cityadmin@wadena.org](#); [d_bjohn@yahoo.com](#); [jayne.bbtownship@gmail.com](#); [janellevanalst@gmail.com](#); [huntersville@wcta.net](#); [las21514@gmail.com](#); [lyonsmncclerk@gmail.com](#); [marionha@wcta.net](#); [fullmeasure@wcta.net](#); [shannonputikka@gmail.com](#); [jeannie.arthur@hotmail.com](#); [raatika5660@hotmail.com](#); [bonitan@wcta.net](#); [smdukowitz@gmail.com](#); [wadena_township@live.com](#); [rdkern@wcta.net](#); [tyler_ray@usda.gov](#); [Lisa.Dumont@state.mn.us](#); [darren.newville@eot.mnswcd.org](#); [joshua.hanson@usda.gov](#); [aharrison@toddwadena.coop](#); [customerservice@mnpower.com](#); [lwestrum@wdc2155.k12.mn.us](#); [pbrownlow@verndaleschool.org](#); [dfjeldheim@g.sebeka.k12.mn.us](#); [Zacarias Gonzalez](#); [Kate.adornetto@clcmn.edu](#); [swilliams@co.hubbard.mn.us](#); [chad.emery@co.cass.mn.us](#); [michael.wisniewski@co.todd.mn.us](#); [pwaletzk@co.ottertail.mn.us](#); [craig.fontaine@co.becker.mn.us](#)
Cc: [Bonnie K Hundrieser](#)
Subject: WADENA COUNTY MULTI-HAZARD MITIGATION PLAN UPDATE- MEETING INVITATION
Date: Thursday, September 22, 2022 10:47:21 AM
Attachments: [image001.png](#)
Importance: High

WADENA COUNTY

MULTI-HAZARD MITIGATION PLAN UPDATE – MEETING INVITATION

Greetings,

Your presence is requested at the **2nd Planning Team Meeting** for the update of the **Wadena County Multi-Hazard Mitigation Plan (MHMP)**. This meeting will be the final planning meeting for the hazard mitigation planning process for the county, city jurisdictions, and other stakeholders.

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 webinar:

Date: Friday, October 28, 2022

Time: 9:00 a.m. – 11:00 a.m.

Zoom Link: https://umn-private.zoom.us/webinar/register/WN_PdktVO2JSBa-39_5vlBRuw

You must click on the link above to register. (Ctrl + click to follow link)

The purpose of this meeting is to provide a final overview of the plan, including a review of the updated risk assessment for natural hazards that affect the county (history, local vulnerabilities, and future trends). We will also discuss the Mitigation Action Charts that have been developed for Wadena County and each city, as well as funding opportunities for eligible projects under the FEMA Hazard Mitigation Assistance grant program. Your participation in this meeting and feedback on the draft plan is important to us. The draft Wadena County MHMP is underway and will be ready for review by planning team members and the public following this meeting.

When you register, you will automatically be placed on an RSVP list. Please be sure to include the name, title and representation (jurisdiction/agency) for all persons planning to attend the meeting.

Thank you!

Deputy Tyler Wheeler #4108

Emergency Management Director

Wadena County Sheriff's Office

415 Jefferson St S

Wadena, MN 56482

218-631-7600 (phone)

218-632-6057 (fax)



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**** Please note new email address tyler.wheeler@wcmn.us ****

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From: [Tyler Wheeler](#)
To: [Bryan Savaloja](#); [Mike Carr](#); [Ryan Odden](#); [Deana Malone](#); [Erica Keppers](#); [Sean Uselman](#); [Sheldon Monson](#); [Mike Weyer](#); [Bill Stearns](#); [Murlyn Kreklau](#); [Jon Kangas](#); [aldrichcity@outlook.com](#); [deebilek@wcta.net](#); [cmenahga@wcta.net](#); [Depclerk@wcta.net](#); [davek@wcta.net](#); [Adam Gunderson](#); [cityofnimrod@wcta.net](#); [cosmayordavid@gmail.com](#); [sebekapd@hotmail.com](#); [Dlhaman3@gmail.com](#); [Cityofsebaka@wcta.net](#); [cetzler@ci.staples.mn.us](#); [mbirkholtz@ci.staples.mn.us](#); [cyungbauer@ci.staples.mn.us](#); [jnelson@ci.staples.mn.us](#); [verncity@scicable.com](#); [mpc@wcta.net](#); [Cory Carr](#); [verndalemaintenance@yahoo.com](#); [T2erckenbrack@yahoo.com](#); [Chief Naomi Plautz](#); [gdeiss@wadena.org](#); [Cody Yglesias](#); [cityadmin@wadena.org](#); [d_bjohn@yahoo.com](#); [jayne.bbtownship@gmail.com](#); [janellevanalst@gmail.com](#); [huntersville@wcta.net](#); [las21514@gmail.com](#); [lyonsmnclerk@gmail.com](#); [marionha@wcta.net](#); [fullmeasure@wcta.net](#); [shannonputikka@gmail.com](#); [jeannie.arthur@hotmail.com](#); [raatika5660@hotmail.com](#); [bonitan@wcta.net](#); [smdukowitz@gmail.com](#); [wadena_township@live.com](#); [rdkern@wcta.net](#); [tyler_ray@usda.gov](#); [Lisa.Dumont@state.mn.us](#); [darren.newville@eot.mnswcd.org](#); [joshua.hanson@usda.gov](#); [aharrison@toddwadena.coop](#); [customerservice@mnpower.com](#); [lwestrum@wdc2155.k12.mn.us](#); [pbrownlow@verndaleschool.org](#); [dfjeldheim@g.sebeka.k12.mn.us](#); [Zacarias Gonzalez](#); [Kate.adornetto@clcmn.edu](#); [swilliams@co.hubbard.mn.us](#); [chad.emery@co.cass.mn.us](#); [michael.wisniewski@co.todd.mn.us](#); [pwaletz@co.ottertail.mn.us](#); [craig.fontaine@co.becker.mn.us](#)
Cc: [Bonnie K Hundrieser](#)
Subject: RE: WADENA COUNTY MULTI-HAZARD MITIGATION PLAN UPDATE- MEETING INVITATION
Date: Monday, October 24, 2022 2:08:34 PM
Attachments: [image001.png](#)

Reminder to everyone to please register for our meeting on the 28th if you have not done so already.
Have a great day!

You can register by clicking on the link in the original email.

Deputy Tyler Wheeler #4108

Emergency Management Director
Wadena County Sheriff's Office
415 Jefferson St S
Wadena, MN 56482
218-631-7600 (phone)
218-632-6057 (fax)



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From: Tyler Wheeler

Sent: Thursday, September 22, 2022 10:47 AM

To: Bryan Savaloja <Bryan.Savaloja@WCMN.US>; Mike Carr <Mike.Carr@WCMN.US>; Ryan Odden <Ryan.Odden@WCMN.US>; 'Deana Malone'; Erica Keppers <Erica.Keppers@WCMN.US>; 'Sean

Wadena County

10/28/22 MHMP Planning Team Meeting #2

List of Participants (23)

	First Name	Last Name	Organization	Job Title
1	Tyler	Wheeler	Wadena County Sheriff's Office	Emergency Management Director
2	Bryan	Savaloja	Wadena County Sheriff's Office	Sergeant / Deputy EM Director
3	Erica	Keppers	Wadena County Public Health	Wadena County Public Health Director
4	Deana	Malone	Wadena County	Zoning Administrator
5	Ryan	Odden	Wadena County	County Coordinator
6	Michael	Weyer	Wadena County	Commissioner
7	Sheldon	Monson	Wadena County	Commissioner
8	Keith	Frame	City of Nimrod	Mayor
9	Jerel	Nelsen	City of Staples	City Administrator
10	Cole	Yungbauer	City of Staples Fire Dept	Fire Chief
11	Missi	Birkholtz	City of Staples/Police	Chief of Police/EM Director
12	Matt	Uselman	City of Verndale	Public Works Manager
13	Melissa	Current	City of Verndale	City Clerk/Treasurer
14	Kim	Schroeder	City of Wadena	City Administrator
15	George	Deiss	City of Wadena	Mayor
16	Naomi	Plautz	City of Wadena Police Dept.	Chief / EM
17	Marion	Hansen	Meadow Township	Clerk
18	Larry	Huotari	Red Eye Township	Chairman
19	Jeannie	Arthur	Red Eye Township	Clerk
20	Lisa	Villcheck	HSEM	HSEM Region 4 RPC
21	Tyler	Fisher	Todd-Wadena Electric	Interim Operations Manager
22	Chad	Emery	Cass County Sheriff's Office	Deputy Sheriff / EM Coordinator
23	Scott	Williams	Hubbard County Emergency Management	Deputy Sheriff & Emergency Manager

WADENA COUNTY Multi-Hazard Mitigation Plan Update 2022 Planning Team Meeting #2

OCTOBER 28, 2022



Welcome & Introductions

U-Spatial@UMD Project Leads



Stacey Stark
Project Manager
U-Spatial@UMD



Bonnie Hundrieser
HM Planning Specialist
Hundrieser Consulting LLC

Wadena County Project Lead

- Tyler Wheeler, Wadena County Emergency Management Director, Sheriff's Office



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

PRESENTER: STACEY STARK

Zoom Logistics

If you haven't yet, please type your name 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



2016 Windstorm, Verndale

The purpose of this meeting is to formally convene the **Wadena County MHMP 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 MHMP Points
- > Review of Risk Assessment & Vulnerability Analysis
- > Overview of FEMA HMA Funding and Mitigation Action Charts
- > Review & Feedback
- > Next Steps

PRESENTER: STACEY STARK

Overview of Plan Update

Wadena County is updating its **Multi-Hazard Mitigation Plan (MHMP)** to fulfill a state & federal requirement. The plan must be updated every 5 years. The last plan was adopted in 2015.

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



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

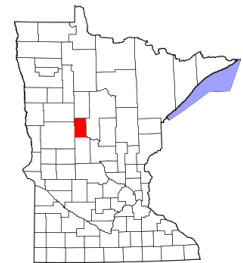
PRESENTER: BONNIE HUNDRIESER

Who the Plan Covers



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

The plan also takes into consideration the needs and concerns of other stakeholders participating in the plan update.



PRESENTER: BONNIE HUNDRIESER

Who Needs to Participate



Key Stakeholders

It is required to provide an opportunity for local county & municipal government, related agency stakeholders and neighboring jurisdictions to participate in the plan update.

- 2 Planning Team Meetings
- Local Mitigation Survey
- Provision of key data
- MAC Review & Feedback
- Review of Draft Plan

The Public

It is required to provide an opportunity for the public to learn about the plan update, ask questions and provide input that may be incorporated into the plan update.

- 2 News Releases
- Outreach conducted via websites, social media and local media
- Online public review & comment period for draft plan

PRESENTER: BONNIE HUNDRIESER

The structure of the HMP

PDF document

- Contains almost all FEMA required elements
- Limited Figures and Images
- Summary of Hazard Identification
- Local mitigation survey report
- Plans and Programs in Place
- Past Mitigation Action Review Status Report
- Planning Team Meetings
- Public Outreach and Engagement Documentation
- Mitigation Actions by Jurisdiction

Website companion

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



PRESENTER: BONNIE HUNDRIESER

Hazards Risk Assessment

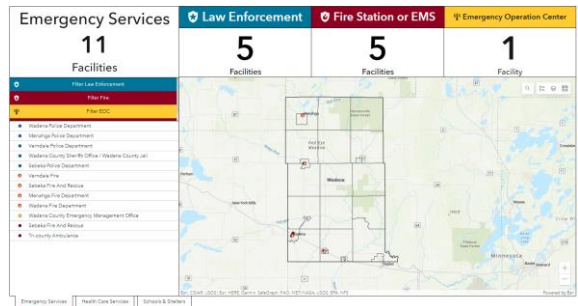
- Validate prioritization
- Provide probability and severity of future events as possible
- Identify vulnerable populations and structures at risk as possible
- Consider variable jurisdictional vulnerability
- Inform Mitigation Actions in the HMP



City of Wadena Flooding, July 16, 2016

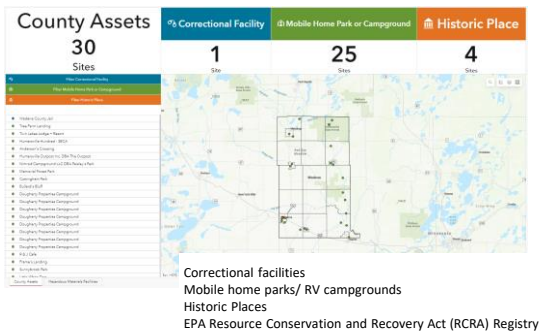
PRESENTER: STACEY STARK

All Hazards - Critical Infrastructure



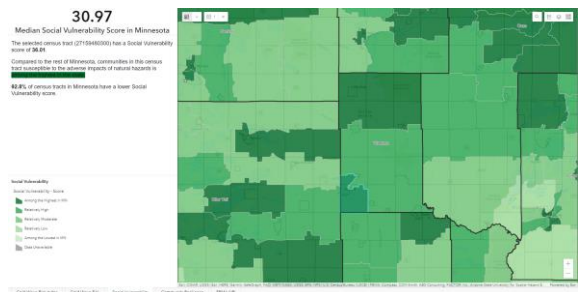
PRESENTER: STACEY STARK

All Hazards - Critical Infrastructure



PRESENTER: STACEY STARK

All Hazards – Population Vulnerability



PRESENTER: STACEY STARK

Prioritization of Hazards for Wadena County

NATURAL HAZARDS

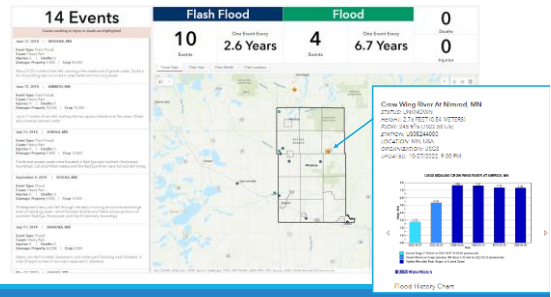
Prioritization of hazards by the Wadena County planning team included consideration of:

- Probability and Severity of natural hazard events (risk)
- Observed increase or decrease in risk since 2015
- Jurisdictional variations in risk (i.e., local vulnerabilities, changes in development)

Hazard	2022 Priority
Flooding	High
Wildfire	High
Windstorms	High
Tornadoes	Moderate
Winter Storms	Moderate
Hail	Moderate
Extreme Cold	Moderate
Drought	Moderate
Dam/Levee Failure	Low – but included
Extreme Heat	Low
Lightning	Low
Landslides	Low

PRESENTER: STACEY STARK

WADENA COUNTY: Flooding (High)

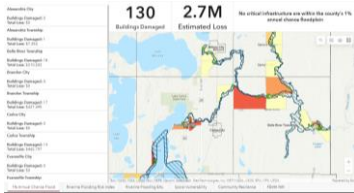


PRESENTER: STACEY STARK

WADENA COUNTY: Flooding (High)



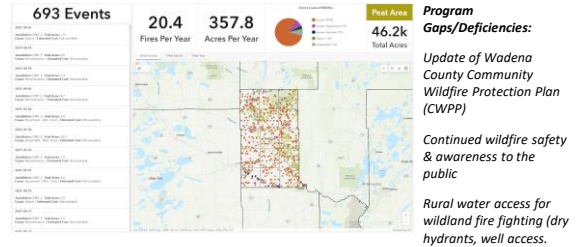
2017 Wadena County Flood Event



- Obtain building and parcel values
- Used statewide building footprint data
- Obtained FEMA Flood Insurance Rate Maps
- Use flood model to estimate economic loss
- Identify Critical Infrastructure in flood zone

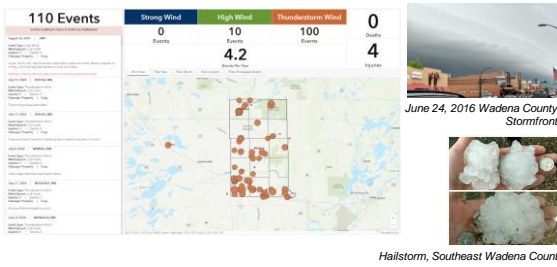
PRESENTER: STACEY STARK

WADENA COUNTY: Wildfire (High)



PRESENTER: STACEY STARK

WADENA COUNTY: Windstorms, Hail (High - Moderate)



PRESENTER: STACEY STARK

WADENA COUNTY: Tornadoes (Moderate)



Wikipedia image

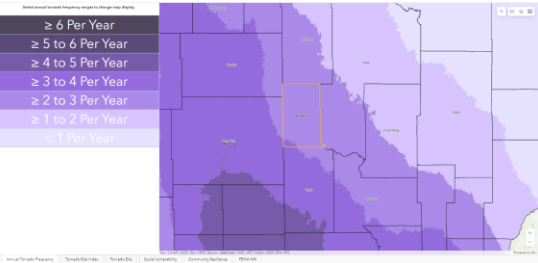


PRESENTER: STACEY STARK

WADENA COUNTY: Tornadoes (Moderate)



Annual tornado frequency within 50 miles of any location in Minnesota



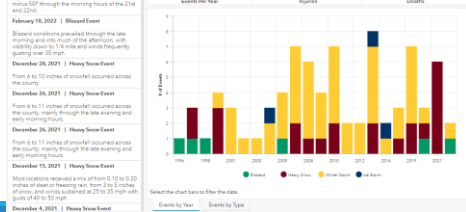
PRESENTER: STACEY STARK

WADENA COUNTY: Winter Storms (Moderate)



80 Events

Blizzard	Heavy Snow	Ice Storm	Winter Storm	Winter Weather
6 Events	23 Events	3 Events	48 Events	0 Events
3.1 Events/Year	0 Events	0 Events	0 Events	0 Events



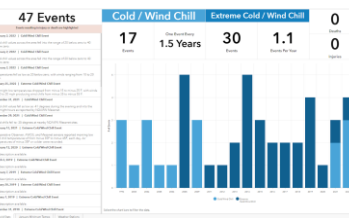
PRESENTER: STACEY STARK

WADENA COUNTY: Extreme Cold (Moderate)

Program Gaps and Deficiencies:

Obtaining generators for backup power to healthcare facilities and designated shelter facilities.

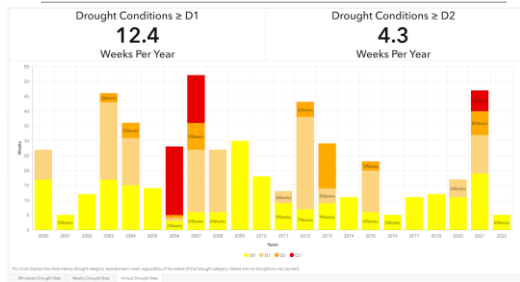
Plans and Programs in Place
 Emergency Notifications – NWS & Wadena County
 Emergency Management
 School Closings – policy and communication plans
 NWS Winter Hazard Awareness Week – public education & awareness



The Park Rapids Municipal Airport station (Hubbard County) experiences a daily minimum temperature of $\leq -18^{\circ}\text{F}$ an average of 78 days per year.

PRESENTER: STACEY STARK

WADENA COUNTY: Drought (Moderate)



PRESENTER: STACEY STARK

Development of Mitigation Actions

- Must address hazards of moderate to high risk
- Must be jurisdictionally-specific
- Should address local vulnerabilities & reduce risk
- Should incorporate existing planning mechanisms and capabilities



Important

Eligible FEMA HMA project activities must be identified to support a future grant application.

FEMA HMA Grant Funding



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

Example 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

Overview of 5-year Jurisdictional Mitigation Action Charts

Each MAC is organized to address:

- Hazards of priority
- Mitigation Strategy
- Mitigation Action
- Status/Priority/Timeframe
- Responsibility
- Comments on Implementation and Integration
- Possible Funding



Local Planning & Regulations



Wadena County Examples:

- Participating in the NFIP
- Collaborating with SWCD to address flooding and erosion (Wadena County Water Management Plan)
- Working with MHP operators to be in compliance with Minnesota State statutes for storm shelters & evacuation plans.
- Providing EM and mitigation planning assistance to local jurisdictions.



PRESENTER: BONNIE HUNDRIESER

Structure & Infrastructure Projects

Wadena County Examples:

- Installation of new outdoor warning sirens.
- Construction of safe rooms / storm shelters at MHPs, campgrounds, city parks, fairgrounds.
- Burying powerlines to reduce power failure
- Implementing stormwater improvement projects for high rain and snow melt (i.e. drainage improvements, culvert upsizing). (Cities / Townships)
- Wadena County Highway Dept. projects to address flood mitigation in key locations.
- Conducting property buyouts of homes at risk from repetitive flooding and convert to open space.



PRESENTER: BONNIE HUNDRIESER

Natural Systems Protection

Wadena County Examples:

- Conduct vegetation management along roads to reduce the risk of downed trees and branches resulting from severe storms.
 - County Highway Dept.
 - Utility Providers
 - Local road authorities



PRESENTER: BONNIE HUNDRIESER

Education & Awareness Programs

Wadena County Examples:

- Promoting sign-up for the County's CodeRED emergency notification system.
- Promoting residents to be aware of and prepared for severe weather and extended power outages.
- Encouraging residents to maintain sump pumps and to clear street drains of debris.
- Promoting water conservation measures during periods of drought
- SKYWARN Storm Spotter Training



PRESENTER: BONNIE HUNDRIESER

Mitigation Preparedness & Response Support

Wadena County Examples:

- Purchasing generators for critical services or facilities (i.e., sewer, city well, City Hall, fire hall, community centers).
- Updating EOP's
- Shelter Planning
- Working with long-term care facilities to be prepared for power outages or evacuation.
- Training local elected officials in EM responsibilities



PRESENTER: BONNIE HUNDRIESER

Comments and Questions?



Fall/Winter 2022

Planning Team Meeting #2 and Public Review & Comment Period



- Following Planning Team Mtg. #2, disseminate & document news release by county and jurisdictions.
- Conduct public review & comment period (stakeholder & public review of draft plan).
- Document and incorporate feedback into the plan as appropriate.

PRESENTER: BONNIE HUNDRIESER



Winter 2022-2023

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

PRESENTER: BONNIE HUNDRIESER

Questions?

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

PRESENTER: STACEY STARK

Contact Information

Stacey Stark, MS, GISP

U-Spatial@UMD

slstark@d.umn.edu

218-726-7438

Bonnie Hundrieser, HM Planner

Hundrieser Consulting LLC

hundrieserconsulting@outlook.com

218-343-3468



PRESENTER: STACEY STARK

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.	<ul style="list-style-type: none"> • 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	<p>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.</p> <p>This type of action also involves projects to construct manmade structures to reduce the impact of hazards.</p>	<ul style="list-style-type: none"> • 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 <p><i>Many of these types of actions are projects eligible for funding through FEMA HMA grant programs.</i></p>

Mitigation Strategy	Description	Example Mitigation Actions
<p>Natural Systems Protection</p>	<p>These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.</p>	<ul style="list-style-type: none"> • 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 <p><i>Many of these types of actions are projects eligible for funding through FEMA HMA grant programs.</i></p>
<p>Education and Awareness Programs</p>	<p>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.</p>	<ul style="list-style-type: none"> • 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 <p><i>Some of these types of actions may be projects eligible for funding through the FEMA HMA "5 Percent Initiative Program".</i></p>
<p>Mitigation Preparedness and Response Support</p>	<p>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.</p>	<ul style="list-style-type: none"> • 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.



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>

Appendix G – Public Outreach & Engagement Documentation

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

Overview: On September 8, 2021, Wadena 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 Multi-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. Wadena 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?
- Have you experienced a previous disaster event?
- 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 Wadena 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 MHMP Jurisdictional Contact List, which includes the names, titles, phone numbers, and email addresses of key stakeholders to be engaged in the MHMP 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 with a request to carry the news release.

Postings: Attached is documentation of the news release postings by Wadena 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 news release and how their input will be incorporated into the plan update, and if not relevant to be addressed, why.

9/10/21 Letter submitted by the Wadena Fire Department to Wadena County Emergency Management detailing their top hazard risk concerns. See attached letter.

9/13/21 Email response from Tyler Wheeler, Wadena County Emergency Management Director

Dear Andrew,

Thank you very much for the letter submitted from the Wadena Fire Department on 9/10/21 in response to the news release regarding the Wadena County Multi-Hazard Mitigation Plan (MHMP) update. The time and detail put into this letter is greatly appreciated. As per FEMA requirements, the MHMP will be addressing only natural-hazards that pose risk, so I will make note of your specific concerns & mitigation suggestions for the high-risk hazards of wildfire and spring & summer severe storms. Structure fires and pandemics will not be covered under the plan but your input on these hazards is noted for our larger emergency management efforts.

As a multi-jurisdictional plan, we will be working directly with the City of Wadena to address local vulnerabilities and development of local mitigation actions. The information that you submitted is extremely helpful for these purposes. We look forward to having the Wadena Fire Department involved in our planning process in the year ahead.

Thank you,

Deputy Tyler Wheeler #4108

Emergency Management Director

Wadena County Sheriff's Office

415 Jefferson St S

Wadena, MN 56482

218-631-7600 (phone)

218-632-6057 (fax)



September 10, 2021

From:

Wadena Fire Department
PO Box 30
Wadena, MN 56482

To:

Wadena County Emergency Management
415 Jefferson St. S.
Wadena, MN 56482

RE: Hazard Mitigation

Dear Director Wheeler,

Enclosed is the Wadena Fire Departments Hazard Mitigation input for our local fire district and hazards that we have identified as critical concern within our fire district. As a city entity of the City of Wadena, we have posted the public input to this planning through posting the press release in our City Government Office, Fire Department Facebook Page, and City Facebook Page, in conjunction with other city agencies.

The Wadena Fire Department is responsible for a fire district of 82 square miles that covers two counties of Wadena and Otter Tail Counties, serving the City of Wadena and all or part of the following Township's Compton, Leaf River, and Wadena. We also provide automatic mutual aid to the following cities on a contractual basis: City of Bluffton, City of Deer Creek, and City of Verndale. On average, the Wadena Fire Department responds to approximately 80 calls for service a year.

Within our fire district covering major infrastructure in the largest city within Wadena County, we have responded to within the past 10 years to several major incidents. Some of those incidents include the following: June 17, 2010, Tornadoes April 2012 Nimrod Jeep Wildfire, May 2013 Green Valley Wildfire, December 1, 2014, BNSF Bluffton Train Derailment, and April 2015 Aldrich Wildfire. In addition, we have responded to several other smaller scale incidents in the past 10 years.

The Wadena Fire Department has looked at the following risk assessments as our most critical hazards to plan and respond to within our district and mutual aid partners.

- Structure Fires: On average, the Wadena Fire Department responds to around 15 structure fires each year, with a total loss of property average of \$500,000 each year. The leading cause of structure fires in Minnesota is Cooking Fires and the leading cause of fire fatalities is Careless Smoking. In the past 10 years, within the Wadena Fire District, 4 fire fatalities have been reported. On February 14, 2014, two victims died in a camper fire located in Wadena Township. And on August 1, 2021, two victims died in a house fire located in Wadena Township. Historically over the past 5 years structure fires involving residential living units have been decreasing. Today with structure fires burning faster due to new construction and synthetic home products inside a building, the average time of an individual escaping a fire is approximately

3 minutes. With this data collected, Wadena Fire Department rates this as our highest risk assessment of incidents we respond to. Our goal is to decrease the number of structures fires each year through fire prevention and education.

- **Wildfires:** Approximately 87% of the Wadena Fire Department District is rural land that coverage croplands, wetlands, open fields, and heavily wooded forests. On average, the Wadena Fire Department responds to around 10 wildland type fires each year. Over the past 10 years, the Wadena Fire Department has responded to several major wildfires through initial respond within our fire district as well as mutual aid to neighboring departments. Typically, the Wadena Fire Department has two distinct fires seasons, spring which is from March until end of May and fall which is from end of September to November. Currently, our fire district has been in an extreme drought in 2021, with limited amount of rainfall and a 2020-2021 winter with below average snow precipitation. With accessing the risk of wildfires within our district, we have identified the biggest risk of wildfires to be within our citizens living in rural areas of our district with their living structures within proximity to heavily dense forests, wetlands, and open fields. Within our district, there is several rural homesteads that have heavy junk and debris within their place of residences as well that pose a risk to wildfires as excess fuels for accelerating wildfires. Wadena Fire Department sees this risk and an area where improvement could be done through education and prevention of clearing rural debris within proximity to structures and citizens living in rural areas within our district.
- **Natural Disasters:** In Minnesota, we have 4 distinct seasons where weather patterns change year with the seasons. The Wadena Fire Department has responded to several small-scale natural disasters. The largest natural disaster within our district was the June 17, 2010, Tornado. On June 17th, the Wadena Fire Department was a first line response to the aftermath of the tornado with respond to search and rescue within the first several hours following the tornado. In addition, the Wadena Fire Department provided response to several hazardous conditions that included an anhydrous ammonia leak at Leaf River Ag and several small gas leaks within the Southwest part of town, which was hit the hardest by the tornado. The Wadena Fire Department also provides Skywarn Weather Spotting through coordinated response with strategically placing firefighters throughout our district in areas with clear visibility for tracking storms and reporting real time weather events. Wadena Fire Department within the past 10 years hasn't responded to any winter weather emergencies. The Wadena Fire Department assessment rates spring and summer severe weather as the highest concern.
- **Pandemic:** The Wadena Fire Department with mitigation to a pandemic has one risk with the current COVID-19 Pandemic. The biggest risk assessment for the Wadena Fire Department is a community spike in cases that would pose the risk of several firefighters out at a given time for quarantine. Currently, the number is unknown to how many of our staff of 20 firefighters are vaccinated for COVID-19. Fire administration has encouraged firefighters to get vaccinated. Since this COVID-19 Pandemic, we have had one scenario where 5 firefighters were out at the same time on quarantine. This still poses a risk with firefighters possibly having to be quarantined with a possible community spike again. We have closely worked with our local mutual aid partners and the State Fire Marshal's Office on local tracking to report firefighter COVID-19 cases for statewide staffing if needed.

- Transportation of Goods: With the Wadena Fire Department covering a major railway line and US Hwy 71 and US Hwy 10, each day hazardous goods are transported by both rail and truck through our community each day. The Wadena Fire Department staff is trained to a level of Hazardous Material Operations levels of training. For major hazardous material disasters, the Wadena Fire Department closely relies on regional hazardous material units from Moorhead and St. Cloud Fire Department's for response to major incidents. The Wadena Fire Department has basic PPE and limited training on certain hazardous material incidents. We also have two decontamination portable stations that can be setup for decontamination of fire personnel in the field. In addition, the City of Wadena has major agricultural facilities within our fire district that have a large amount of toxic hazardous materials being stored on site. Annually, we receive data from a third-party vendor on what hazardous materials on commercial property on being stored and an estimate of quantity of those hazards. These records are archived annually and updated on an annual basis.

Currently, the Wadena Fire Department is in the process of updating outdated pre-planning incident response report to critical infrastructure within our fire district. Due to being on paid-on-call department, this process takes a lot longer due to the size and volume of commercial assets within our fire district. Our fire department will use this data collected to better understand mitigation practices and response to certain emergencies and prevention of loss of property and life within our fire district. The goal is to have all critical infrastructure assets within our fire district completed with current pre-planning incident reports completed by spring of 2022.

As a fire protection department, our goal is to provide education and prevention within our fire district related to fire emergencies. We do this through local trends in fire related emergencies by collecting and tracking data through information gathered through historic data collected from past emergencies.

If you have further questions regarding our input through planning a Hazard Mitigation Plan to make our county and community a safer place, please feel free to reach out to us at any time.

Respectfully Submitted,

Wadena Fire Department

From: [Tyler Wheeler](#)
To: [Tyler Wheeler](#); [Bryan Savaloja](#); [Mike Carr](#); [Ryan Odden](#); [Deana Malone](#); [Cindy Pederson](#); [Sheldon Monson](#); [Sean Uselman](#); [Mike Weyer](#); [Bill.stearns.@co.wadena.mn.us](#); [Murlyn Kreklau](#); [Jon Kangas](#); [justingeno@yahoo.com](#); [aldrichcity@outlook.com](#); [cmenahga@wcta.net](#); [Depclerk@wcta.net](#); [davek@wcta.net](#); [Adam Gunderson](#); [cityofnimrod@wcta.net](#); [cosmayordavid@gmail.com](#); [sebekapd@hotmail.com](#); [dlhaman3@gmail.com](#); [Cityofsebaka@wcta.net](#); [cetzler@ci.staples.mn.us](#); ["mbirkholtz@ci.staples.mn.us"](#); [cyungbauer@ci.staples.mn.us](#); [jnelson@ci.staples.mn.us](#); [verncity@scicable.com](#); [mpc@wcta.net](#); [Cory Carr](#); [verndalemaintenance@yahoo.com](#); [T2erckenbrack@yahoo.com](#); [Chief Naomi Plautz](#); [gdeiss@wadena.org](#); [Cody Yglesias](#); [cityadmin@wadena.org](#); [d_bjohn@yahoo.com](#); [jayne.bbtownship@gmail.com](#); [janellevanalst@gmail.com](#); [huntersville@wcta.net](#); [las21514@gmail.com](#); [malcore@wcta.net](#); [marionha@wcta.net](#); [fullmeasure@wcta.net](#); [shannonputikka@gmail.com](#); [jeannie.arthur@hotmail.com](#); [raatikka5660@hotmail.com](#); [bonitan@wcta.net](#); [smduckowitz@gmail.com](#); [Trisha Wadena Township \(wadena_township@live.com\)](#); [rdkern@wcta.net](#)
Cc: [Bonnie K Hundrieser](#)
Subject: Wadena County MHMP News Release #1
Date: Thursday, September 9, 2021 9:25:58 AM
Attachments: [image001.png](#)
[Hazard Mitigation Press release #1.pdf](#)

Hello everyone,

Please see attached news release #1 for our MHMP planning. Thanks and have a great day!

Deputy Tyler Wheeler #4108

Emergency Management Director
Wadena County Sheriff's Office
415 Jefferson St S
Wadena, MN 56482
218-631-7600 (phone)
218-632-6057 (fax)



[Sheriff's Office | Wadena County, MN - Official Website](#)
[Wadena County Sheriff's Office Facebook - Home](#)

From: [Tyler Wheeler](#)
To: [Michael Johnson](#); [Tim Bloomquist](#); trinity@inhnews.com; info@staplesworld.com; corey@kwadknsp.com
Cc: [Bonnie K Hundrieser](#); [Bryan Savaloja](#)
Subject: Wadena County Multi Hazard Mitigation Plan update/press release
Date: Thursday, September 9, 2021 9:48:53 AM
Attachments: [image001.png](#)
[Hazard Mitigation Press release #1.pdf](#)

Good Morning Everyone,

Attached you will find a press release from the Wadena County Emergency Management Director seeking public input for the update of the Wadena County Multi Hazard Mitigation Plan.

Your assistance in getting this out to our local community is greatly appreciated. Thank you!

Deputy Tyler Wheeler #4108

Emergency Management Director
Wadena County Sheriff's Office
415 Jefferson St S
Wadena, MN 56482
218-631-7600 (phone)
218-632-6057 (fax)



[Sheriff's Office | Wadena County, MN - Official Website](#)
[Wadena County Sheriff's Office Facebook - Home](#)

From: [Tyler Wheeler](#)
To: tyler.ray@usda.gov; Lisa.Dumont@state.mn.us; darren.newville@eot.mnswcd.org; joshua.hanson@usda.gov; [Abby Harrison; customerservice@mnpower.com](mailto:Abby.Harrison@customerservice.mnpower.com); pdownlow@verndaleschool.org; dfjeldheim@g.sebeka.k12.mn.us; Kate.adornetto@clcmn.edu; swilliams@co.hubbard.mn.us; chad.emery@co.cass.mn.us; michael.wisniewski@co.todd.mn.us; pwaletz@co.ottertail.mn.us; craig.fontaine@co.becker.mn.us
Cc: [Bonnie K Hundrieser](#)
Subject: Wadena County Multi Hazard Mitigation Plan press release
Date: Thursday, September 9, 2021 9:57:49 AM
Attachments: [image001.png](#)
[Hazard Mitigation Press release #1.pdf](#)

Good Morning Everyone,

Wadena County has begun work on updating our Multi Hazard Mitigation Plan. Please see attached press release for more information. Have a great day!

Deputy Tyler Wheeler #4108

Emergency Management Director
Wadena County Sheriff's Office
415 Jefferson St S
Wadena, MN 56482
218-631-7600 (phone)
218-632-6057 (fax)



[Sheriff's Office](#) | [Wadena County, MN - Official Website](#)
[Wadena County Sheriff's Office Facebook - Home](#)



WADENA COUNTY
SHERIFF
Michael D. Carr

415 Jefferson St. South
Wadena, MN 56482
Telephone 218.631.7600
Fax 218.631.7699

Working For You, Working With You.

WADENA COUNTY NEWS RELEASE

September 8, 2021

Public Input Wanted as County Updates Multi-Hazard Mitigation Plan

The Wadena County Office of Emergency Management is working with U-Spatial at the University of Minnesota Duluth to update the county's Multi-Hazard Mitigation Plan (MHMP). 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 Wadena County MHMP is a multi-jurisdictional plan that covers Wadena County, including the cities of Aldrich, Menahga, Nimrod, Sebeka, Staples, Verndale, and Wadena. The Wadena County MHMP also incorporates the concerns and needs of townships, school districts, and other stakeholders 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.

"Hazard mitigation planning is a central part of our emergency management program," said Tyler Wheeler, Wadena 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 actions include improvement of roads and culverts that experience repetitive flooding; construction of safe rooms at campgrounds, public parks, mobile home parks or schools to protect lives in the event of tornados or severe wind 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 public awareness and education campaigns to help people to be prepared to take safe action before, during, or following a hazard event. Some mitigation activities may be eligible for future FEMA Hazard Mitigation Assistance grant funding.

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



WADENA COUNTY
SHERIFF

Michael D. Carr

415 Jefferson St. South
Wadena, MN 56482
Telephone 218.631.7600
Fax 218.631.7699

Working For You, Working With You.

- What are the natural hazards you feel pose the greatest risk to your community?
- Have you experienced a previous disaster event?
- 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?

Comments, concerns, or questions regarding natural disasters and potential mitigation actions to be included into the plan update process should be submitted to Wadena County Emergency Management by phone or email. Public comments may also be submitted on the Wadena County Sheriff's Office Facebook page where this news release will be posted.

There will be additional opportunities for public feedback throughout the planning process. A draft of the plan will be posted on the county website 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

Tyler Wheeler
Wadena County Emergency Management Director
Phone: 218-631-7795
Email: tylerw@co.wadena.mn.us

Wadena County MHMP News Release #1 Documentation of News Release Postings

COUNTY POSTINGS

Wadena County Sheriff's Office Facebook posting, September 9

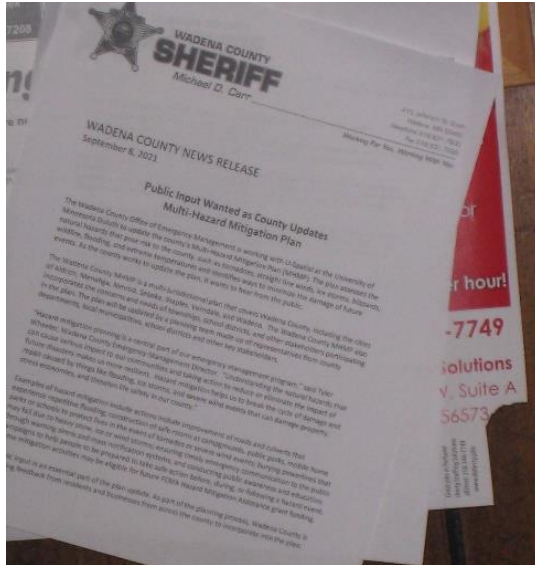


LOCAL MEDIA POSTINGS

No local media postings.

CITY POSTINGS

City of Aldrich
Post Office, November 4, 2021



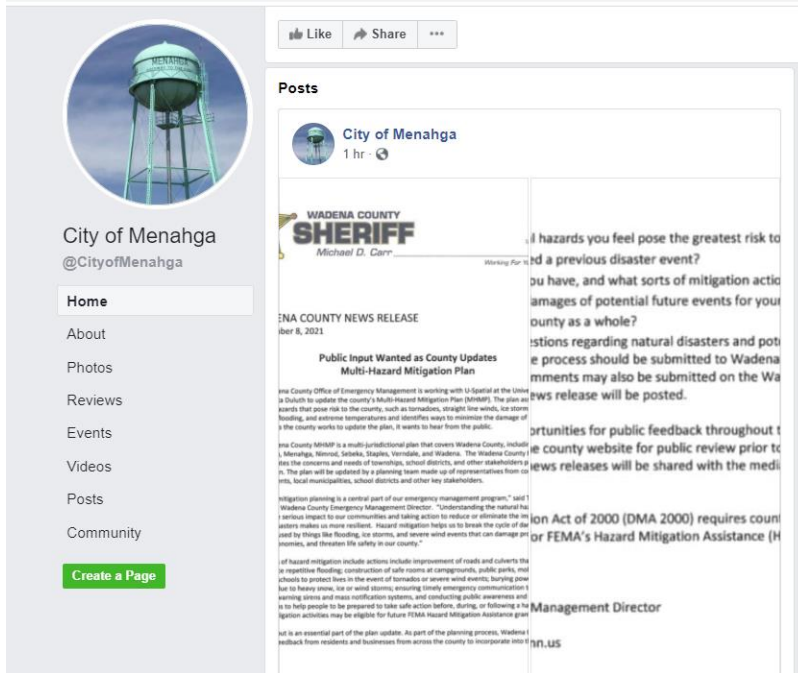
City of Menahga
City Website, September 9, 2021



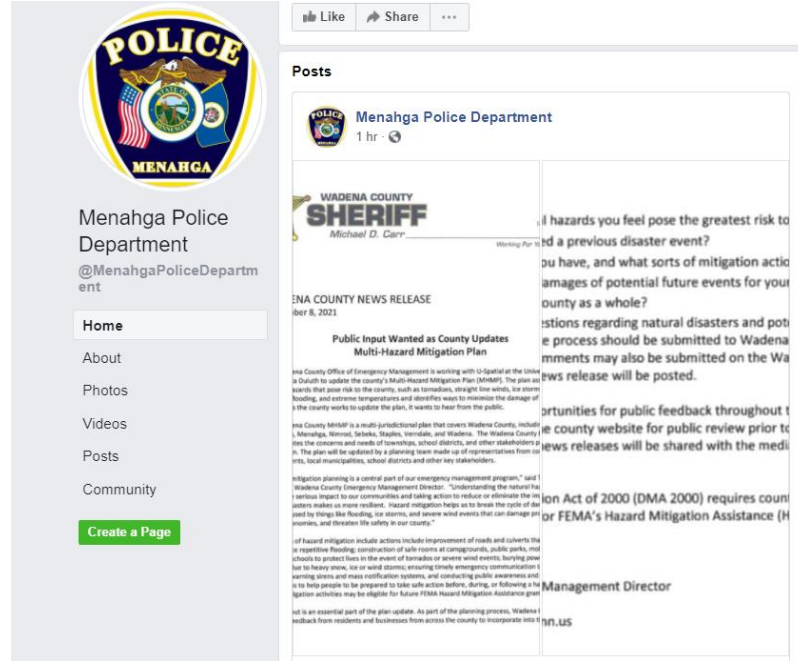
City of Menahga
City Hall Front Door, September 9, 2021



City of Menahga
City Facebook page, September 9, 2021

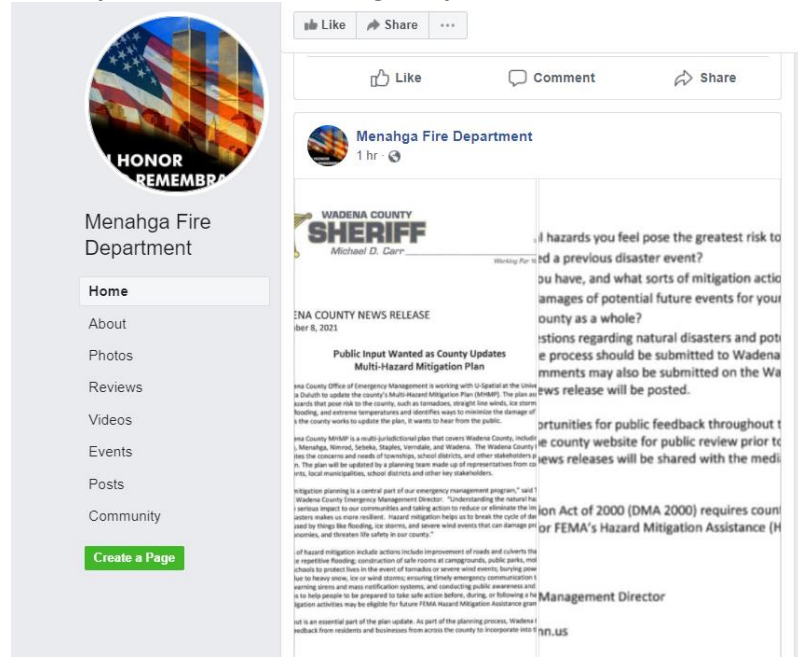


City of Menahga Police Department Facebook Page, September 9, 2021



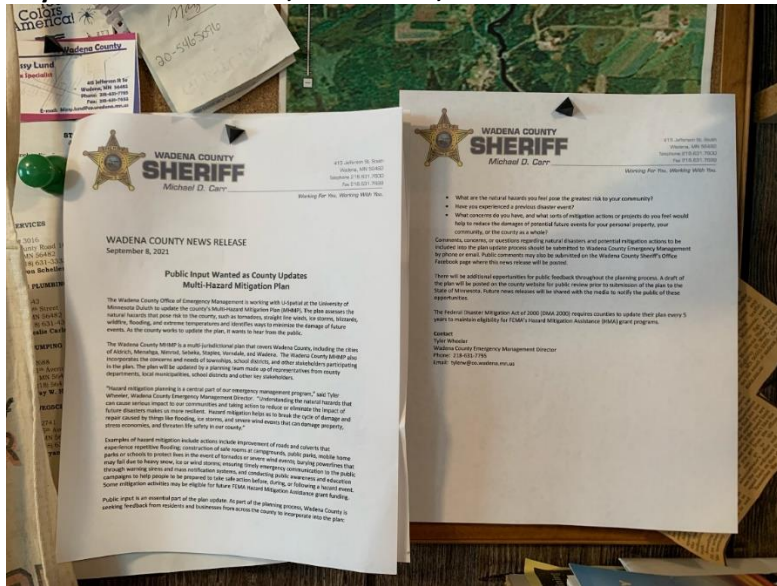
This screenshot shows the Facebook profile of the Menahga Police Department. The profile picture is the official police badge. The cover photo is a news release from Wadena County Sheriff Michael D. Carr, dated October 8, 2021, titled "Public Input Wanted as County Updates Multi-Hazard Mitigation Plan". The post text asks for public input on hazards, mitigation actions, and emergency communication plans. The left sidebar contains navigation links: Home, About, Photos, Videos, Posts, and Community, along with a "Create a Page" button.

City of Menahga Fire Department Facebook Page, September 9, 2021

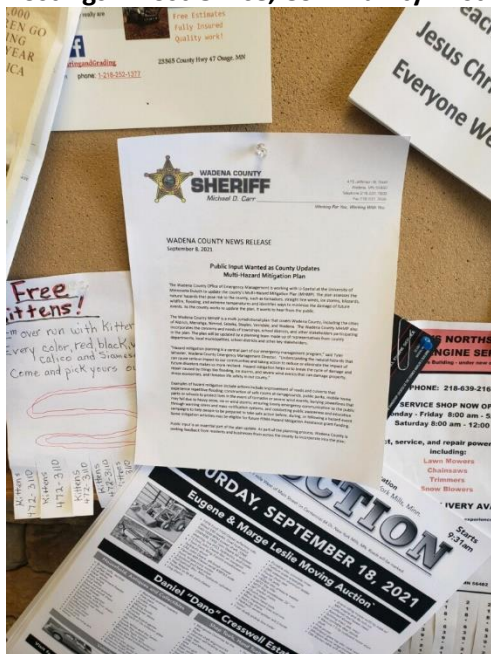


This screenshot shows the Facebook profile of the Menahga Fire Department. The profile picture features an American flag with the text "HONOR REMEMBER". The cover photo is identical to the one in the first screenshot, a news release from Wadena County Sheriff Michael D. Carr. The post text is also identical, asking for public input on hazards and mitigation actions. The left sidebar contains navigation links: Home, About, Photos, Reviews, Videos, Events, Posts, and Community, along with a "Create a Page" button.

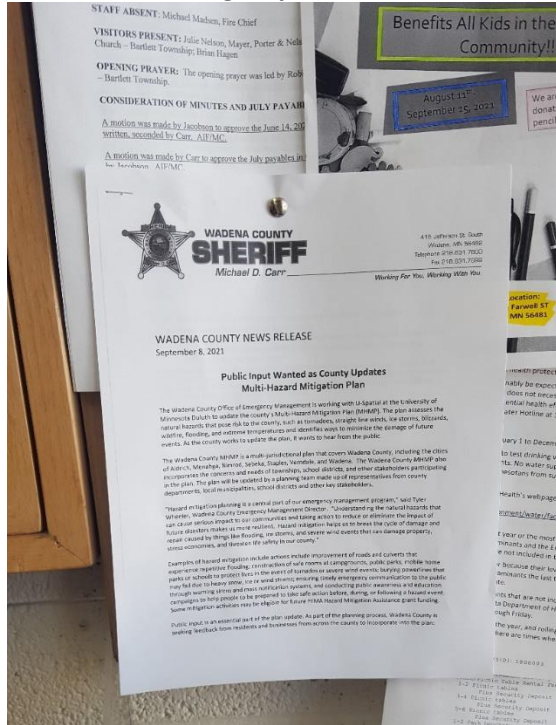
**City of Nimrod
City Hall Bulletin Board, October 29, 2021**



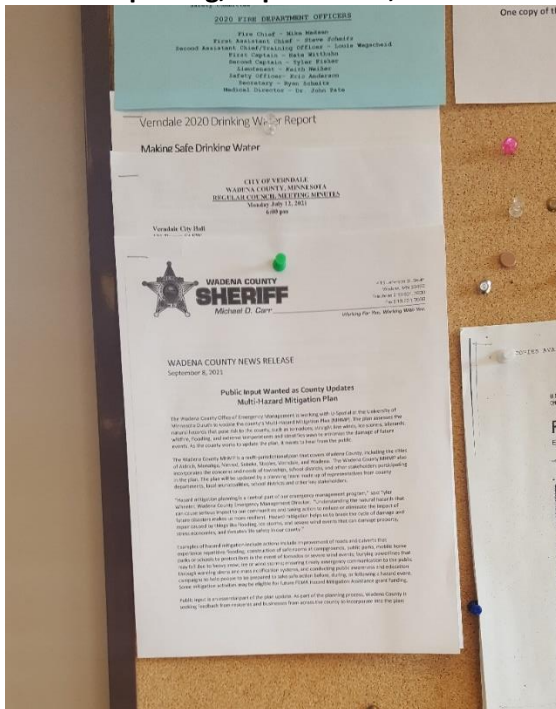
**City of Sebeka
September 16, 2021
Postings – Post Office, Community First Bank, Review Messenger, and City Hall**



City of Verndale Post Office Posting, September 9, 2021



City of Verndale Star Bank posting, September 9, 2021



**City of Wadena
Fire Department Facebook Page, September 9, 2021**

Wadena Fire Department Minnesota
@wadenafd

Home
About
Reviews
Photos
Videos

Wadena Fire Department Minnesota
September 9 at 7:45 AM · 🌐

Wadena County Emergency Management is looking for public input on updating our Local Hazard Mitigation Plan. This input from local residents and businesses owners within our community is essential information to planning a detailed plan for future disasters and emergencies. If you would like to share input, contact information is posted in the post below.

WADENA COUNTY SHERIFF
Michael D. Carr
Working For You

WADENA COUNTY NEWS RELEASE
September 8, 2021

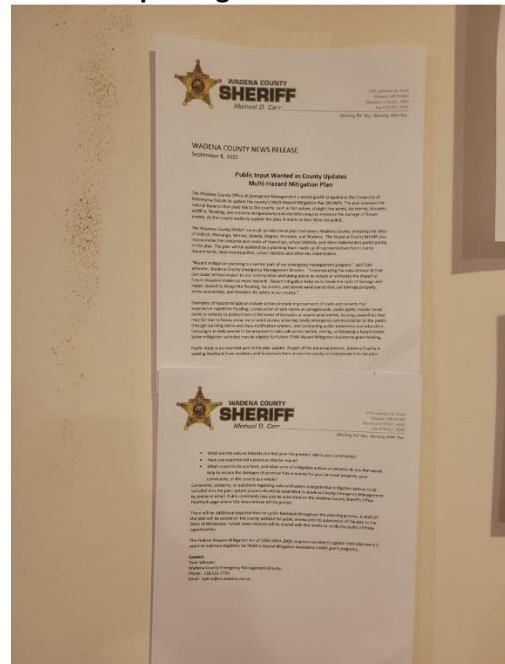
Public Input Wanted as County Updates Multi-Hazard Mitigation Plan

Wadena County Office of Emergency Management is working with U-Spatial at the University of Minnesota to update the county's Multi-Hazard Mitigation Plan (MHMP). The release and news release will be posted.

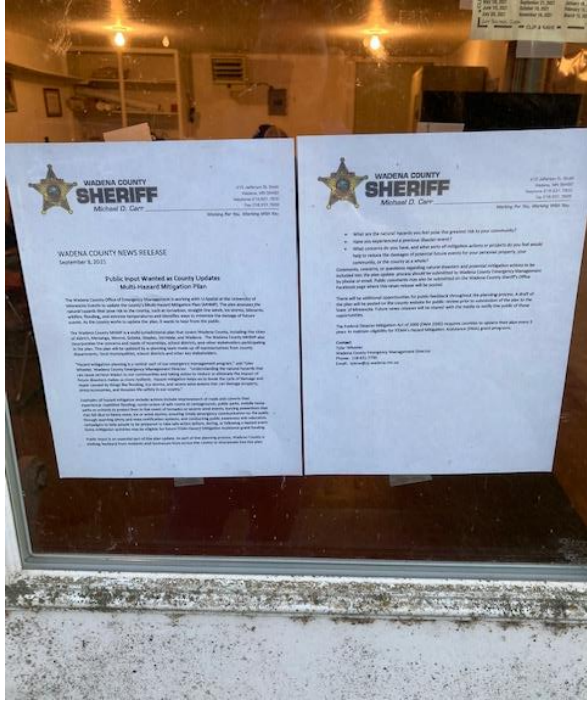
What hazards you feel pose the greatest risk to you and your community?
Have you experienced a previous disaster event?
If so, what were the damages, and what sorts of mitigation actions were taken?
What types of mitigation actions would you like to see implemented?
What types of mitigation actions would you like to see implemented?
What types of mitigation actions would you like to see implemented?

TOWNSHIP POSTINGS

**Bullard Township, October 12, 2021
Town Hall posting**



Huntersville Township, September 21, 2021 Town Hall front door posting



Wadena County MHMP News Release #2 Record of Public Input & Incorporation

Overview: On January 9, 2023 Wadena County Emergency Management put out a news release titled “**Public Comment Sought for County’s Multi-Hazard Mitigation Plan**” to announce the completion of the draft Wadena County Multi-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 1/9/23 to 1/23/23, for a total of 15 days.

Distribution: The news release was sent via email to the county’s MHMP Jurisdictional Contact List, which includes the names, titles, phone numbers, and email addresses of key stakeholders to be engaged in the MHMP 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 Wadena 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 Wadena 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 by Wadena County Emergency Management, local jurisdictions, or via the online comment form.

From: [Bonnie K Hundrieser](#) on behalf of hundrieserconsulting@outlook.com
To: "mike.carr@co.wadena.mn.us"; "darin.fellbaum@wcmn.us"; "deana.malone@co.wadena.mn.us"; "erica.keppers@wcmn.us"; "sean.uselman@co.wadena.mn.us"; "sheldon.monson@co.wadena.mn.us"; "Mike.weyer@co.wadena.mn.us"; "Bill.stearns.@co.wadena.mn.us"; "murlyn.kreklau@co.wadena.mn.us"; "jon.kangas@co.wadena.mn.us"; "aldrichcity@outlook.com"; "deebilek@wcta.net"; "cmenahga@wcta.net"; "Depclerk@wcta.net"; "davek@wcta.net"; "Adam.gunderson@co.wadena.mn.us"; "cityofnimrod@wcta.net"; "cosmayordavid@gmail.com"; "sebekapd@hotmail.com"; "DLhaman3@gmail.com"; "Cityofsebeka@wcta.net"; "cetzler@ci.staples.mn.us"; "mbirkholtz@ci.staples.mn.us"; "cyungbauer@ci.staples.mn.us"; "jnelson@ci.staples.mn.us"; "vernacity@scicable.com"; "mpc@wcta.net"; "Cory.carr@co.wadena.mn.us"; "verndalemaintenance@yahoo.com"; "T2erckenbrack@yahoo.com"; "Naomi.plautz@co.wadena.mn.us"; "gdeiss@wadena.org"; "Cody.yglesias@co.wadena.mn.us"; "cityadmin@wadena.org"; "d_bjohn@yahoo.com"; "jayne.bbtownship@gmail.com"; "janellevanalst@gmail.com"; "huntersville@wcta.net"; "las21514@gmail.com"; "lyonsmnclerk@gmail.com"; "marionha@wcta.net"; "fullmeasure@wcta.net"; "shannonputikka@gmail.com"; "jeannie.arthur@hotmail.com"; "raatikka5660@hotmail.com"; "bonitan@wcta.net"; "smdukowitz@gmail.com"; "wadena_township@live.com"; "WRTownship.Clerk@outlook.com"; "tyler.ray@usda.gov"; "Lisa.Dumont@state.mn.us"; "darren.newville@eot.mnswcd.org"; "joshua.hanson@usda.gov"; "aharrison@toddwadena.coop"; "customerservice@mnpower.com"; "lwestrum@wdc2155.k12.mn.us"; "pbrownlow@verndaleschool.org"; "dfjeldheim@g.sebeka.k12.mn.us"; "Kate.adornetto@clcmn.edu"; "swilliams@co.hubbard.mn.us"; "chad.emery@co.cass.mn.us"; "michael.wisniewski@co.todd.mn.us"; "pwaletz@co.ottertail.mn.us"; "Adam.douglas@co.becker.mn.us
Cc: [Tyler Wheeler](#); "[Bryan Savaloja](#)"
Subject: Wadena County News Release - Public Comment Sought for County's Hazard Mitigation Plan
Date: Monday, January 9, 2023 9:45:00 AM
Attachments: [Public Comment Release 1-9-23.pdf](#)
Importance: High

Greetings,

Attached is a news release announcing the public review and comment period is open for the Wadena County draft Hazard Mitigation Plan from [January 9 – January 23](#) prior to submission of the plan to FEMA. As a jurisdiction, related agency, or neighboring jurisdiction involved in the plan update, your assistance is requested to help post the news release and also to review the plan. Please see the following directions and links to the plan below:

POSTING THE NEWS RELEASE

The cities of Aldrich, Menahga, Nimrod, Sebeka, Staples, Verndale, and Wadena are specifically requested to post the news release for their community. As a multi-jurisdictional plan, we are required to document the participation of cities helping to conduct this local outreach. Townships and other agency stakeholders are also encouraged to participate in posting the news release. You can post the news release in any of the ways below:

- **Posting Online:** Please post the news release to your respective website and/or social media and provide me with the name of your jurisdiction/agency, along with a direct website link to your posting(s) or a screenshot of the posting online.
- **Posting a Hardcopy:** If posting a printed copy of the news release, please provide me with the name of your jurisdiction/agency, date & location of where it was posted (i.e., City Hall, Post Office, Community Center).
- **Posting to Local Papers:** If you are a jurisdiction with a local paper, you are also encouraged to run this as a printed or online story and notify me of where it was submitted.

REVIEW OF THE PLAN

All recipients of this notice are encouraged to review the plan and provide comment. Following

are links for the interactive website, PDF plan document, jurisdictional mitigation action charts, and online public feedback form. Use Control +Click to follow links:

[Wadena County HMP Website](#)

[Mitigation Action Charts](#)

[Public Comment Feedback Form](#)

As this is a 15-day review period, your timeliness to post and review is very important. Please respond via email directly with the following information no later than January 20:

- **Documentation of your electronic or hardcopy posting of the news release.**
- **Documentation of the names & titles of who reviewed the plan, as well as approximate time spent. All participants' time counts towards the county's 25% local match on this project.**

This is our final step in completing the update of the Wadena County Hazard Mitigation Plan. We thank you for your assistance and participation.

If you have any questions or comments, please let me know.

Thank you!

Bonnie Hundrieser

Bonnie K. Hundrieser, CEM

Hazard Mitigation Planning Specialist

Part of the **U-Spatial@UMD** MHMP Planning Team

Hundrieser Consulting LLC

Phone: 218-343-3468

From: [Bryan Savaloja](#)
To: ["Dawn Timbs-Staples World"](#); ["REV MESS TIM"](#); ["REVIEW MESSENGER"](#); ["STAPLES WORLD"](#); ["STAPLES WORLD"](#); ["Trinity"](#); ["VERNDALE SUN"](#); ["WADENA PJ"](#)
Cc: [Bonnie K Hundrieser](#); [Tyler Wheeler](#)
Subject: Media Release-Hazard Mitigation
Date: Monday, January 9, 2023 12:37:15 PM
Attachments: [image001.png](#)
[Public Comment Release.pdf](#)

Good Afternoon local media partners. Please see attached media release regarding our Hazard Mitigation Plan and request for public comment. If you have any questions on it, please reach out to Deputy Tyler Wheeler or I. Thank you!

Sgt. Bryan Savaloja #4103

Wadena County Sheriff's Office
415 Jefferson St S

Wadena, MN 56482

218-631-7600 (phone)

218-632-6057 (fax)



[Sheriff's Office | Wadena County, MN - Official Website](#)

[Wadena County Sheriff's Office Facebook - Home](#)

****PLEASE NOTE NEW EMAIL ADDRESS: bryan.savaloja@wcmn.us****

This message has been sent from a law enforcement agency and contains information which is confidential, privileged, and intended only for the person or entity to which it is addressed. This message (including attachments) is covered by the Electronic Communications Privacy Act, 18 U.S.C. 2510-2521. If you are not the intended recipient, any review, transmission, dissemination or other use of this information by anyone other than the intended recipient is prohibited. If you received this electronic mail transmission in error, please delete it from your computer system without copying it and notify the sender by reply email or by calling 218-631-7600. Thank you.



January 9th, 2023

Public Comment Sought for County's Hazard Mitigation Plan

Wadena County has completed an updated draft of the of its Hazard Mitigation Plan (HMP) and is now seeking public feedback. Like all Minnesota counties, Wadena County is vulnerable to a variety of potential natural disasters, such as tornadoes, windstorms, severe winter storms, flooding, drought, and extreme temperatures, which threaten the loss of life and property in the county. Planning for natural disasters minimizes the impact of these events that can cause vast economic loss and personal hardship.

All county residents, as well as other interested stakeholders (those in neighboring counties or working with affected agencies) are strongly encouraged to review and offer feedback on the interactive website, PDF of the draft plan, and proposed local mitigation actions. The review and comment period is open for a period of 15 days through January 23, 2023. The public can access the plan using the following links:

[Wadena County HMP Website](https://z.umn.edu/WadenaHMP) (z.umn.edu/WadenaHMP)

[Mitigation Action Charts](https://wadena-county-hmp-umn.hub.arcgis.com/pages/mitigation-actions) (https://wadena-county-hmp-umn.hub.arcgis.com/pages/mitigation-actions)

[Public Comment Feedback Form](https://z.umn.edu/WadenaSurveyHMP) (https://z.umn.edu/WadenaSurveyHMP)

The Wadena County HMP is a multi-jurisdictional plan that covers Wadena County, including the cities of Aldrich, Menahga, Nimrod, Sebeka, Staples, Verndale, and Wadena. The Wadena County HMP also incorporates the concerns and needs of townships, school districts, and other stakeholders participating in the plan.

Update of the plan has been under direction of Wadena County Emergency Management in cooperation with U-Spatial at the University of Minnesota Duluth and representatives from county departments, city and township governments, school districts, and other key 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 improvement of roads and culverts that experience repetitive flooding; construction of safe rooms in areas where residents and visitors are vulnerable to tornadoes and severe storm events; burying power lines 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 public awareness and education campaigns to help people be prepared to take safe action before, during, or following a hazard event.

Hazard mitigation planning helps Wadena 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. Updating the plan further allows Wadena 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. Wadena 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 Wadena County Emergency Management.

Contact:

Deputy Tyler Wheeler

Wadena County Emergency Management Director

Phone: 218-631-7795

Email: tyler.wheeler@wcmn.us

Wadena County 2023 Hazard Mitigation Plan Online Public Review Website & Comment Forms

Wadena County Hazard Mitigation Plan 2023 About HMP Planning County Profile All Natural Hazards Climate Change Mitigation Actions

Wadena County Minnesota Hazard Mitigation Planning



Welcome to the Wadena County 2023 Hazard Mitigation Plan! Hazard mitigation planning is the process of preparing for natural disasters to reduce the loss of life and property in communities of all sizes. By developing long-term strategies for protecting people and property, hazard mitigation plans are key to breaking the cycle of disaster damage and reconstruction (EFMA 2022).

This website provides 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.

[Link to 2023 Hazard Mitigation Plan \(HMP\)](#)

(PDF companion)

The Wadena County 2023 Hazard Mitigation Plan was made available for public review online with a website hosted by U-Spatial@UMD ([Wadena County HMP Website](#)). The website provided an interactive experience for the public to understand the planning process, learn about the natural hazards that affect the county and where county-specific vulnerabilities lie, review jurisdictional mitigation action charts, as well as a chance to submit feedback. Website content included:

- **About HMP Planning**
Description of what hazard mitigation, purpose of the HMP update, overview of the planning process, and members of the planning team.
- **County Profile**
County-specific information on demographics, economy, critical infrastructure, utility & transportation infrastructure, other county assets (significant buildings, cultural or historic assets, and mobile home park locations).
- **Hazard Profiles for each natural hazard covered by the plan**
 - o Definition of hazard and supporting information
 - o Hazard History of Events
 - o Hazard Risk & Vulnerability
 - o Relationship to Climate Change
- **Mitigation Actions**
Overview of the development of mitigation actions and PDFs of draft jurisdictional mitigation action charts for the county and each participating city.
- **Climate Change and Adaptation**
Overview of climate change in Minnesota, information on building climate resilience, and interactive data to explore Minnesota climate data.
- **Public Feedback Forms**
Survey links provided for feedback on the 2023 HMP website and draft plan (during public comment period) or submission of mitigation actions (ongoing survey). Following are the detailed questions provided in each survey.

Mitigation Plan Feedback Survey

Fill in this survey to provide feedback on the Hazard Mitigation Draft Plan.

What section(s) of the Plan would you like to comment on? Select all that apply.

- | | |
|---|--|
| <input type="checkbox"/> Planning Process | <input type="checkbox"/> Mitigation Strategy |
| <input type="checkbox"/> Risk Assessment | <input type="checkbox"/> Implementation Plan |

Please provide comments about the Plan. (Comment box provided)

Upload document (optional)

Would you like to be contacted by the Planning Team? (Yes / No)

County – Enter the county you live in or represent (drop down menu)

Jurisdictional Check-box – Select your jurisdictional representation

Hazard Mitigation Ideas Survey

This survey will be used to capture mitigation ideas for a county hazard mitigation plan. Please be as specific as possible. Thank you for your participation!

Name (First Name, Last Name)

Email

Job Title or Organization (enter job title or organization. If a resident, type “community resident”)

County – Enter the county you live in or represent (drop down menu)

Jurisdictional Check-box – Select your jurisdictional representation

New Action Idea - Please describe in detail any mitigation action ideas you have for your jurisdiction.

Is the mitigation action site-specific, or for the whole jurisdiction? (select answer)

What hazards will this action address?

- | | |
|--|--|
| <input type="checkbox"/> Winter Storms | <input type="checkbox"/> Extreme Cold |
| <input type="checkbox"/> Windstorms | <input type="checkbox"/> Extreme Heat |
| <input type="checkbox"/> Tornadoes | <input type="checkbox"/> Wildfire |
| <input type="checkbox"/> Hail | <input type="checkbox"/> Landslides |
| <input type="checkbox"/> Lightning | <input type="checkbox"/> Drought |
| <input type="checkbox"/> Flooding | <input type="checkbox"/> Dam/Levee Failure |

What mitigation strategy best describes this action? Select all that apply

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

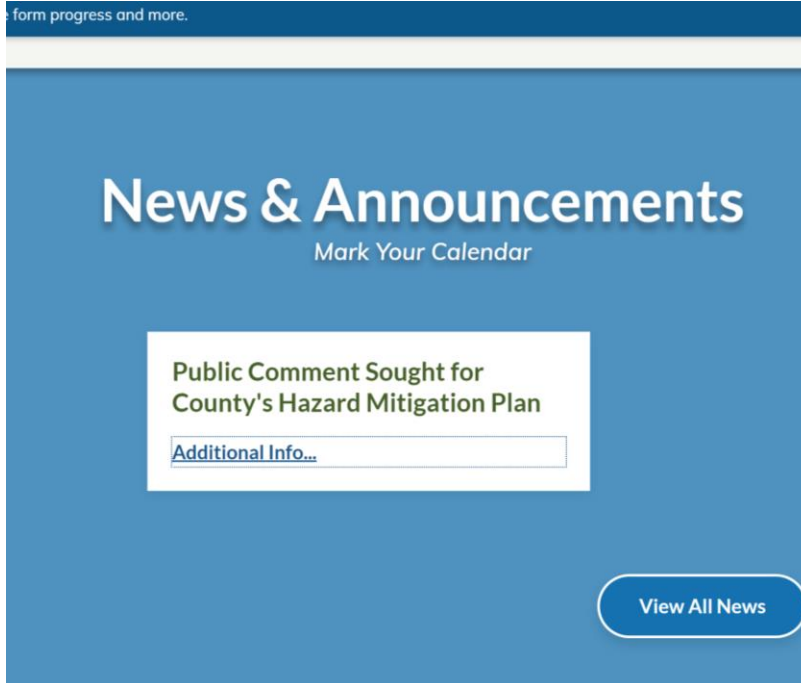
Wadena County MHMP News Release #2 Documentation of News Release Postings

COUNTY POSTINGS

1/9/23 Wadena County Facebook Page



1/9/23 Wadena County Website



LOCAL MEDIA POSTINGS

1/10/23, Wadena Pioneer Journal

NEWS | LOCAL | News reporting

Public comment sought for county's hazard mitigation plan

Planning for natural disasters minimizes the impact of events that can cause vast economic loss and personal hardship.



City of Wadena crews clearing storm sewers after heavy rain. Wadena Pioneer Journal file photo

By News Staff
January 10, 2023 08:00 AM

SHARE

We are part of The Trust Project.

WADENA — Wadena County has completed an updated draft of its Hazard Mitigation Plan and is now seeking public feedback, according to a Wadena County Sheriff's Office press release.

Like all Minnesota counties, Wadena County is vulnerable to a variety of potential natural disasters, such as tornadoes, windstorms, severe winter storms, flooding, drought, and extreme temperatures, which threaten the loss of life and property in the county. Planning for natural disasters minimizes the impact of these events which can cause vast economic loss and personal hardship.

All county residents, as well as other interested stakeholders — those in neighboring counties or working with affected agencies — are strongly encouraged to review and offer feedback on the interactive website, PDF of the draft plan, and proposed local mitigation actions. The review and comment period is open for a period of 15 days through January 23, 2023. The public can access the plan using the following links:

- [Wadena County HMP Website](#)
- [Mitigation Action Charts](#)
- [Public Comment Feedback Form](#)

The Wadena County HMP is a multi-jurisdictional plan that covers Wadena County, including the cities of Aldrich, Menahga, Nimrod, Sebek, Staples, Verndale, and Wadena. The Wadena County Hazard Mitigation Plan also incorporates the concerns and needs of townships, school districts, and other stakeholders participating in the plan.

Updating the plan has been under the direction of Wadena County Emergency Management in cooperation with U-Spatial at the University of Minnesota Duluth and representatives from county departments, city and township governments, school districts, and other key 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 improvement of roads and culverts that experience repetitive flooding; construction of safe rooms in areas where residents and visitors are vulnerable to tornadoes and severe storm events; burying power lines 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 public awareness and education campaigns to help people be prepared to take safe action before, during or following a hazard event.

Hazard mitigation planning helps Wadena 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. Updating the plan further allows Wadena 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.

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CITY POSTINGS

City of Aldrich

1/12/23 Hardcopy Posting

A printed copy of the news release was posted on the bulletin board at the Aldrich Post Office.

City of Menahga

1/19/23 Hardcopy Posting

A printed copy of the news release was posted at City Hall.

1/19/23 City of Menahga Website



City of Nimrod

1/9/23 Hardcopy Posting

A printed copy of the news release was posted at Nimrod City Hall.

City of Sebeka

1/9/23 City of Sebeka Website



1/9/23 City of Sebekia Facebook page

WADENA COUNTY SHERIFF
Richard E. Coon
January 9th, 2023
Public Comment Sought for County's Hazard Mitigation Plan

Wadena County has completed an updated draft of its Hazard Mitigation Plan (HMP) and is now seeking public feedback. Like all Minnesota counties, Wadena County is vulnerable to a variety of potential natural disasters, such as tornadoes, windstorms, severe winter storms, flooding, drought, and extreme temperatures, which threaten the loss of life and property in the county. Planning for natural disasters minimizes the impact of these events that can cause vast economic loss and personal hardship.

All county residents, as well as other interested stakeholders (those in neighboring counties or working with affected agencies) 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 13 days through January 23, 2023. The public can access the plan using the following links:

[Wadena County HMP Website](http://www.wadena.com/hmp) (<http://www.wadena.com/hmp>)
[Mitigation Actions Catalog](https://wadena-county.mn.us/mn-sub-arcgis.com/pages/mitigation-actions) (<https://wadena-county.mn.us/mn-sub-arcgis.com/pages/mitigation-actions>)
[Public Comment Feedback Form](http://www.wadena.com/hmp-feedback) (<http://www.wadena.com/hmp-feedback>)

The Wadena County HMP is a multi-jurisdictional plan that covers Wadena County, including the cities of Aldrich, Maranga, Fremont, Sebekia, Staples, Verndale, and Wadena. The Wadena County HMP also incorporates the concerns and needs of townships, school districts, and other stakeholders participating in the plan.

Update of the plan has been under direction of Wadena County Emergency Management in cooperation with U.S. Spatial at the University of Minnesota Duluth and representatives from county departments, city and township governments, school districts, and other key 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 improvement of roads and culverts that experience repetitive flooding; construction of safe rooms in areas where residents and visitors are vulnerable to tornadoes and severe storm events; burying power lines that may fall due to heavy snow, ice or wind storms; ensuring timely emergency communication to the public through warning sirens and mass notification systems; and conducting public awareness and education campaigns to help people be prepared to take safe action before, during, or following a hazard event.

Hazard mitigation planning helps Wadena 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. Updating the plan further allows Wadena 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. Wadena 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.

See more of Sebekia-City Hall on Facebook

Log In or Create new account

1/9/23 Hardcopy Posting

A printed copy of the news release was posted on the bulletin board at Sebekia City Hall.

City of Staples

1/10/23 City of Staples Website

City Hall
122 6th Street NE
Staples, MN 56479
218-894-2550

OFFICE HOURS:
8am to 4:30pm Mon-Fri
(except holidays)

Additional information can be found

Welcome to Staples!
News and Information

[PUBLIC COMMENT SOUGHT FOR WADENA COUNTY HAZARD MITIGATION PLAN](#)

[LICENSE IS NOW REQUIRED TO OPERATE MOBILE FOOD UNIT WITHIN CITY LIMITS](#)

1/12/23 Hardcopy Posting

A printed copy of the news release was posted on the Staples Police Department community bulletin board.

City of Verndale

1/11/23 Hardcopy Postings

Printed hardcopies of the news release were posted on the City Hall Bulletin Board, at the Post Office, and at Star Bank.

City of Wadena 1/9/23 City of Wadena website posting

The screenshot shows the City of Wadena website with a navigation bar at the top containing 'Home', 'About', 'City Government', 'Services', and 'I Want To...'. Below the navigation bar is a search bar and social media icons. The main content area features a heading 'Public Comment Sought for Wadena County's Hazard Mitigation Plan'. The text below the heading states: 'Wadena County has completed an updated draft of the of its Hazard Mitigation Plan (HMP) and is now seeking public feedback. Like all Minnesota counties, Wadena County is vulnerable to a variety of potential natural disasters, such as tornadoes, windstorms, severe winter storms, flooding, drought, and extreme temperatures, which threaten the loss of life and property in the county. Planning for natural disasters minimizes the impact of these events that can cause vast economic loss and personal hardship.' It also mentions that all county residents and other interested stakeholders are encouraged to review and offer feedback on the interactive website 'P2P' of the draft plan, with a review and comment period open from January 9 to January 23, 2023. Links are provided for the HMP Website, Mitigation Action Charts, and Public Comment Feedback Form. The footer of the page includes contact information for Deputy Tyler Wheeler, Wadena County Emergency Management Director, with a phone number and email address.

OTHER POSTINGS

1/19/23, Todd-Wadena Electric Cooperative Facebook

The screenshot shows a Facebook post from the 'Todd-Wadena Electric Cooperative' page, dated 53 minutes ago. The post text reads: 'Wadena County has completed an updated draft of the of its Hazard Mitigation Plan (HMP) and is now seeking public feedback. Like all Minnesota counties, Wadena County is vulnerable to a variety of potential natural disasters, such as tornadoes, windstorms, severe winter storms, flooding, drought, and extreme temperatures, which threaten the loss of life and property in the county. Planning for natural disasters minimizes the impact of these events that can cause vast economic loss and personal hardship. All county residents are encouraged to review and offer feedback. <https://wadena-county-hmp-umn.hub.arcgis.com/>' Below this is a comment from the 'Wadena County Sheriff's Office' dated January 9, which says: 'We need your help/input! Every so often, we must review our Hazard Mitigation Plan (HMP) to make sure we're ready to respond appropriately to a variety of hazards. We are in the phase of the plan now where we look for public input on the plan. The link below will take you to the official release, which will include links that allow you to view the documents. There is also contact information in the document to submit your comments. Thank you in advance for helping keep Wadena County safe and ready to respond!' At the bottom of the post, the website 'CO.WADENA.MN.US' and 'www.co.wadena.mn.us' are listed.

Appendix H – Mitigation Actions by Jurisdiction

CITY OF ALDRICH**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 all city residents to sign-up for the county's CodeRED emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city council can make occasional announcements to encourage residents to go to the county website to sign up. The city has a Facebook Page for local outreach. Established 12-2022.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and extended power outages.	Existing High 2023-2028	City Admin, City EM	Same as above. The city can seek to use city council meetings to provide public reminders on residents to be prepared for severe weather events and to go to the Wadena County Emergency Management website for more information if needed.	City
3	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish a water conservation ordinance and conduct outreach to residents to be aware of drought conditions and watering restrictions.	New Moderate 2023-2028	City Admin	The city will establish and enforce a water conservation ordinance and conduct outreach as per MN DNR guidelines during periods of severe drought.	City

CITY OF MENAGHA

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 all city residents to sign-up for the county's CodeRED emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city will use our city website to encourage residents to sign up for the CodeRED system.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and extended power outages.	Existing High 2023-2028	City Admin, City EM	The city has increased use of our website page to communicate with residents on emergency preparedness and will continue to do so.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Acquire backup generators for the city's lift stations and the water treatment plant.	New High 2023-2028	City Admin, City Public Works	The city will work to purchase generators as funding allows. FEMA HMA grant funding may be applied for if said generators are an eligible mitigation project.	City, FEMA HMA grant funding
4	Flooding	Local Planning & Regulations	Develop a floodplain ordinance to be in compliance with requirements of participation in the National Flood Insurance Program.	Existing Moderate 2023-2028	City Admin	The city is enrolled in the NFIP, but we do not have a floodplain ordinance on file. The MN DNR Floodplain Manager was contacted for assistance and has offered to help the city through the process of developing a floodplain ordinance if a past one cannot be found on file. If we do not expect any development in the mapped floodplain area, the MN DNR can provide a much simpler ordinance.	City
5	Wildfire	Natural Systems Protection	Evaluate and address wildfire mitigation such as creation of defensible space for the city.	New Moderate 2023-2028	City EM, City Public Works	The city will work with our Fire Chief and Public Works Director to evaluate how to address wildfire mitigation for the city, such as fuels reduction projects or creation of defensible space around homes and critical infrastructure.	City
6	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish a water conservation ordinance and conduct outreach to residents to be aware of drought conditions and watering restrictions.	New Moderate 2023-2028	City Admin	City Administration will establish and enforce a water conservation ordinance and conduct outreach as per MN DNR guidelines during periods of severe drought.	City

CITY OF NIMROD

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 all city residents to sign-up for the county's CodeRED emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	We will seek to post flyers during the year at City Hall to remind residents to sign up for the county's CodeRED system. We do not have a city website or Facebook page.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and extended power outages.	Existing High 2023-2028	City Admin, City EM	We can make occasional reminder announcements at City Council meetings to encourage residents to be prepared for severe storm events and periods of extreme cold.	City
3	Flooding	Local Planning & Regulations	Work with the MN DNR to review the city's mapped flood risk area, enroll in the NFIP, and develop a floodplain ordinance.	Existing Moderate 2023-2028	City Admin in coord with State NFIP Coordinator	The city will work with the MN DNR state floodplain manager to review current flood risk for the city, how to get enrolled in the NFIP, and how to develop a floodplain ordinance.	City
4	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish a water conservation ordinance and conduct outreach to residents to be aware of drought conditions and watering restrictions.	New Moderate 2023-2028	City Admin	City Administration will establish and enforce a water conservation ordinance and conduct outreach as per MN DNR guidelines during periods of severe drought.	City

CITY OF SEBEKA

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 all city residents to sign-up for the county's CodeRED emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	We do not do this currently, but we will have a link on the city web page to sign up for the county alert system. The city does not have our own system.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and extended power outages.	Existing High 2023-2028	City Admin, City EM	We use our city website and Facebook page. We also post information on bulletin boards at the Community First Bank, Review Messenger, and at the Post Office. We also make announcements at city council meetings to the public during severe weather season. Staff goes to the campground and informs campers when severe weather is approaching.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Acquire a portable generator for our City Hall and Fire Hall, which is our designated community mass care shelter.	New High 2023-2028	City Admin, City EM	City Admin and our Fire Chief/City EM will seek to purchase said	City
4	Severe Summer Storms	Structure & Infrastructure Projects	Construct a storm shelter or tornado safe room at the local campground and on the north side of the city.	New Moderate 2023-2028	City Admin, City EM, Public Works	City Admin will work with our City EM and city Public Works Director to look at the feasibility to construct storm shelters or tornado safe rooms for these locations. FEMA HMA grant funding may be applied for in the future if we have an eligible project.	City, FEMA HMA grant funding
5	Flooding	Structure & Infrastructure Projects	Address the need for additional storm sewer upgrades and purchase of additional pumps in the event of flooding.	Existing Moderate 2023-2028	City Public Works	This is ongoing work by our city Public Works Department. The department prioritizes and plans for stormwater infrastructure upgrades as necessary.	City

CITY OF SEBEKA**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
6	Flooding	Local Planning & Regulations	Enforce city ordinances that reduce the impacts of high rain events and risk of flooding to areas of new development.	Existing Moderate 2023-2028	City Admin	The city of Aldrich enforces requirements of the NFIP through Ordinance 95-01, Floodplain Ordinance in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city. We also have a sump pump ordinance in place to mitigate against overload of the city's I&I system.	City
7	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish a water conservation ordinance and conduct outreach to residents to be aware of drought conditions and watering restrictions.	New Moderate 2023-2028	City Admin	City Administration will establish and enforce a water conservation ordinance and conduct outreach as per MN DNR guidelines during periods of severe drought.	City

CITY OF STAPLES

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 all city residents to sign-up for the county's CodeRED emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	We use our city website, city and Police Department Facebook pages, city newsletter and National Night Out to encourage residents to sign up for the emergency notification system.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and extended power outages.	Existing High 2023-2028	City Admin, City EM	We use our city website, Facebook pages, our city newsletter, and the annual National Night Out event to share emergency preparedness information with residents.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Acquire a generator to provide backup power to the Community Center, which is designated for emergency sheltering.	New High 2023-2028	City Admin, City EM	The city plans to purchase a generator for the Community Center as funding allows.	City
4	Severe Winter & Summer Storms	Structure & Infrastructure Projects	Convert overhead powerlines to underground where feasible.	Existing Moderate 2023-2028	City of Staples Utility & Todd-Wadena Electric Cooperative	The City of Staples Utility and the Todd-Wadena Electric Coop will work to convert powerlines from OH to UG where deemed necessary and feasible. Future FEMA HMA grant funding may be applied for to support these efforts.	City, FEMA HMA grant funding
5	Severe Summer Storms	Structure & Infrastructure Projects	Complete construction of storm shelter for the city campground.	In-Progress High 2023	City Admin, City EM	Campground Storm Shelter grant has been received with plans for construction in 2023.	City, FEMA HMA grant award
6	Flooding	Local Planning & Regulations	Enforce city ordinances that reduce the impacts of high rain events and risk of flooding to areas of new development.	Existing Moderate 2023-2028	City Admin	The city of Staples enforces requirements of the NFIP through Chapter 105, Floodplain Management in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city.	City
7	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish a water conservation ordinance and conduct outreach to residents to be aware of drought conditions and watering restrictions.	New Moderate 2023-2028	City Admin	City Administration will establish and enforce a water conservation ordinance and conduct outreach as per MN DNR guidelines during periods of severe drought.	City

CITY OF VERNDALE

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 all city residents to sign-up for the county's CodeRED emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city has not done this to date but we can promote sign up on the city website, our city newsletter, and the Public Works and Police Dept. Facebook pages.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and extended power outages.	Existing High 2023-2028	City Admin, City EM	We will seek to share information from Wadena County Emergency Management and the National Weather Service on our communication platforms noted above.	City
3	Severe Summer Storms	Structure & Infrastructure Projects	Construct a storm shelter or tornado safe room.	New High 2023-2028	City Admin, City EM, City Public Works	This is a project the city will work to develop with guidance from Wadena County Emergency Management. FEMA HMA grant funding may be sought if we pursue construction of a tornado safe room	City, FEMA HMA grant funding
4	Flooding	Local Planning & Regulations	Work with the MN DNR to get the city enrolled in the National Flood Insurance Program and develop a floodplain ordinance.	New Moderate 2023-2028	City Admin	The city is working with the MN DNR Floodplain Manager to learn about the city's current floodplain mapping, how to participate in the NFIP and how to develop a floodplain ordinance. Although the city does not participate in the NFIP, considerations for regulating development in potential flood prone areas is addressed in Chapter XV – Land Usage in the city's code of ordinances.	City
5	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish a water conservation ordinance and conduct outreach to residents to be aware of drought conditions and watering restrictions.	New Moderate 2023-2028	City Admin	City Administration will establish and enforce a water conservation ordinance and conduct outreach as per MN DNR guidelines during periods of severe drought.	City

CITY OF WADENA

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 all city residents to sign-up for the county's CodeRED emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	We promote the Wadena County CodeRed System as most of the city is within Wadena County. We encourage residents to sign up by having a link on the homepage of website that connects to the registration site. Residents in the SW quadrant of the city could sign up for Otter Tail County Smart911 alerts if they wished to do so.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and extended power outages.	Existing High 2023-2028	City Admin, City EM	Our city participates 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.	City, FEMA HMA Grant funding
3	Severe Summer Storms	Structure & Infrastructure Projects	Address the need for additional storm shelters for mobile home parks within the city.	Existing High 2023-2028	City Admin, City EM in coord with WCEM	There are 2 mobile home parks in the city and one on the edge. With the railroad, at times it is difficult to get to the one storm shelter/safe room in a timely manner. The city will seek to work with the mobile home park operators and Wadena County Emergency Management to assess and address construction of storm shelters or tornado safe rooms to serve these areas. The city may seek to apply for FEMA HMA grant funding if pursuing construction of tornado safe rooms.	City, FEMA HMA Grant funding
4	Flooding	Local Planning & Regulations	Enforce city ordinances that reduce the impacts of high rain events and risk of flooding to areas of new development.	Existing Moderate 2023-2028	City Admin / Planning & Zoning Dept.	The city of Wadena enforces requirements of the NFIP through Chapter 152, Zoning, Section 152.32 Floodplain District in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city.	City

CITY OF WADENA**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
5	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish a water conservation ordinance and conduct outreach to residents to be aware of drought conditions and watering restrictions.	New Moderate 2023-2028	City Admin / Planning & Zoning Dept.	City Administration will establish and enforce a water conservation ordinance and conduct outreach as per MN DNR guidelines during periods of severe drought.	City