

WRIGHT COUNTY MINNESOTA



2023

Hazard Mitigation Plan



U-SPATIAL

UNIVERSITY OF MINNESOTA DULUTH

Driven to Discover

WRIGHT COUNTY MINNESOTA

HAZARD MITIGATION PLAN

Seth Hansen
Director of Emergency Management
Wright County Sheriff's Office
3800 Braddock Avenue NE
Buffalo, MN 55313

763-684-2371

Prepared By:

U-Spatial
Research Computing | Office of the Vice President for Research
1208 Kirby Drive
University of Minnesota Duluth
Duluth, MN 55812

218-726-7438

Contents

Section 1 – Introduction	2
1.1 Introduction	2
1.1.1 Scope.....	3
1.1.2 Hazard Mitigation Definition	3
1.2 State Administration of Mitigation Grants	4
Section 2 – Public Planning Process	5
2.1 Planning Team Information.....	5
2.2 Review of Existing Plans, Capabilities & Vulnerabilities	6
2.3 Planning Process Timeline and Steps	7
2.3.1 Wright County Stakeholder Coordination.....	7
2.3.2 Overview of Jurisdictional Participation.....	8
Section 3 – Risk Assessment and Vulnerability Analysis	10
3.1 Hazard Identification and Prioritization	10
3.1.1 Hazard Prioritization.....	10
3.1.2 FEMA- and Minnesota-Declared Disasters and Assistance.....	11
3.2 Population Vulnerability	12
3.3 Climate Change	12
3.4 Jurisdictional Change in Risk or Vulnerability Assessment	13
3.4.1 Jurisdictional Responses	14
3.4.2 Future Development.....	23
Section 4 – Hazards	27
4.1 Flooding	27
4.1.1 Probability of Occurrence.....	27
4.1.2 Vulnerability	28
4.1.3 Program Gaps and Deficiencies.....	30
4.2 Windstorms.....	30
4.2.1 Probability of Occurrence.....	30
4.2.2 Vulnerability	30
4.2.3 Program Gaps and Deficiencies.....	31
4.3 Tornadoes.....	32
4.3.1 Probability of Occurrence.....	32
4.3.2 Vulnerability	33
4.3.3 Program Gaps and Deficiencies.....	34
4.4 Hail.....	34

4.4.1	Probability of Occurrence.....	35
4.4.2	Vulnerability.....	35
4.4.3	Program Gaps and Deficiencies.....	36
4.5	Winter Storms.....	36
4.5.2	Probability of Occurrence.....	37
4.5.3	Vulnerability.....	37
4.5.4	Program Gaps and Deficiencies.....	37
4.6	Extreme Cold.....	38
4.6.1	Probability of Occurrence.....	39
4.6.2	Vulnerability.....	39
4.6.3	Program Gaps and Deficiencies.....	39
4.7	Extreme Heat.....	40
4.7.1	Probability of Occurrence.....	40
4.7.1	Vulnerability.....	41
4.7.2	Program Gaps and Deficiencies.....	41
4.8	Drought.....	42
4.8.1	Probability of Occurrence.....	42
4.8.2	Vulnerability.....	43
4.8.3	Program Gaps and Deficiencies.....	43
4.9	Dam Failure.....	43
4.9.1	Probability of Occurrence.....	44
4.9.2	Vulnerability.....	45
4.9.3	Program Gaps and Deficiencies.....	45
Section 5 – Mitigation Strategy		46
5.1	Community Capability Assessments.....	46
5.1.1	National Flood Insurance Program (NFIP).....	46
5.1.2	Plans and Ordinances.....	50
5.1.3	Plans and Programs in Place to Address Natural Hazards.....	50
5.2	Mitigation Goals.....	54
5.3	Mitigation Action and Project Strategies.....	55
Section 6 – Plan Maintenance		66
6.1	Monitoring, Evaluation, and Updating the Plan.....	66
6.2	Implementation.....	67
6.3	Continued Public Involvement.....	68
APPENDICES		
Appendix A – References		
Appendix B – Adopting Resolutions		
Appendix C – Local Mitigation Survey Report		
Appendix D – Plans & Programs in Place		

Appendix E – Past Mitigation Action Review Status Report

Appendix F – Planning Team Meetings

Appendix G – Public Outreach & Engagement Documentation

Appendix H – Mitigation Actions by Jurisdiction

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).

Wright County is vulnerable to a variety of natural hazards that threaten the loss of life and property in Wright 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 Wright 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:



[Wright 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 Wright County Emergency Management to facilitate an update to the 2015 Wright 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 Wright 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 Wright County, including the cities of Albertville, Annandale, Buffalo, Clearwater, Cokato, Delano, Hanover, Howard Lake, Maple Lake, Monticello, Montrose, Otsego, Rockford, South Haven, St. Michael, and Waverly. The Wright 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 Wright County after final approval by FEMA (see Appendix B).

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

- Include more recent data documenting the critical infrastructure and hazards faced by Wright 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 Wright 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 Wright County HMP planning team is headed by the Wright County emergency manager, who is the primary point of contact. Members of the Wright 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 Wright 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
Seth Hansen	Wright County Sheriff's Office	Emergency Management Director
Richard Ward	Wright County Sheriff's Office	Deputy Emergency Management Director
Lee Kelly	Wright County	County Administrator
Tim Dahl	Wright County	Risk Manager
Marc Mattice	Wright County Parks & Recreation	Director
Barry Rhineberger	Wright County Planning & Zoning	Administrator
Sarah Grosshuesch	Wright County Public Health Department	PH Director
Jami Goodrum	Wright County Health and Human Services Department	HHS Director
Chad Hausmann	Wright County Highway Department	Assistant County Engineer
Adam Nafstad	City of Albertville	City Administrator
Eric Bullen	City of Albertville Fire Department	Fire Chief
Pete Standafer	City of Annandale Police Department	Chief of Police
Pat Budke	City of Buffalo Police Department	Chief of Police
John Harnois	City of Buffalo Fire Department	Fire Chief
Annita Smythe	City of Clearwater	City Administrator
Brad Potter	City of Cokato	City Administrator
Phil Kern	City of Delano	City Administrator
Shawn Louwagie	City of Delano	City Engineer
Robert VanLith	City of Delano Fire Department	City Emergency Manager
Jennifer Nash	City of Hanover	City Administrator
Nick Haggenmiller	City of Howard Lake	City Administrator
Adam Flaherty	City of Otsego	City Administrator

Name	Agency/Organization	Participant Title
Sabrina Hille	City of Otsego	Assistant City Administrator
Melissa Stenson	City of South Haven	City Clerk
Steve Bot	City of St. Michael	City Administrator
Steven Hosch	City of St. Michael Fire Department	Fire Chief
Rachel Leonard	City of Monticello	City Administrator
Dan Klein	City of Monticello Fire Department	Emergency Manager
Jessica Bonniwell	City of Montrose	City Administrator
Dean Mahlstedt	Cokato Township	Supervisor
Kevin Yonak	Monticello Township	Supervisor
Karen McDougall	Rockford Township	Supervisor
Greg Eckblad	Rockford Township	Supervisor
Gloria Janikula	Woodland Township	Clerk
Gene Janikula	Woodland Township	Chairman of the Board
Dan Nadeau	Wright Soil and Water Conservation District	Senior Resource Conservationist
Julie Reberg	USDA Natural Resource Conservation Service	District Conservationist
Kyle Breffle	Sherburne County Sheriff's Office	Emergency Management Director
Derek Baas	Sherburne County Sheriff's Office	Deputy Emergency Management Director
Eric Waage	Hennepin County Emergency Management	Emergency Management Director
Stephanie Johnson	Meeker County Sheriff's Office	Emergency Management Director

2.2 Review of Existing Plans, Capabilities & Vulnerabilities

Wright 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 Wright County HMP, U-Spatial consultants reviewed and incorporated a variety of planning documents that direct community development and influence land use decisions for Wright County and its jurisdictions. In addition, U-Spatial consultants worked closely with the Wright 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 Wright 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 Wright County to support mitigation.

Local Mitigation Surveys: As part of Wright 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 Wright County LMS report, see Appendix C).

2.3 Planning Process Timeline and Steps

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

2.3.1 WRIGHT COUNTY STAKEHOLDER COORDINATION

Two planning team meetings took place via Zoom video conference hosted by U-Spatial. Meeting participants included representatives from Wright 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, Wright 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. Wright County HMP website, hosted by U-Spatial, and the feedback and mitigation action ideas survey will remain available through the five-year planning period to foster public engagement.

Table 2 documents dates of Hazard Mitigation update meetings and public outreach; The public feedback period for the draft plan was open from 1/24/23 to 2/7/23, for a period of 15 days. Appendix G provides documentation of the public outreach for feedback on the draft plan by Wright County and jurisdictions.

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

Event	Date	Appendix
Kickoff Webinar	7/14/21	Appendix F, Planning Team Meetings
News Release #1	9/14/21	Appendix G, Public Outreach & Engagement Documentation
Planning Team Meeting #1	1/24/22	Appendix F, Planning Team Meetings
Planning Team Meeting #2	10/25/22	Appendix F, Planning Team Meetings
News Release #2	1/24/23	Appendix G, Public Outreach & Engagement Documentation

At the close of the public outreach period, the U-Spatial consultants worked with the Wright 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, Wright County and the U-Spatial team worked to engage representatives from Wright 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 Wright 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 Wright 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 Wright 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 Wright 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. Wright 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 Wright 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
Wright County (145,387)	X	X	X	X	X	X
City of Albertville (8,037)	X	X	X	X	X	X
City of Annandale (3,332)	X	X	X			X
City of Buffalo (16,437)	X	X	X	X	X	X
City of Clearwater (960)	X	X	X	X		X
City of Cokato (1,324)	X	X	X	X		X
City of Delano (6,497)	X	X	X			
City of Hanover (2,966)	X	X	X	X		X
City of Howard Lake (1,934)	X		X	X	X	X
City of Maple Lake (2,143)	X			X		X
City of Monticello (14,666)	X	X	X	X	X	
City of Montrose (3,840)	X		X	X	X	X
City of Otsego (21,736)	X	X	X	X		X
City of Rockford (3,359)	X		X	X		X
City of South Haven (166)	X	X		X	X	X
City of St. Michael (19,002)	X	X	X	X		X
City of Waverly (2,122)	X		X	X		
Neighboring Jurisdictions:						
Sherburne County		X			X	
Anoka County						
Hennepin County		X			X	
Carver County						
McLeod County						
Meeker County		X			X	
Stearns 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 Wright 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).

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

Table 4. Prioritization of hazards for 2023 Wright County HMP Update

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

3.1.2 FEMA- AND MINNESOTA-DECLARED DISASTERS AND ASSISTANCE

Another historical perspective is derived from FEMA-declared disasters. Thirteen major disasters and four emergency declarations in Wright County have been made between 1957 and December 2022; these can be [viewed on a map](#) on the Wright 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). Wright 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 Wright County funded by a hazard mitigation assistance program.

Table 5. Historical hazard mitigation funding awarded in Wright County

Project Identifier	Sub-Grantee	Project Type	Federal Share (%75)
DR-0993-0006-R	Rockford	Acquisition of Private Real Property (Structures and Land) - Riverine	\$503,956
DR-1419-0023-R	Delano	Utility Protective Measures (Electric, Gas, etc.)	\$764,456
DR-1419-0025-R	Delano	Water and Sanitary Sewer System Protective Measures	\$35,647
DR-4113-0003-P	Wright (County)	Local Multihazard Mitigation Plan	\$21,180
DR-1333-0014-R	Cokato	Water and Sanitary Sewer System Protective Measures	\$116,826
DR-1116-0011-R	Minnesota Department of transportation- Metro Dist	Feasibility, Engineering and Design Studies	\$22,026
PDMC-PL-05-MN-2007-001	Wright County Emergency Management	Local Multihazard Mitigation Plan	\$24,750

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 Wright 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 Wright 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, Wright 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.

Wright County

Flooding: County residents, both in and outside of corporate limits are susceptible to flood hazard in numerous locations, specifically on lakes and waterbodies associated with the North Fork Crow River and Clearwater River. Local roads and streets can be heavily impacted during flood events.

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

Windstorms, Tornadoes: Wright County has two county-owned campgrounds that offer RV and tent camping (Collinwood Regional Park and Campground and Schroeder Regional Park and Campground). Tent campers are always more vulnerable to high wind and thunderstorm events. Both campgrounds have modern shower and restroom facilities that can be used for temporary shelter for campers if needed.

Overhead electrical lines throughout the county are also susceptible to high wind and tornado events that can bring down trees and branches on power lines.

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.

In the past 3 years during periods of extreme cold two cities (Delano and Montrose) experienced loss of natural gas service. This has led to a large response to get to homeowners for access, get them heat, and to get systems re-ignited.

Wildfire, Drought: Wright County has a high agricultural presence on the west side of the county and a very suburban area in the northeast and east areas. Drought effects the ag industry as well as having an issue with the wildland urban interface. Approximately 5 years ago wildfire destroyed

multiple homes in the Otsego area because of drought-like conditions combined with high winds. However, wildfire itself is considered a low risk for Wright County.

City of Albertville

Flooding: Portions of the “Albertville Villas” and areas along 57th St NE are very prone to local flooding with heavy rain events. The city storm sewer infrastructure in these older areas is not able to keep up with these events. During a recent storm our wastewater plant was overrun, and storm water had to be diverted into two holding ponds. Some of the areas prone to flooding are near our senior citizen townhome developments.

Winter Storms, Tornadoes, Windstorms: Much of the electrical power in the older part of Albertville is all carried by overhead power lines and electrical poles. Many of these poles are only being replaced during road construction projects, and not run under ground. Winter storms, tornadoes, and windstorms can all affect overhead power lines.

City of Annandale

Flooding, Rain: The city has I&I in our sanitary sewer system. During periods of heavy rain, the sanitary sewer collection system could get overloaded.

Ice Storms, Blizzards: Much of the city’s 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 with approximately 300 units. They have a storm shelter, but the units are susceptible to wind damage.

Many homes in new developments 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.

In the past we have experienced frozen water services from extended extreme cold.

Lighting: The city has 10 lift stations that that pump sanitary sewer to the treatment facility. If any of these are damaged by lightning or storm, the city would have issues with backups with sanitary sewer service.

City of Buffalo

Flooding: We have homes along Lake Pulaski that require sand bagging when the lake level rises. Lake Pulaski requires pumping to keep the lake level controlled to prevent flooding. This pumping is only allowed when Buffalo Lake is at a low enough level to accept water from Lake Pulaski.

Ice Storms, Blizzards: 15% of the city owned electric infrastructure is overhead and a good portion of the city is provided power by an electrical coop with overhead power. These lines are prone to failure in ice and windstorms.

Windstorms, Tornadoes: Overhead power lines are prone to damage from wind and falling trees.

We have 2 trailer parks that do not have storm shelters. Residents need to find shelter in other locations during severe storms.

Our city is expanding, and we have a couple of areas that have poor siren coverage. Sirens need to be installed in those areas.

Extreme Cold: We have several nursing homes and assisted living facilities that have a large population of senior citizens that can be vulnerable during extreme cold events. We have had a major gas outage in the past which makes this a concern.

Drought: The aquifer that the city of Buffalo gets its water from is limited. The city needs to limit water usage during dry years so the water levels in the aquifer are maintained at an acceptable level.

City of Clearwater

Winter Storms: Poor road conditions due to weather can cause vehicle crashes. At times, these have included vehicles hitting electric poles or fire hydrants.

The Clearwater Estates neighborhood has private water/sewer lines which are not at standard depths that the city recommends. This causes freezing of some lines in the winter. Since they are connected to city mains, when they freeze, it can cause backups or broken pipes at the city main.

Winter storms can cause power outages, which results in closures at City Hall. Our server system and internet system do not have a generator to keep them operational. Power outages can also affect water and sewer systems that do not have a generator or require a manual switchover to the generators. Power outages impact heat and water resources for residents and businesses.

Tornadoes, High Winds: Our newer housing development south of I-94 requires an additional storm siren. Residents have asked for this, but funding has been an issue. The siren north of I-94 in the older area of town is owned/maintained by Xcel Energy.

We have a lot of overhead electric lines in the city. Storms create regular risk for power outages. These can impact water/sewer operations if they are not resolved quickly.

There are a lot of older trees in city limits, particularly the areas north of I-94. These are at risk to come down in storms/high winds.

Flooding: Storms and spring thaws cause both street flooding and some residential flooding in areas without storm sewers. Our public works staff have had to pump water from some neighborhoods to prevent flooding of homes/basements.

Our city has two rivers that run through it, so river flooding is a moderate concern, however, most buildings are built at a height to reduce this risk.

City of Cokato

Tornadoes: Mobile home park residents in two mobile home park shelters are more vulnerable to tornado 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.

Flooding: The city is taking into account possible flooding near Sucker Creek that runs through the community.

City of Delano

Flooding: The city's earthen levee system consists primarily of an uncertified levy that was constructed in 1969. The city has acted to replace and/or fortify a number of areas that have shown signs of weakness in past flooding events, but the majority of original construction remains. The city continues to monitor, evaluate, and maintain the levee to maintain its effectiveness.

There are residential areas along the Crow River, particularly along River Street south of downtown, that are threatened with potential flooding from river floods.

A significant portion of the city's downtown is located just above the 100-year floodplain elevation. In 2015 the city constructed a removable floodwall system to provide additional protection for downtown. The floodwall has been deployed on at least two occasions in preparation for potential flooding, but to date hasn't been fully tested in action.

The city has a number of neighborhoods that were historically constructed to an engineering standard less than current design would dictate. As a result, storm water capacity and emergency overflow designs are susceptible to flash flooding from extreme rain events. In these situations, failure of critical infrastructure due to events exceeding design limits can cause property and infrastructure damage.

Windstorms, Tornadoes: Much of the city is heavily forested with mature trees within neighborhoods, parks, and developed areas. The threat of heavy windstorms and tornadoes – in addition to the potential direct impacts – also present the potential for indirect damage due to falling trees.

Hail, Lightning: Similar to windstorms and tornadoes, the potential of spring/summer storms to create hail and lightning impacts remains an emergency concern. With growth and the addition of new homes and businesses, the potential community impacts from these potential natural disasters increases.

City of Hanover

Flooding: A portion of the city along Crow River and the large wetland complex in the middle of the city are covered under FEMA 100-year and 500-year floodplains. There are several existing buildings which are within the FEMA 100-year floodplain and are at risk of flooding during larger storm events. Any sanitary infrastructure within the 100-year floodplain is also susceptible to flooding.

There are also three stormwater structures located within the FEMA floodplain, resulting in flooding problems at Mill Pond Trail during high water level conditions. The 48” culvert and weir under CSAH 23 connects the wetland complex in the city with the Crow River and is within the FEMA floodplain and may be susceptible to flooding/additional maintenance to maintain flow between the two waterbodies.

There were several areas identified in the city’s Comprehensive Water Resource Management Plan (CWRMP) that were noted for flooding issues or concerns:

- High water levels occur in a landlocked wetland near Jonquil Lane with the potential of flooding adjacent properties.
- The Quail Pass development is located within a landlocked basin that will need an outlet when additional development occurs or may cause flooding issues.
- The Hilltop Bar Ravine has flooding and ravine erosion concerns due to stormwater back up issues.
- Repeated spring flooding has been identified on a property near the intersection of River Road NE and 12th Street.
- Several other sub-watersheds/wetlands are identified as landlocked with the potential for flooding risks.

The existing bridge over the Crow River in the city may be vulnerable to increased flooding risk and should be monitored in the future for potential vulnerabilities.

Windstorms/Tornadoes: Our city fire chief notes an event from a few years back where overhead power lines were damaged in the area and brought down the power grid in the area for some time. Many overhead lines still exist in Hanover which leaves the community susceptible to additional damage and handicap with emergency response and recovery times due to likelihood of loss of power.

City of Howard Lake

Flooding: The city has three lakes, numerous & large wetland areas, and about two dozen storm ponds. Flooding has and will occur. When it does, properties – including public parks, lift stations and related infrastructure – is susceptible to damage.

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: High rate of overhead power lines, old/established trees make for vulnerabilities. An estimated 65% of our housing stock predates the adoption of the UBC Building Code.

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, frozen culverts that cause localized flooding.

Drought: The extended heat and drought of 2021 further exposed threats to our water system. The city currently has enough water capacity for about 1-day reserves; best practice suggest much more. The 2021 drought stressed our water system. Need new water treatment plant and water storage/tower.

City of Monticello

Flooding: The city currently has a few areas of the right-of-way that are within the 100- and 500-year floodplain. Within this right-of-way there is utility infrastructure including sanitary sewer, storm sewer, and watermain systems. If flooding caused water to enter the cities sanitary sewer system, a lift station and the wastewater treatment facility could be impacted which could cause flooding into households or untreated waste could be discharged to the river. The roadway systems could also become flooded causing the need for traffic to be re-routed. In addition, River Terrace Park and Campground is right on the river and quite susceptible to flooding.

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. These down trees and branches would also pose a risk to the transportation networks ability to move people throughout the city.

A large blizzard with significant amounts of snowfall could cause delays in clearing the roadways resulting in delays for utility repair companies or emergency services. The loss of power could be impactful the city's utility infrastructure which would require the city to utilize standby generators to operate the utility system.

Windstorms, Tornadoes: 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 windstorms and tornadoes that may bring down trees and branches. Downed trees and branches would also pose a risk to the transportation networks ability to move people throughout the city. The loss of power could impact the city's utility infrastructure which would require the city to utilize standby generators to operate the utility system.

City of Montrose

Winter Storms, Extreme Cold: All of the residents are susceptible to the extreme cold – there have been a few times in the past five years when the power has gone out during extreme cold events. We also have a lot of elderly and lower-income residents who are even more susceptible to the extreme cold and winter weather.

The city had three broken water main lines this past winter from the extreme cold and temperature fluctuations.

Tornadoes, Summer Storms: We have 2 mobile home parks within town – one does have a storm shelter, but we have heard it is not a very sound building itself. Their trailer homes are vulnerable to high wind and tornado events.

We only have two emergency sirens in town which does not service the northwest side of town as well as should. The city should probably install another outdoor warning siren in the northwest part of town as well as the far southern part if it starts to develop.

We also have some homes that are built slab-on-grade with no basements. These homes do have a “strong room”, but big storms are still a concern.

Drought: During the summer of 2021, the city experienced an extreme drought situation which caused our municipal water reserves to be drained to an alarming level. This type of ongoing situation would perhaps cause us to not be able to provide water to community residents.

Ice Storms, Hail: The city municipal buildings are very old and vulnerable to ice and hail storm damage. Most of the power lines in town are still above-ground and vulnerable to being brought down with a heavy ice storm, which would also cut the power to residents.

Flooding: We have many catch basins that were not repaired correctly in the past and have issues with them eroding each time we get a lot of precipitation. Since we had drought weather in 2021, this was not as big of an issue, but weather patterns change often.

Lightning: We have had lift stations be damaged by lightning storms multiple times and had to make repairs.

City of Otsego

Flooding: CSAH 36 east of TH 101 is vulnerable to seasonal flooding with the spring thaw or extended heavy rain periods. The flooding likely causes shortened life expectancies for the roadway, but mostly causes issues with primary access to residential neighborhoods in the southeast corner of the city.

Ice Storms, Blizzards: Portions of the city are serviced by 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: The city has one mobile home park and one seasonal RV campground where residents and visitors would be more vulnerable to high wind and tornado events.

Power loss during these events risk effectiveness of the city water and wastewater systems.

Access to city services sites can be obstructed for operations staff to respond to emergencies including equipment failures.

Communication antennas can be destroyed, impeded, or knocked down to disrupt information technology assets such as phones and internet and eliminates remote monitoring and equipment capabilities.

Certain homes in new developments 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.

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

Drought: Water production and supply well operation is strained during drought events to meet customer demands. Loss of equipment because of extreme operation is elevated.

Extreme Heat: Various lift stations and well control panels have maximum temperature stipulations with reliance on an in-panel AC unit. In event of failure can render site in operable.

Energy grids are susceptible to extreme heat. Loss of power can result for 9 Lift Stations, 1 Water Pressure Control Station, 2 Public Water Supply Wells and 4 Water Treatment. These locations are susceptible to power loss with no automatic backup power. Fire protection, water system pressures and wastewater conveyance are risked during outages.

City of Rockford

Flooding: A significant portion of downtown is within a mapped floodplain and the existing earthen dam is not a certified levee. The sanitary and water systems in these areas are susceptible to the impacts flooding may cause as well.

Winter Storms: The majority of the Rockford downtown areas has aging overhead power lines which would be susceptible to damage from winter storms.

Tornadoes: The majority of the Rockford downtown areas has aging overhead power lines which would be susceptible to damage from tornadoes.

Rockford's water storage is all overhead storage with no surface storage. If a significant tornado were to hit the city it could impact these storage reservoirs.

Lightning: Lightning has previously caused damage to the electrical components at the Public Works Facility and wastewater treatment facilities which could happen again.

City of St. Michael

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

We also have lots of older homes with mature trees that are at risk of being impacted by high wind events.

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

City of Waverly

Flooding: The city of Waverly previously had a lake sewer system that was vulnerable to high rain events and flooding, causing the sewer system to fail and cause back up to residences. The city has completed a water and gravity sewer project around the lake improving the system. Due to the location of the lake to residences, the city is always vulnerable to flooding with extreme rain events.

Windstorms, Tornadoes: The cabins and seasonal residences around the lake are at risk during tornado events. Many of the seasonal cabins have been converted to full-time residences, however, the potential for storm damage to residences and possible mudslides are a concern.

Extreme Cold: Periods of extreme cold can cause the city to experience water main breaks. This is a concern of the city along with extreme ice storms that are difficult to manage with heavy equipment. It is also concerning that some residents do not have proper heating systems and may be susceptible to fire hazard or malfunction of their main heat source in extremely cold weather.

3.4.2 FUTURE DEVELOPMENT

Because Wright County is vulnerable to a variety of natural hazards, Wright County government—in partnership with the state government—must make a commitment to prepare for the management of these events. Wright 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 Wright 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.

Wright County

Wright County is one of the fastest growing counties in the state of Minnesota. Within the last 5 years the county has been experiencing a very large population growth. This growth will increase the cost of damage due to a tornado, wind, or hail events. With an increase in population and construction of more homes and commercial properties, we have also witnessed more stormwater discharging to our stormwater system. We feel this is due to more impermeable surface which has increased stormwater runoff and the amount of precipitation seems to have increased per rain event.

Wright County is also experiencing a large growth of aging residents. This adds to the concern of residents that will need assistance during a disaster.

City of Albertville

Residential, commercial, and industrial construction in Albertville is at an all-time high. A 70-home residential neighborhood is underway, and a 180-unit multi-family development will be breaking ground in summer 2022 as well as several large industrial and commercial buildings that are currently being constructed.

We have both an assisted living facility, and two large concentrations of senior citizen townhouse neighborhoods in the city.

With an increase in population and the construction of more homes and commercial properties, we have also witnessed more stormwater discharging to our stormwater system.

City of Annandale

Since 2017 the city has constructed 77 homes, which increases the cost of damage due to tornado, wind or hail. We have also seen an increase of slab-on-grade construction, which leaves some residents more vulnerable to wind events without a basement to take cover in.

City of Buffalo

Buffalo is a growing community and we have seen a large population growth. This will cause an increase in cost damage due to large storms. The population growth has caused larger flows in both sanitary and storm water discharge. We have had an increase in assisted care facilities. These facilities require more resources during emergency events.

City of Clearwater

Recent population growth along with commercial growth has increased our vulnerability. We have a larger number of heavy vehicles/semi-trucks on the road due to commercial transportation businesses, which increases the road hazards from any weather-related events.

We have also been building about 15 new homes per year, plus a new apartment building. Each new structure creates a new opportunity for damage from tornadoes/wind/ice/hail.

Our neighborhood closest to the Mississippi River has a lot of seniors and is more vulnerable to flooding than other areas. Because much of the infrastructure there is private/HOA, the city has concerns about its age and level of maintenance.

City of Delano

The city continues to see increased occurrences of flooding due to external circumstances and more frequent high intensity rain events. New development is also increasing, but developments are using current engineering standards for design and therefore this alone is not considered an increase of vulnerability to flooding in particular. The added physical improvements and additional property value does raise the potential of loss in potential hail, lightning, windstorm, tornado, and winter storms.

City of Hanover

The city has been experiencing a growth pattern with respect to population since the 1980s and between 2010-2017 experienced an 18% population growth. This increase in population is reflected by an increase in residential developments within the community. Multiple large residential developments (200+ unit developments) have been constructed in the last several years or are in construction currently. The new developments would increase the cost of damage due to a tornado, wind or hail. While new development is required to meet the city's stormwater management requirements, the additional impervious from new development can lead to additional runoff in the city, which can put more strain on existing stormwater infrastructure.

City of Howard Lake

Howard Lake has experienced steady single-family development over the last 3-5 years. Once empty subdivisions are now nearing capacity. The two largest subdivisions, Terning Trails and Lake Ridge were built out by different developers than originally intended. This has led to slightly larger homes being built leading to less pervious surface for run off. Additionally, storm ponds are filling with sediment which could lead to increased chance of localized flooding. Added development is also leading to more channelized run-off going to newly replaced culverts. During extreme rain conditions these act as super-highways carrying sediment, debris etc. that may get plugged and lead to more localized flooding.

City of Monticello

Monticello has continued to experience steady growth in all sectors: commercial, industrial, and residential. We have seen a significant amount of multi-family projects – creating additional density in specific areas that could be vulnerable to natural disasters. We also have one new senior facility and a second senior multi-family project planned for construction this year – both could have significant populations that could need assistance during a disaster.

City of Montrose

Since 2017, the City of Montrose has issued approximately 50 building permits each year to new development, which increases the strain on the storm drainage system as well as the WWTP and water reserves. We are near capacity with the WWTP and are currently working on an upgrade for the plant. If we continue to have drought conditions, the increase in population will draw even more on our water reserves in the aquifer we pull from.

City of Otsego

The city has experienced a 47% population growth from the 2010 to the 2020 US Census and is one of the fastest growing cities in the State of Minnesota. There have been more than 1,700 new single-family homes, 267 apartment units and 142 units of senior housing constructed in the city over the past five years. In addition to the residential development, there have been numerous commercial-industrial projects and two new schools constructed in the city.

City of Rockford

In recent years a development in the city of Rockford has been built out which is adjacent to the floodplain. While this development was constructed in accordance with all regulatory requirements, stormwater patterns are ever changing and if new flood models are developed in the future, this could be a concern.

City of St. Michael

We've had about 20% population and development growth over the past 10 years.

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 Wright 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 Wright 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 Wright 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 Wright 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 in order 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 Wright 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. Eight of the 17 federal disaster declarations in Wright County included flooding.

4.1.1 PROBABILITY OF OCCURRENCE

From 1997 to 2022, the NCEI Storm Events Database has recorded 21 flood and flash flood events. Wright County has experienced one flash flood event every two years and one riverine flood event every 3.3 years on average during this period.

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

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

1% annual chance flood boundary. Where available, stream base flow elevation and cross-section data were used to generate a depth grid with a 10-meter horizontal resolution. The resulting Hazus 1% annual chance floodplain is shown in the Flood Vulnerability dashboard on the Wright County HMP website (Figure 1), where it is available in an interactive form.

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	82,052	\$17,662,354,634	1307	\$269,355,693	178	\$5,744,825
Commercial	1,806	\$1,160,389,276	26	\$6,335,800	11	\$551,901
Other	16,446	\$4,187,039,465	90	\$183,429,737	11	\$804,890
Totals	100,304	\$23,009,783,375	1,423	\$459,121,230	200	\$7,101,616

SOURCE: (FEMA, 2021B)

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.

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 Wright 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 Wright 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. In Wright County, two airports (Buffalo Municipal and Shadduck), the Delano power plant, and four manufactured home parks were found to be at risk in the 1% annual chance flood. These locations are mapped in the [Wright County HMP website](#). No other information was available.

Community Vulnerability

Potential economic losses were estimated by Census Minor Civil Division. Rockford Township and the City of Buffalo would suffer the most significant estimated losses in the 1% annual chance flood. The City of St Michael, and Franklin and Cokato Townships also have significant estimated losses. All jurisdictions

with buildings identified in the 1% annual chance flood zone can also be viewed on the Wright 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

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

4.2 Windstorms

A windstorm is a wind strong enough to cause damage to trees and buildings and typically exceeding 34 mph (Pielke, 2012). Windstorm events encompass a variety of types of damaging wind. The history of windstorms in Wright County is shown in Figure 2; an interactive version of this map can be found on the Wright County HMP website.

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

4.2.1 PROBABILITY OF OCCURRENCE

To determine the probability of future wind-related events in Wright County, records of previous wind-related events (strong wind, high wind, and thunderstorm wind) in Wright 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 9.8 per year. These relative frequencies can be used to infer the probability of these events occurring in the future.

4.2.2 VULNERABILITY

The likelihood of a windstorm event does not vary geographically within Wright County, but the vulnerability of its residents is not constant. Vulnerability to injury from all kinds of windstorms decreases with adequate warnings, warning time, and sheltering in a reinforced structure. Therefore, residents living in rural areas, living alone or with limited mobility, or living in a manufactured home

may be more vulnerable. Also at a higher risk to windstorms are those who work outdoors or do not have permanent housing.

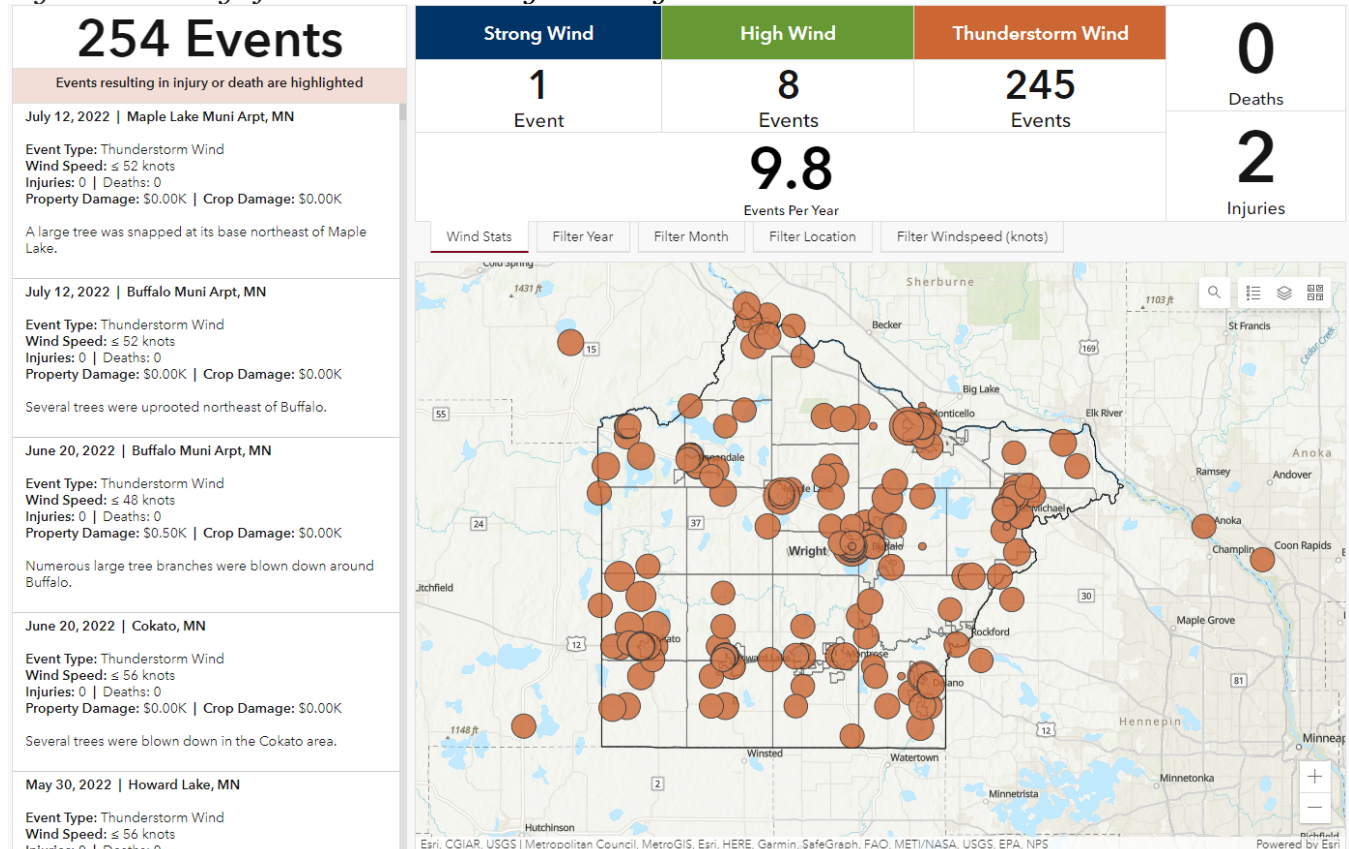
Structural vulnerability depends in part upon the construction of a building and its infrastructure. Residents of mobile homes are more vulnerable to fatality or injury from windstorms because mobile homes are not able to withstand high winds as well as other structural dwellings, with 50 mph (43.4 knots)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

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

4.2.3 PROGRAM GAPS AND DEFICIENCIES

Wright 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:

Figure 2. History of windstorms in Wright County



Above-Ground Power Lines: Most powerlines throughout Wright 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.

4.3 Tornadoes

With wind speeds reaching up to 300 mph, tornadoes are one of nature’s most violent storms (Hogeback, 2020). The history of tornadoes in Wright County is shown in Figure 3; an interactive version of this map can be found on the Wright County HMP website.

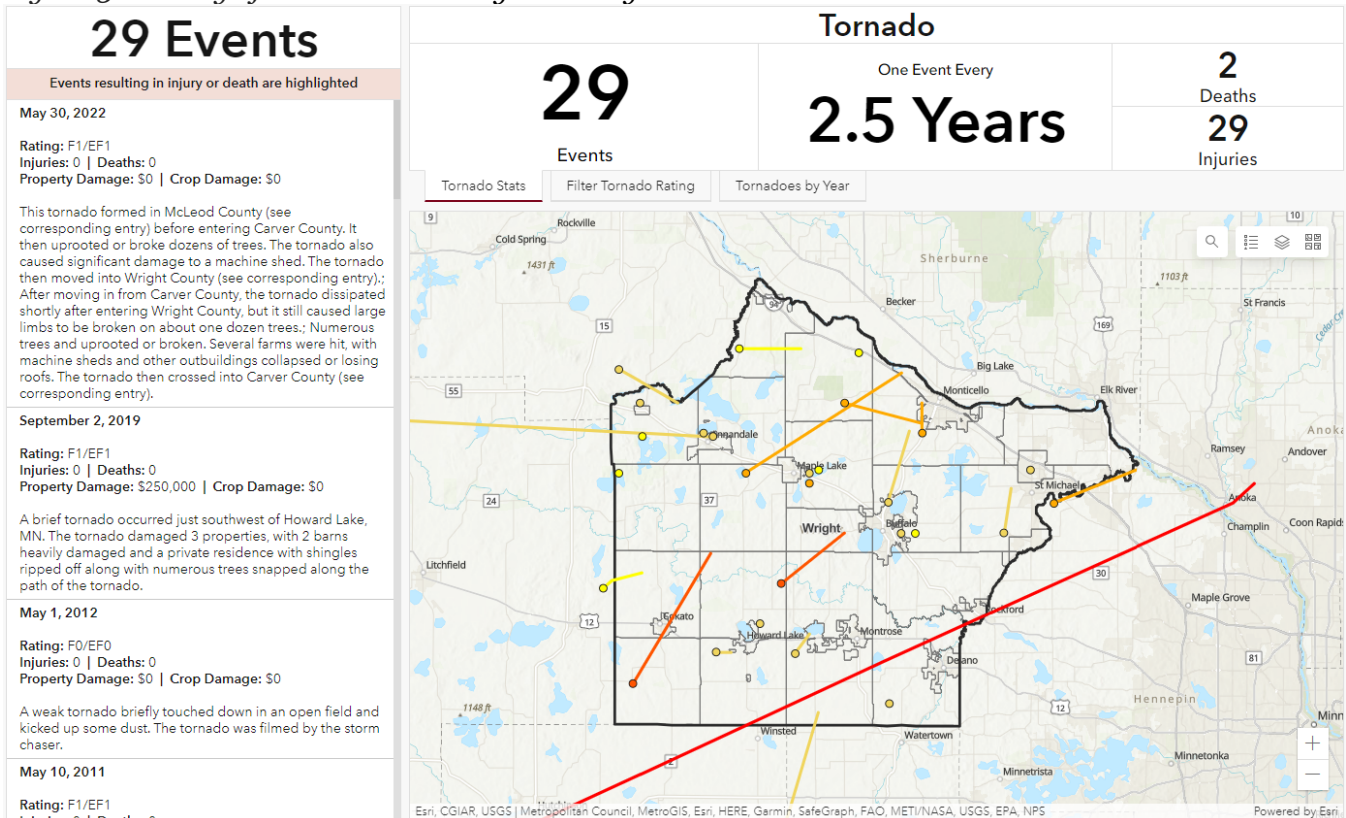
4.3.1 PROBABILITY OF OCCURRENCE

Estimating the probability of future tornadoes in Wright County was done using two methods. The first method summed the total number of tornadoes which either touched down in or traveled through Wright County. This sum was divided by the number of years tornado data was recorded, resulting in the annual relative frequency of tornado occurrences in Wright County. Based on records in the NCEI Storm Events Database through February 2020, there has been one tornado every 2.5 years in Wright County. These 29 tornadic events occurred in 18 of the 70 years on record. In 1997, there were five tornado touchdowns in Wright County, including two of EF2, and one EF3 rating.

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

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 Wright 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.

Figure 3. History of tornadoes in Wright County



For any location in Wright County, there was an annual frequency of 4-5 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.

4.3.2 VULNERABILITY

The likelihood of a tornado does not vary significantly across geography within Wright 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.

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

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).

4.3.3 PROGRAM GAPS AND DEFICIENCIES

Wright 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 Wright 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.

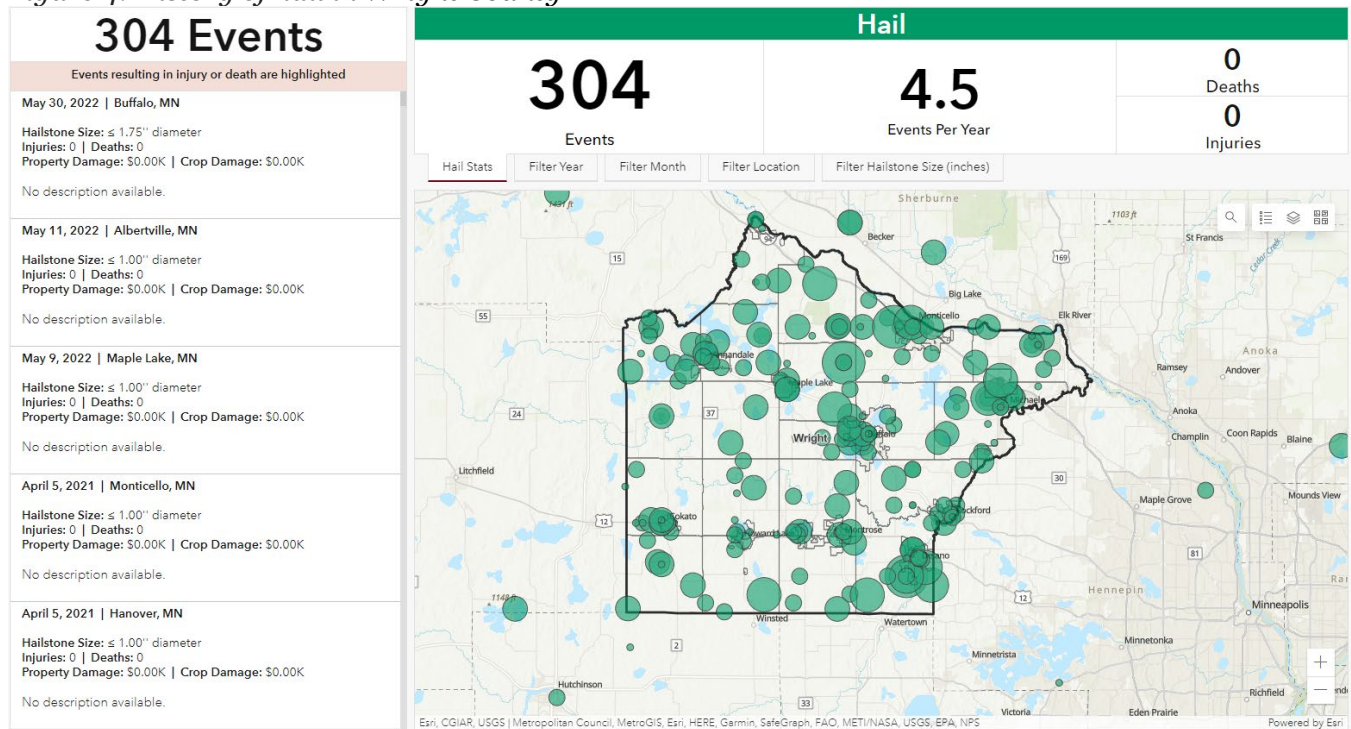
Storm Shelters and Tornado Safe Rooms: There are areas throughout the county without viable storm shelters or tornado safe rooms where there are populations vulnerable to high wind and storm events, such as campgrounds, resorts, mobile home parks, schools, and other seasonal gathering locations such 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 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 Wright County is shown in Figure 4; an interactive version of this map can be found on the Wright County HMP website.

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

Figure 4. History of hail in Wright County



4.4.1 PROBABILITY OF OCCURRENCE

To determine the probability of future hailstorms in Wright County, records of previous hail events in Wright County were examined for the period of record. From January 1955 through January 2020, the relative frequency of hail events was 4.5 per year. This relative frequency can be used to infer the probability of hail events occurring in the future. Please note that public reports of hail are often secondary to those of thunderstorm winds or tornadoes because if either damaging winds or tornadoes occur, the damaging wind and/or tornado are more important to the reporter and may result in underreporting of hail events.

4.4.2 VULNERABILITY

Wright 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 Wright County’s monetary losses due to hail damage to crops, property, injury, and death. From 1960 through 2018 Wright County reported \$5,283,781 in hail damages, ranking 47th among Minnesota counties in total hail damages. Wright County’s losses are primarily due to property damages reported at \$3,117,754, followed by \$2,166,026 in crop damages. Crop indemnity payments due to hail totaled \$2,265,481 for the period of record spanning 1989–2018 (CEMHS, 2019).

Within Wright 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.

4.4.3 PROGRAM GAPS AND DEFICIENCIES

Wright 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:

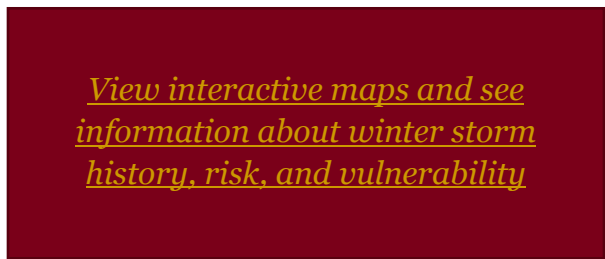
Above-Ground Power Lines: Most powerlines throughout Wright County are above ground, exposing them to impacts/damage from high wind events, potentially leading to localized or extensive power outages.

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 Winter Storms

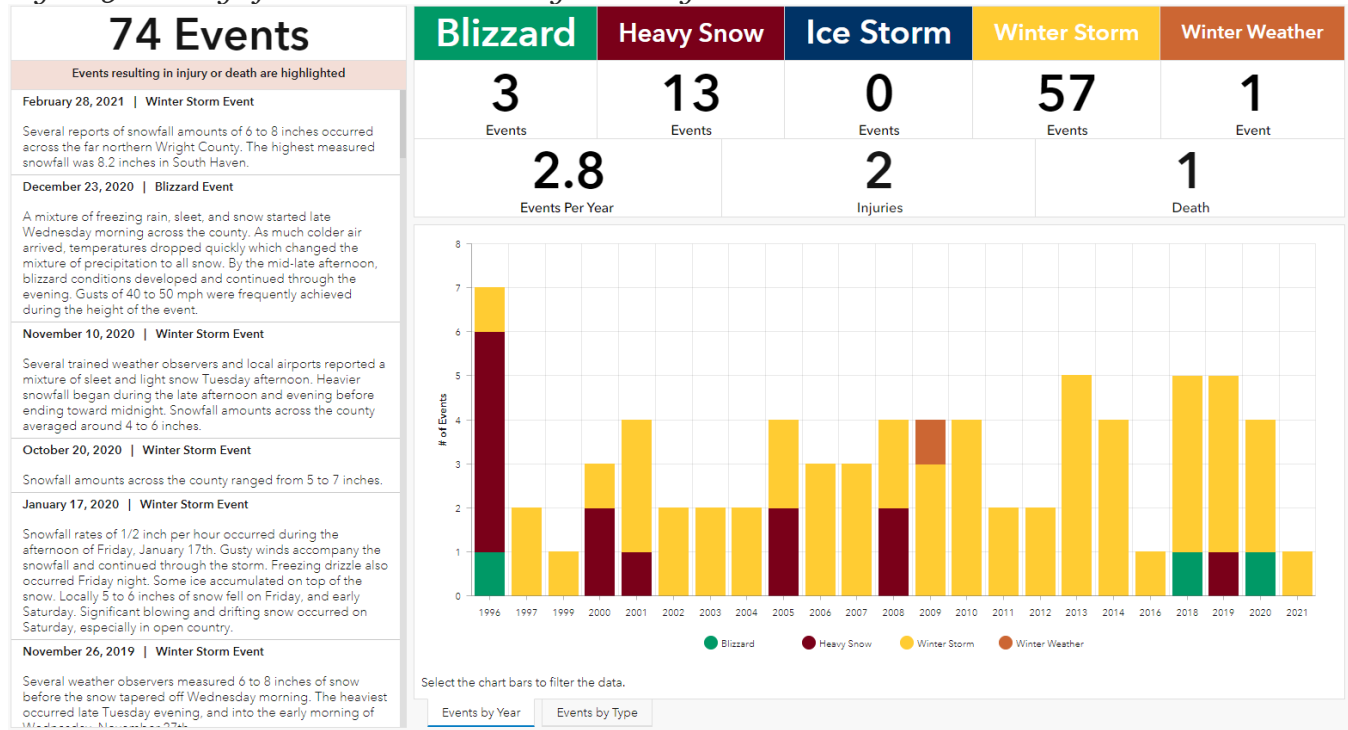
Winter storms encompass a number of winter weather events which the National Weather Service (NWS) organizes into the following categories: blizzard, heavy snow, ice storm, winter storm, and winter



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 Wright County is shown in Figure 5; an interactive version of this map can

be found on the Wright County HMP website.

Figure 5. History of winter storms in Wright County



4.5.2 PROBABILITY OF OCCURRENCE

To determine the probability of future winter-related storm events in Wright 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 Wright County is 2.8 per year. This relative frequency can be used to infer the probability of these events occurring in the future.

4.5.3 VULNERABILITY

Transportation systems, electrical distribution systems, and structures are vulnerable to winter storms throughout Wright County. These events do not vary geographically within Wright 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.

4.5.4 PROGRAM GAPS AND DEFICIENCIES

Wright 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 Wright County are above ground, exposing them to impacts/damage from winter high wind and ice events, potentially leading to localized or extensive power outages.

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

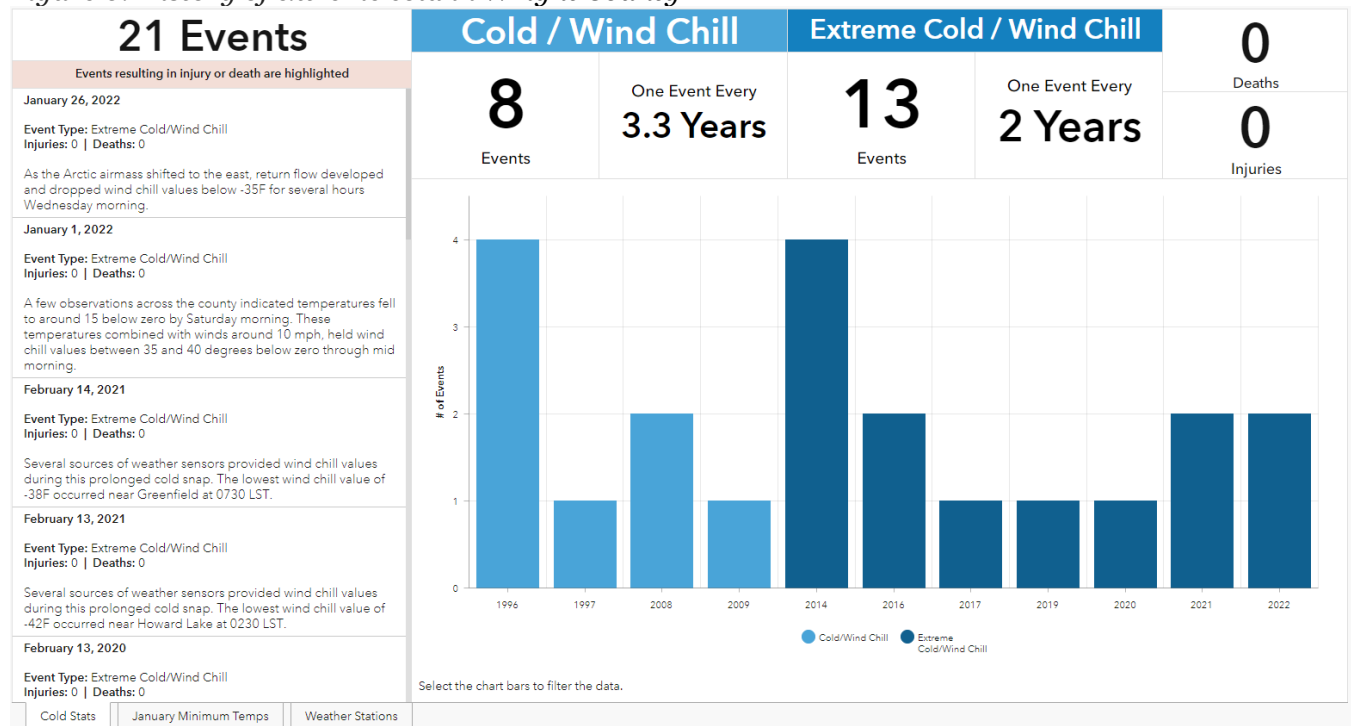
Backup Power: Not all designated shelter facilities have generator back-up power to provide the ability to care for residents if displaced during a severe winter event coupled with an extended power outage.

4.6 Extreme Cold

Due to Minnesota’s position in the middle of the continent and subsequent climate, the state may experience extremely frigid temperatures in winter. Winter in Wright County can be especially dangerous when low temperatures and wind create arctic-like wind chills. The history of extreme cold in Wright County is shown in Figure 6; an interactive version of this dashboard can be found on the Wright County HMP website.

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

Figure 6. History of extreme cold in Wright County



4.6.1 PROBABILITY OF OCCURRENCE

To determine the probability of future cold-related events in Wright 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 Wright County is one event every two years. (NCEI, 2021). This relative frequency can be used to infer the probability of these events occurring in the future.

4.6.2 VULNERABILITY

The risk of extreme cold does not vary geographically within Wright 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.

4.6.3 PROGRAM GAPS AND DEFICIENCIES

Wright 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.

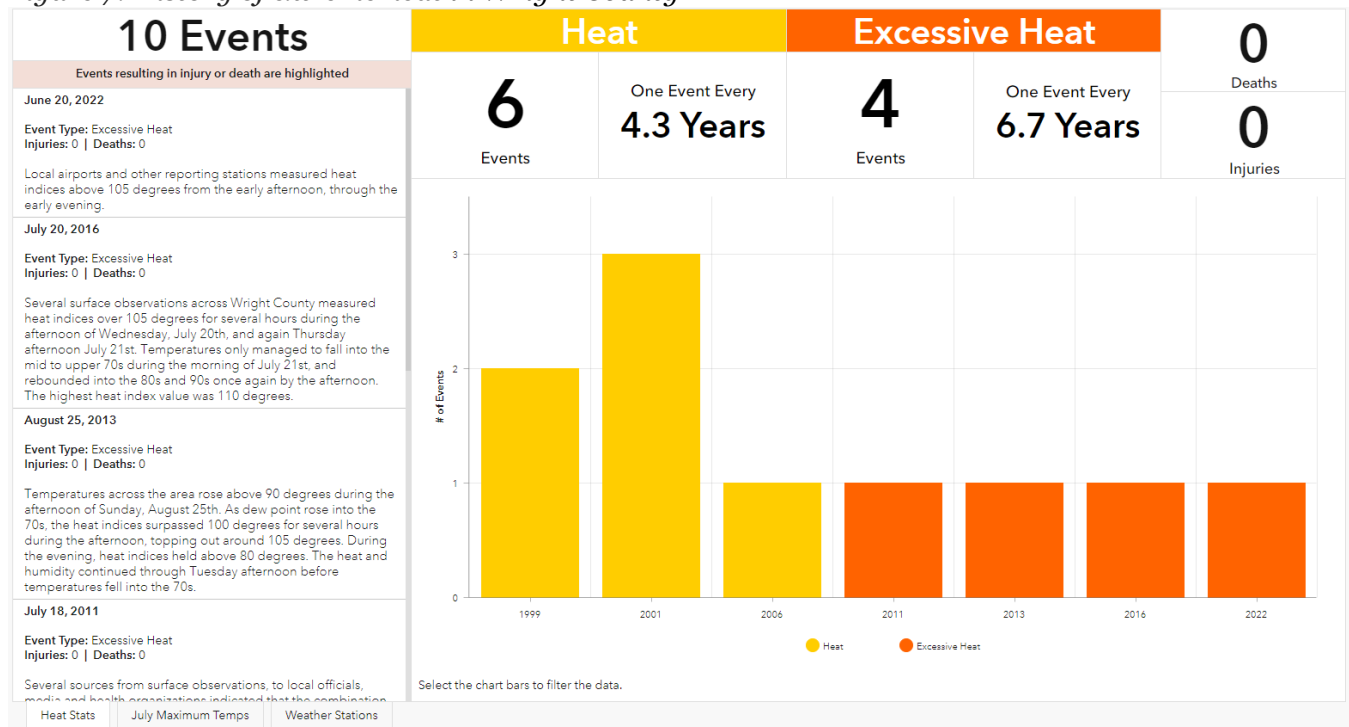
4.7 Extreme Heat

Extreme heat is the combination of very high temperatures and exceptionally humid conditions. When the atmospheric moisture content is high, the rate of perspiration from the body decreases and the human body feels warmer (NWS, 2021). Heat stress can be indexed by combining the effects of temperature and humidity. The history of extreme heat in Wright County is shown in Figure 7; an interactive version of this chart can be found on the Wright County HMP website.

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

Extreme heat events are linked to a range of illnesses, even death, and can exacerbate pre-existing chronic conditions (Moss, 2017). Medical costs related to extreme heat can be enormous: in 2005, the total was \$1.5 billion nationwide, or more than \$16,000 per patient (Union of Concerned Scientists, 2009). Heat-related hazards have cost Wright County over \$63,000 in property damages since 1960 (CEMHS, 2019).

Figure 7. History of extreme heat in Wright County



4.7.1 PROBABILITY OF OCCURRENCE

To determine the probability of future heat-related events in Wright County records of previous heat and excessive heat events were summed and divided by the dataset’s period of record, resulting in the annual relative frequency of heat-related events. Based on records in the NCEI Storm Events Database through January 2020, the relative frequency of extreme heat-related events in Wright County is one every 6.7 years. This relative frequency can be used to infer the probability of these events occurring in the future.

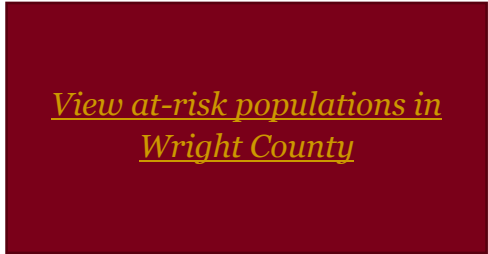
4.7.1 VULNERABILITY

The Minnesota Department of Health released a 2012 Minnesota Extreme Heat Toolkit, to help local governments prepare for extreme heat events. In their toolkit, they note extreme heat events are often dubbed “silent killers” because deaths and illnesses from these events are often misunderstood and underreported. Minnesota has no official system to report deaths and illnesses linked to extreme heat (MDH, 2012). It is important to not underestimate the danger of extreme heat events within the state.

High temperatures can be exacerbated by the urban heat island effect in densely developed areas, an effect that amplifies higher temperatures in areas with a higher concentration of impervious and paved surfaces. These types of surfaces absorb more heat and hold it for longer than vegetation cover (EPA, 2019). Impervious surfaces cover 4% of Wright County (MDH & University of Minnesota, 2019). Impervious surfaces are not spread evenly throughout Wright County and attention should be given to cities or areas within Wright County that contain the largest amounts of this type of surface cover. Except for these areas, the risk of extreme heat does not vary geographically.

The impact extreme heat has on individuals is not equal. According to the Center for Disease Control and Prevention (CDC), population groups more vulnerable to extreme heat include:

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



Warming temperatures will continue to increase the risk of extreme heat, especially among these already vulnerable populations. Section 3.4 provides jurisdictional responses of localized vulnerabilities to extreme heat.

4.7.2 PROGRAM GAPS AND DEFICIENCIES

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

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

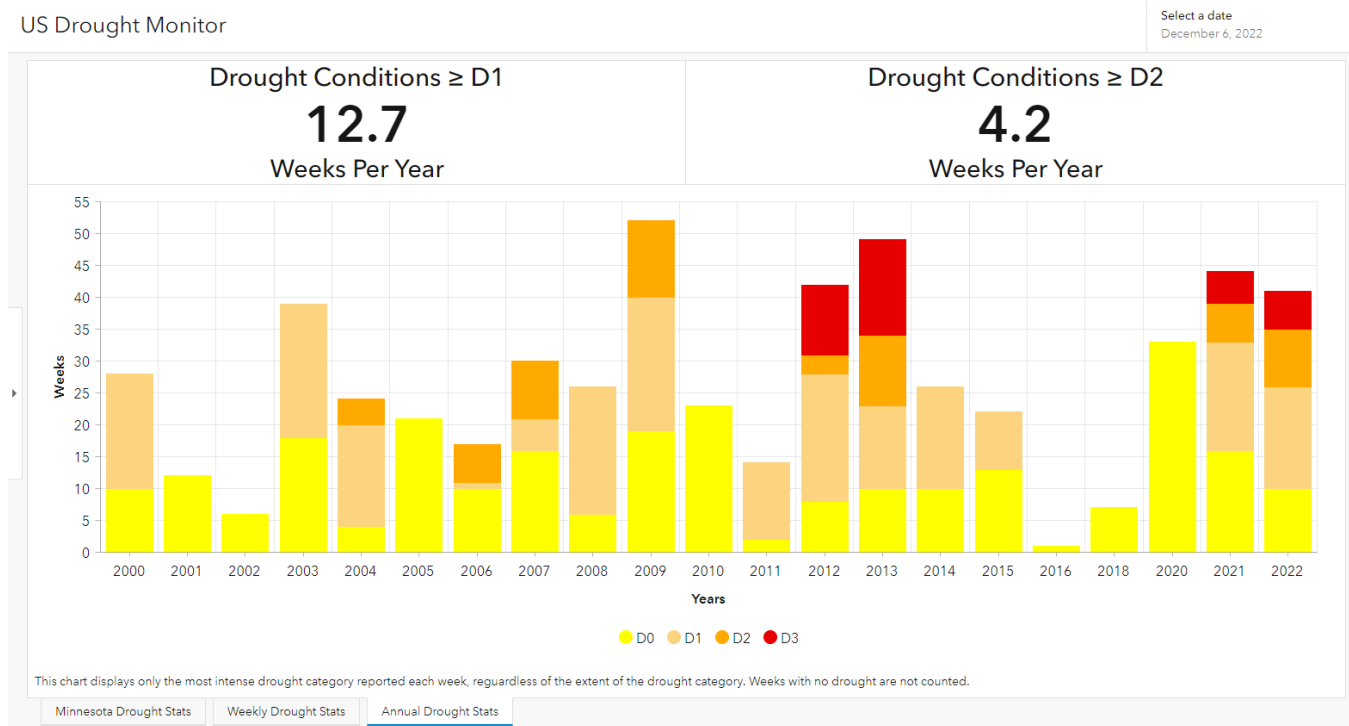
Public Education: Ongoing public education is needed to encourage residents to be prepared for extreme weather, including power outages during periods of extreme cold.

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 Wright County HMP website.

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

Figure 8. Annual drought statistics in Wright County since 2000



4.8.1 PROBABILITY OF OCCURRENCE

To determine the probability of future droughts in Wright 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 Wright County, regardless of the duration of the drought. According to the weekly reported data, the relative frequency of Wright County experiencing drought conditions ≥ D1 is 12.7 weeks per year, and the relative frequency of drought conditions ≥ D2 is 4.2 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 24 drought incidents impacting five sectors in Wright County between 2000 and 2022. Since droughts are regional in nature, jurisdictions within Wright County do not vary in their vulnerability to drought; however, the impact from droughts are not equal.

Drought conditions may impact soil moisture reserves, groundwater supplies, lake levels and stream flows. Water-dependent industries that experience the greatest impacts include: agriculture, public utilities, forestry and tourism (MN DNR, 2021). In addition, droughts may negatively affect an individual’s health by contributing to poor air quality caused by wildfire smoke and particulate, 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, Wright County’s agriculture sector has been impacted by drought more than once, and with 46% of Wright County’s land devoted to cultivated crops, Wright County’s agriculture community is also vulnerable to the economic impact a drought may have on crops. From 1989–2018, Wright County received \$39,752,029 (2018 ADJ) in crop indemnity payments due to drought, placing it as the 8th-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

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

4.9 Dam Failure

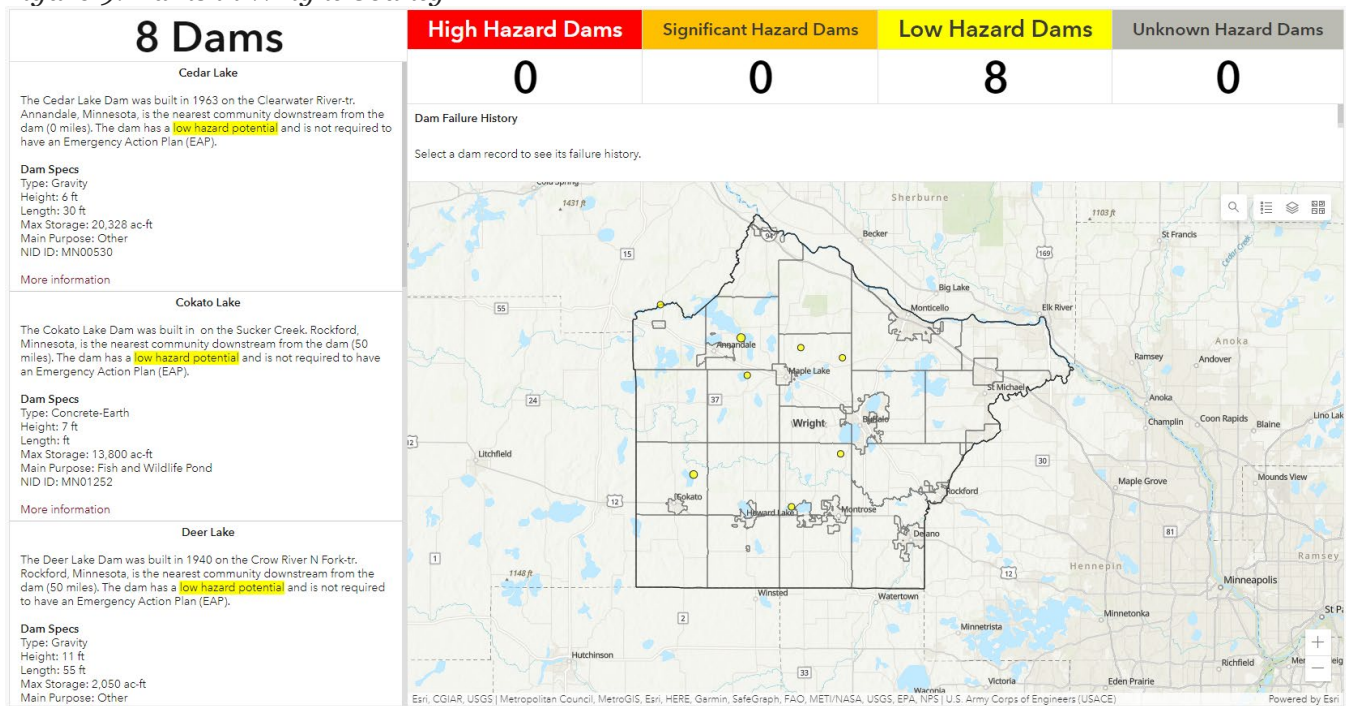
The MN DNR Dam Safety Program has the mission of protecting the life and safety of people by ensuring that dams are safe. Minnesota’s Dam Safety Program sets minimum standards for dams and regulates the design, construction, operation, repair, and removal of both privately and publicly (non-federal) 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 are eight dams in Wright County. Dams are mapped in Figure 9; an interactive version of this map is available on the Wright County HMP website.

Figure 9. Dams in Wright County



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 environmental conditions and structural conditions. There are few incidents of dam failure in Minnesota and the likelihood of a dam failure in Wright County is very low. Dam failures are extremely unlikely if the dam is maintained in compliance with Minnesota’s Dam Safety Program. The dams in Wright County all are of low hazard potential and the likelihood of failure in the 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 7 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 7. Downstream hazard potential classification criteria

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

SOURCE: (USACE, 2008)

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

An Emergency Action Plan (EAP) is a document 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). All Wright County dams are Class III, having low hazard potential.

4.9.3 PROGRAM GAPS AND DEFICIENCIES

Wright 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 Wright County as related to hazard mitigation.
- Appendix C: As part of the Wright County HMP update, Wright 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 Wright 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 8 below lists and describes jurisdictional participation in the National Flood Insurance Program (NFIP).

Table 8. NFIP participation in Wright County

Community Name	Participation in the NFIP	FEMA Map	Description of Participation
Wright County	Participating	FEMA-mapped high-risk areas	<p>Wright County Planning & Zoning Department maintains the floodplain management ordinance (Section 155.056, Land Use and Zoning) 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 Wright County. The Planning and Zoning Office can assist county residents in determining whether their property is affected by an officially mapped flood area.</p>
Albertville	Participating	No FEMA-mapped high-risk areas	<p>The city of Albertville is participating in NFIP but has no FEMA mapped high risk areas. The city does have zoning and development regulations in place that set minimum structure elevations to prevent flooding (Ordinance No. 2011-007). All new construction is required to meet a minimum freeboard requirement above the area emergency overflow and/or adjacent high-water level.</p>
Annandale	Participating	No FEMA-mapped high-risk areas	<p>The city participates in the NFIP but does not have any FEMA-mapped high-risk areas. The city code that references these items is Chapter 150.</p>
Buffalo	Participating	FEMA-mapped high-risk areas	<p>The city enforces requirements of the NFIP through Division 3. – Shoreland Overlay District Sec. 50-112 to Sec. 50-137 in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city.</p>
Clearwater	Participating	FEMA-mapped high-risk areas	<p>The city enforces requirements of the NFIP through Chapter 109, Floodplain Management in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city. The city reviews the ordinance requirements to ensure no new construction goes into vulnerable areas without meeting flood prevention requirements.</p>

Community Name	Participation in the NFIP	FEMA Map	Description of Participation
Cokato	Participating	FEMA-mapped high-risk areas	The city enforces requirements of the NFIP through Chapter 153, Zoning Regulations, Section 153.036, Flood Plain Overlay in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city.
Delano	Participating	FEMA-mapped high-risk areas	The city enforces requirements of the NFIP through the City of Delano Flood Plain Ordinance, Sections 1.0 – 16.0 in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city.
Hanover	Participating	FEMA-mapped high-risk areas	The city has a floodplain ordinance in place that is enforced (Hanover Code of Ordinances, Section 10.32, Floodplain Overlay District). This ordinance regulates development in the flood hazard areas of the City of Hanover. The city reviews all proposed development and redevelopment within the city to confirm sites meet the city's floodplain ordinances where applicable.
Howard Lake	Participating	No FEMA-mapped high-risk areas	The city of Howard Lake is participating but does not have FEMA mapped high risk areas. The city's code of ordinances includes Part 17. Building and Land Use Regulations, Chapter 17.01-95 FP, Floodplain Overlay District serves as the city's floodplain ordinance.
Maple Lake	Participating	FEMA-mapped high-risk areas	The city enforces requirements of the NFIP through Section 79 – Floodplain Ordinance in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city.
Monticello	Participating	FEMA-mapped high-risk areas	The city enforces requirements of the NFIP through Monticello Zoning Ordinance, Chapter 3, Section 7(C) - Floodplain District in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city.

Community Name	Participation in the NFIP	FEMA Map	Description of Participation
Montrose	Not Participating	FEMA-mapped high flood risk Areas (annexed & mapped on preliminary maps)	The city of Montrose reported that they do not participate in the NFIP as they were not aware that they had FEMA mapped high risk areas. The city has been put in touch with the state NFIP manager to learn about their city's NFIP status and receive information on how to get enrolled in the NFIP.
Otsego	Participating	FEMA-mapped high-risk areas	The city enforces requirements of the NFIP through Code Title 11 (Zoning Regulations), Chapter 94 - Floodplain Overlay District in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city.
Rockford	Participating	FEMA-mapped high-risk areas	The city enforces requirements of the NFIP through Ordinance 1001.22 Floodplain District in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city.
South Haven	Not Participating	No FEMA-mapped high-risk areas	The city does not have a FEMA map and is not participating.
St. Michael	Participating	FEMA-mapped high-risk areas	The city enforces requirements of the NFIP through Chapter 155: Zoning, section 155.365 Floodplain Overlay District in the city's code of ordinances. This chapter regulates building and zoning within the flood hazard areas of the city.
Waverly	Participating	FEMA-mapped high-risk areas	The city enforces requirements of the NFIP through Chapter 153: Shoreland Overlay District, Section 153.126 Floodplain Regulations in the city's code of ordinances. This chapter regulates building and zoning within 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.

Wright County has two RL properties and no SRL properties. The properties are both single-family residences, one in Buffalo and one in Annandale.

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

5.1.2 PLANS AND ORDINANCES

Wright 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

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

All Hazards

All Hazards Emergency Operations Plan: Wright 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: Wright County maintains the Active911/RAVE Emergency Alert 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 Wright County website.

Relationship with National Weather Service: Wright County has a strong relationship with the National Weather Service – Twin Cities/Chanhassen 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: Wright County utilizes the Wright County website, Wright County social media (Facebook, Twitter), and local news media to communicate with residents and visitors on emergency preparedness.

Mass Care Shelter Facilities: In partnership with the American Red Cross, Wright 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. Wright County Emergency Management maintains a list of shelters within the county and has trained staff prepared for shelter operations.

NOAA Weather Radios: Wright 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: Wright County/Wright 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.

Backup Power: Generator back-up power is in place for the Wright County Sheriff's Office (WCSO), County Jail, Training Center & EOC. The Courthouse and Administration buildings are also hooked up to an emergency generator.

School Closings: Schools throughout Wright 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.): Wright County relays all winter weather statements received from the National Weather Service via social media platforms and our community partners.

Public Education: Wright 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 Wright County Highway Department is responsible for the removal of snow and ice control for county roads. The department completes its snow removal process in accordance with the Wright 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, Active911/RAVE Emergency Alert System, cell phone apps, and the outdoor warning siren system. Wright County redistributes all outlook, watch, advisory, and warning statements issued by the NWS.

Outdoor Warning Sirens: There are 51 outdoor warning sirens located in Wright County which are tested on a monthly basis by the Wright 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 Wright County Sheriff's Office.

Skywarn Program: Wright 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: Wright 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: Wright 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. Wright County also responds to emergency requests to clear right of way from storm damage.

Manufactured Home Parks Shelters & Evacuation Plans: Wright County Public Health works with licensed manufactured home parks 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.

Extreme Cold

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

Extreme Cold Safety Awareness: Wright County Emergency Management and Wright County Public Health work to 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.

Extreme Heat

Emergency Notifications: Extreme heat temperature warnings are issued by the National Weather Service. Wright County Emergency Management assists with sharing this information with the public.

Public Education and Awareness: Wright County Emergency Management and Wright County Public Health work to share the message of personal safety and preparedness to stay safe during periods of extreme heat with county residents, utilizing communication platforms such as the county website, Facebook, and local news media.

Drought

Public Awareness & Outreach: In the event of drought conditions, Wright 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.

Wright County Soil and Water Conservation District: The Wright 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.

Wright County Local Water Management Plan: The Wright County Local Water Management Plan (2006-2015) describes both surface and groundwater needs and concerns for the county.

Flooding

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

Floodplain Ordinance and Mapping: Wright County Planning & Zoning Department maintains the floodplain management ordinance (Section 155.056, Land Use and Zoning) 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 Wright County. The Planning and Zoning Office can assist county residents in determining whether their property is affected by an officially mapped flood area.

Shoreland Regulations: Wright County Zoning Ordinance - Section 155.057, Shoreland Zoning Regulations establish regulations for the control the density and location of developments in the shorelands of the public waters of the county in order to preserve the water quality and the natural

characteristics of the shorelands and public waters in the county. These regulations conform to the standards and requirements of the state’s Shoreland Management Act.

Transportation Improvement Plan: Wright County Highway Department maintains a five-year plan that identifies and schedules road improvement projects that include measures for flood mitigation. The current plan is for 2021-2025.

Wright County Local Water Management Plan: The Wright County Water Plan (2006-2015) is written and overseen by the Wright Soil and Water Conservation District. The plan identifies the primary water planning issues, which include erosion and sediment control, stormwater management, and development pressure.

Buffer Law: Wright 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 Wright County Plan. This framework, as outlined below, will allow for integration of the mitigation actions that are listed by Wright 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 9 below:

Table 9. 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	<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> <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"> • Acquisitions and elevations of structures in flood prone areas • Utility undergrounding • Structural retrofits • Floodwalls and retaining walls • Detention and retention structures • Culverts • Safe rooms

Mitigation Strategy	Description	Example Mitigation Actions
Natural Systems Protection	These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.	<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 Wright 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 Wright 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 Wright 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 Wright 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 Albertville, Annandale, Buffalo, Clearwater, Cokato,

Delano, Hanover, Howard Lake, Maple Lake, Monticello, Montrose, Otsego, Rockford, South Haven, St. Michael, and Waverly.

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 9 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 Wright 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 10 provides criteria that were taken into consideration in the process.

Table 10. 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. • Wright 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. • Wright 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 Wright County Mitigation Action Chart is provided in Table 11.

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

Table 11. Wright 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 RAVE emergency notification alert system.	Existing High 2023-2028	Wright County Emergency Management (WCEM)	A link for the county’s civic alert RAVE emergency notification system is located on the Wright County website for residents to sign up. Reminders are put out on Wright County social media (Facebook, Twitter) pages as well as during the NWS’s Severe Weather Awareness Week.	County
2	All-Hazards	Mitigation Preparedness & Response Support	Ensure the Wright 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, Wright County Public Health (WCPH) WCEM	In partnership with the American Red Cross, Wright 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. Wright County Emergency Management and Wright County Public Health maintain a list of shelters within the county and have trained staff prepared for shelter operations.	County
4	All-Hazards	Mitigation Preparedness & Response Support	Continue to engage key Emergency Management partners in all-hazards planning for a range of hazard and severe weather events.	Existing High 2023-2028		WCEM works with the local Wright County Fire Chiefs and Wright County EMS group, as well as our local Wright County Emergency Manager Assistance Compact which includes public health and city emergency managers and meetings on a quarterly basis. WCEM also works closely with HSEM Region 4 county EM’s on all-hazards planning and exercises.	County

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
5	Severe Winter & Summer Storms / Extreme Temps	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather and extreme temperature events.	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 have NOAA weather radios, and to sign up for the county's RAVE system and Wright County Facebook & Twitter pages to receive emergency notifications and other information. Wright County/Wright 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
6	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 Electric Coops	Xcel Energy and Wright-Hennepin Electric Coop 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.	Electric Coops, 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

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
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.	Wright 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. Wright County also responds to emergency requests to clear right of way from storm damage.	County
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	WCEM continues to encourage long-term care facilities that house senior citizens or other vulnerable populations to have emergency plans and generators in place to deal with severe weather, power outages, and extreme temperatures.	County, Local Facilities
10	Severe Summer Storms	Local Planning & Regulations	Work with owners of mobile home parks (MHP's) to ensure they are in compliance with Minnesota Department of Health (MDH) requirements for evacuation plans and storm shelters.	Existing High 2023-2028	WCPH in coord with Local Gov't and MHP's	Wright County Public Health works with licensed manufactured home parks 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.	WCPH, MHP Owners
11	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

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
12	Severe Summer Storms	Mitigation Preparedness & Response Support	Ensure the functionality of all outdoor warning sirens within Wright County.	Existing High 2023-2028	WCEM in coord with Local Gov't	There are 51 outdoor warning sirens located in Wright County which are tested on a monthly basis by the Wright 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 Wright County Sheriff's Office.	County, Local Gov't
13	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. Work with jurisdictions and to address the need for the construction of storm shelters or tornado safe rooms in communities, 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	WCEM will assist any communities as needed with applying 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
14	Severe Summer Storms	Structure & Infrastructure Projects	Work with jurisdictions and to address the need for the construction of storm shelters or tornado safe rooms in communities, mobile home parks, or other locations where residents and visitors are vulnerable to high wind events.	Existing Moderate 2023-2028	WCEM in coord with Local Gov't	WCEM will provide assistance to help assess need, possible construction options, and assist in applying for possible FEMA grant funding as needed to cities and townships that request assistance to address tornado safe rooms in the community.	County, FEMA HMA grant funding
15	Drought	Education & Awareness Programs	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	With a documented increase in drought conditions across Wright County in 2021-2022, WCEM continues to provide public outreach and education during heightened drought periods using the county website and social media platforms. WCEM encourages city and townships to promote drought awareness to residents and implement watering restrictions as per MN DNR guidance.	County

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
16	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	WC Planning & Zoning Dept.	Wright County Planning & Zoning Department maintains and enforces the floodplain management ordinance (Section 155.056, Land Use and Zoning) 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 Wright County. The Planning and Zoning Office assists county residents in determining whether their property is affected by an officially mapped flood area.	County
17	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.	WC Highway Department maintains a five-year plan that identifies and schedules road improvement projects that include measures for flood mitigation. The current plan is for 2022-2026. The county works in partnership with townships to address necessary flood mitigation measures for township roads, bridges and culverts affected by high rain events.	County, State, Federal, FEMA HMA grant funding
18	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Continue to work in partnership with the Wright Soil & Water Conservation District (SWCD) to update and implement the Wright County Water Plan and address flood-related mitigation projects within the county.	Existing Moderate 2023-2028	WC Highway Dept. in coord with SWCD	The Wright County comprehensive watershed management plan(s) (North Fork Crow River, South Fork Crow River, Mississippi River/St. Cloud Watersheds) are overseen by the Wright Soil and Water Conservation District. The plans identify the primary water planning issues, which include erosion and sediment control, stormwater management, and development pressure. WC Highway Dept. continues to partner with the Wright SWCD to implement the plans and address flood and erosion projects (i.e., ditch drainage, culvert & rural road repair, bank stabilization projects).	County, SWCD Cost-Share Grant Funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
19	Flooding	Local Planning & Regulations	Continue to address shoreland zoning regulations and stormwater management to mitigate impacts from high rain events, especially for areas of new development and population growth within the county.	Existing Moderate 2023-2028	WC Planning & Zoning Dept.	Wright County Planning & Zoning Dept. continues to enforce Wright County Zoning Ordinance - Section 155.057, Shoreland Zoning Regulations, which establishes regulations for the control the density and location of developments in the shorelands of the public waters of the county in order to preserve the water quality and the natural characteristics of the shorelands and public waters in the county. These regulations conform to the standards and requirements of the state's Shoreland Management Act. The Wright SWCD has currently identified streambank and levee erosion of concern in the city of Otsego. Wright County Emergency Management will provide support as appropriate to the SWCD and city in addressing this matter. WCEM will help to provide support to the city in applying for a FEMA flood mitigation grant if it is an eligible project and funding is available.	County
20	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Work with communities and the Wright SWCD to address areas of levee erosion along the Mississippi River.	New High 2023-2028	WCEM in coord with SWCD	There are currently no identified projects for conducting property buyouts, however Wright 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.	SWCD, FEMA HMA grant funding
21	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		County, MN DNR, FEMA HMA, Local Gov't

Section 6 – Plan Maintenance

6.1 Monitoring, Evaluation, and Updating the Plan

The Wright 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 Wright County HMP.

The Wright 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 Wright 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 Albertville, Annandale, Buffalo, Clearwater, Cokato, Delano, Hanover, Howard Lake, Maple Lake, Monticello, Montrose, Otsego, Rockford, South Haven, St. Michael, and Waverly as well as other city elected officials or staff as needed. The Wright 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 Wright 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 Wright County, the group will meet to update pertinent mitigation strategies. Depending on Wright 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 Wright 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, Wright 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

Wright 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 Wright County and its jurisdictions (see Appendix H and Section 5.3). The cities of Albertville, Annandale, Buffalo, Clearwater, Cokato, Delano, Hanover, Howard Lake, Maple Lake, Monticello, Montrose, Otsego, Rockford, South Haven, St. Michael, and Waverly 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 Wright 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 man-made 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 Wright 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 Wright 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, Wright County will take the following measures:

- The plan will be available on the U-Spatial-hosted HMP website and linked to from the Wright County Government website. From the HMP website, the public has the opportunity for continued viewing and feedback on the plan. Collected feedback will be reviewed during the five-year plan cycle and will be noted for future updates or addressed as necessary.
- Following any major storms or natural disasters, Wright 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 Wright 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 Wright 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

- 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. (2020, February 28). *Extreme Heat*. Extreme Heat | Natural Disasters and Severe Weather | CDC. <https://www.cdc.gov/disasters/extremeheat/index.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>
- EPA. (2019). *Learn About Heat Islands*. Environmental Protection Agency. <https://www.epa.gov/heat-islands/learn-about-heat-islands>
- 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.
- Hogeback, 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. (2012). *Minnesota Extreme Heat Toolkit*. Minnesota Department of Health. <https://www.health.state.mn.us/communities/environment/climate/docs/mnextremeheattoolkit.pdf>
- 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/mhpgenreq.html>
- MDH. (2021, February). *Cold-related illness*. Minnesota Department of Health. https://data.web.health.state.mn.us/web/mndata/cold_related_illness#
- MDH, & University of Minnesota, U.-S. (2019). *Heat Vulnerability in Minnesota*. https://maps.umn.edu/climatehealthtool/heat_app/index.html
- 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. (2021). *Drought in Minnesota*. Drought in Minnesota. <https://www.dnr.state.mn.us/climate/drought/index.html>
- 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]
- Moss, P. (2017). *Adapting to Climate Change in Minnesota*. <https://www.pca.state.mn.us/sites/default/files/p-gen4-07c.pdf>
- 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/>
- NWS. (2021). *What is the heat index?* NOAA's National Weather Service.
<https://www.weather.gov/ama/heatindex>
- 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>
- 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>
- Union of Concerned Scientists. (2009). *Confronting Climate Change in the U.S. Midwest*.
<https://www.ucsusa.org/sites/default/files/2019-09/climate-change-minnesota.pdf>
- 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%20/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

Wright County

Local Mitigation Survey Report

Overview

As part of Wright 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

Wright County	Page 2
City of Albertville	Page 9
City of Annandale	Page 12
City of Buffalo	Page 16
City of Clearwater	Page 21
City of Cokato	Page 26
City of Delano	Page 29
City of Hanover	Page 34
City of Howard Lake	Page 39
City of Maple Lake (no LMS)	-
City of Monticello	Page 44
City of Montrose	Page 49
City of Otsego	Page 53
City of Rockford	Page 59
City of South Haven (no LMS)	-
City of St. Michael	Page 62
City of Waverly	Page 65

WRIGHT 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</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	High	No Change
Tornadoes	X	High	No Change
Windstorms	X	High	No Change
Lightning		Low	No Change
Hail		High	No Change
Flooding	X	High	Decreased
Extreme Cold	X	Moderate	No Change
Extreme Heat		Moderate	No Change
Drought		Moderate	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.

In Spring of 2019 Wright County experienced spring flooding due to rapid spring thaw and ice jams. It caused some local street flooding, damage to culverts, and some basement flooding for residential properties. Most public and private businesses were unaffected due to local mitigation efforts.

In September of 2019 the City of Howard Lake experienced a tornado touch down that damaged several private residences.

- 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.
Flooding	County residents, both in and outside of corporate limits are susceptible to flood hazard in numerous locations, specifically on lakes and waterbodies

	associated with the North Fork Crow River and Clearwater River. Local roads and streets can be heavily impacted during flood events.
Ice Storms, Blizzards	Much of the county’s municipal electrical service consists of overhead power lines and electrical poles. Those overhead lines and power poles are prone to failure in ice storms and blizzards with heavy snowfall and high winds that may bring down trees and branches.
Windstorms and Tornadoes	<p>Wright County has two county-owned campgrounds that offer RV and tent camping (Collinwood Regional Park and Campground and Schroeder Regional Park and Campground). Tent campers are always more vulnerable to high wind and thunderstorm events. Both campgrounds have modern shower and restroom facilities that can be used for temporary shelter for campers if needed.</p> <p>Overhead electrical lines throughout the county are also susceptible to high wind and tornado events that can bring down trees and branches on power lines.</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>In the past 3 years during periods of extreme cold two cities (Delano and Montrose) experienced loss of natural gas service. This has led to a large response to get to homeowners for access, get them heat, and to get systems re-ignited.</p>
Wildfire and Drought	Wright County has a high agricultural presence on the west side of the county and a very suburban area in the northeast and east areas. Drought effects the ag industry as well as having an issue with the wildland urban interface. Approximately 5 years ago, wildfire destroyed multiple homes in the Otsego area because of drought-like conditions combined with high winds. However, wildfire itself is considered a low risk for Wright County.

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.

Recent County Highway Department improvements related to flood mitigation include:

- CSAH 35 Wolff Swamp area – raised grade of highway with light-weight foam that has prevented/reduced risk of flooding & road closures.
- CSAH 36 (east of 101) – raised grade of highway with light-weight foam that has prevented/reduced risk of flooding & road closures.
- CSAH 75 near Hasty – raised the grade of the highway with additional pavement/patch thickness to prevent/reduce the risk of flooding & road closure occurrences.

- CSAH 12 (north of T.H. 55) – raised the grade of the highway with additional pavement thickness to prevent/reduce the risk of flooding & road closure occurrences.
- CSAH 14 (between T.H. 55 & U.S. Hwy 12) – replaced two bridges and raised the grade of the highway over the North Fork of the Crow River to prevent/reduce the risk of flooding occurrences.
- Highway Maintenance operations includes a systematic review and analysis of culverts under our 512-mile highway system that includes replacement and/or pipe lining of deteriorated and misaligned culvert pipes to maintain/improve water flow.
- CSAH 17 – Flood Control project in Delano.
- Highway Department Maintenance Division purchased a culvert jetter to mitigate plugged culverts, ditch cleaning, and culvert replacement improvements.
- CSAH 16 riverbank stabilization improvements along the South Fork of the Crow River south of Delano.

At the local city level, in 2019 the cities of Rockford and Delano enacted their flood preparedness plans. These were put in place approx. 9 years ago to identify where berms and levees need to go to prevent or mitigate as much damage as possible from flooding. Delano purchased levee walls that were installed and held the river waters back from preventing damage to local businesses and city infrastructure.

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.

Wright County is one of the fastest growing counties in the state of Minnesota. Within the last 5 years the county has been experiencing a very large population growth. This growth will increase the cost of damage due to a tornado, wind, or hail events. With an increase in population and construction of more homes and commercial properties, we have also witnessed more storm water discharging to our stormwater system. We feel this is due to more impermeable surface which has increased stormwater runoff and the amount of precipitation seems to have increased per rain event.

Wright County is also experiencing a large growth of aging residents. This adds to the concern of residents that will need assistance during a disaster.

In addition, we have noticed an erosion of manmade levees on the Mississippi River where we border Sherburne County. This increases the potential for flooding concern in the future.

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 social media pages. We also use an auto-reverse notification system called RAVE to call residents and provide them critical weather information. This is an opt in service.

- 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 place on the homepage of our county website with a link to the county's sign-up page. Our county has a Civic Alert service called RAVE that residents can sign up for.

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

Yes. Wright County Planning & Zoning Department maintains the floodplain management ordinance (Section 155.056, Land Use and Zoning) 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 Wright County. The Planning and Zoning Office can assist county residents in determining whether their property is affected by an officially mapped flood area.

Wright County Zoning Ordinance - Section 155.057, Shoreland Zoning Regulations additionally establish regulations for the control the density and location of developments in the shorelands of the public waters of the county in order to preserve the water quality and the natural characteristics of the shorelands and public waters in the county. These regulations conform to the standards and requirements of the state's Shoreland Management Act.

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

Wright County participates in Severe Weather statements and notifications, Severe Weather public education, and utilizes trained law enforcement and fire fighters as storm spotters. Dispatch monitors emergency weather notifications from the NWS and remotely activate the 51 outdoor warning sirens in the County.

Wright County Public Health works with licensed manufactured home parks 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.

Wright County Highway Department maintains a 5-year plan that identifies and schedules road improvement projects that include measures for flood mitigation. The current plan is for 2021-2025.

The Wright County Highway Department is responsible for the removal of snow and ice control for county roads. The department completes its snow removal process in accordance with the Wright County Hwy Department Snow Removal Policy. MNDOT removes snow from State Highways as well as disperses salt/sand as needed.

The Wright County Water Plan (2006-2015) is written and overseen by the Wright Soil and Water Conservation District. The plan identifies the primary water planning issues, which include erosion and sediment control, stormwater management, and development pressure.

Wright 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.

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

Wright County staff related to mitigation efforts include two full-time emergency managers within the Wright County Sheriff's Office, a County Engineer that oversees transportation planning and improvements, a Planning and Zoning Director, and a Public Health Director.

We also work with the local Wright County Fire Chiefs and Wright County EMS group, as well as our local Wright County Emergency Manager Assistance Compact which includes public health and city emergency managers and meetings on a quarterly basis.

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

Wright County participates in the National Weather Service's annual Severe Winter/Spring Weather Awareness Week by posting severe weather awareness information out on our county website and social media pages.

There are 51 outdoor warning sirens located in Wright County which are tested on a monthly basis by the Wright County Sheriff's Office on the first Wednesday of the month.

Our local schools all practices tornado drills on an annual basis.

Quarterly we work with our county Public Information Officer to send out various preparedness messages through our website and social media pages.

Wright 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.

Wright County/Wright 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.

Wright 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.

Wright 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. Wright County also responds to emergency requests to clear right of way from storm damage.

Wright County Emergency Management participates in regional emergency management planning and exercises for HSEM Region 4.

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

Wright County has a strong relationship with the National Weather Service – Twin Cities/Chanhassen 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.

Wright County Emergency Management also works with the National Weather Service to offer SkyWarn Storm Spotter training on an annual basis to local fire and law enforcement departments and local residents that wish to be trained as spotters.

We partner with the American Red Cross to establish MOU's with facilities in the county to serve as official shelter locations that meet ARC shelter requirements for space and accessibility.

We work with the Wright SWCD as needed on related flood mitigation planning or project efforts within the county.

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)

XCEL Energy and Wright Hennepin Electric COOP

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

None that we do not already have at this time.

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.

Continue to promote residents to be prepared for emergencies, to have NOAA weather radios, and to sign up for the county's RAVE emergency notification system and Wright County social media to receive emergency notifications and other information.

Work with municipal and rural electric coops to encourage them to address burying powerlines or strengthening power poles to avoid power outages from high wind events and storms.

Continue to implement flood mitigation projects for roads, culverts, etc. as needed (Wright County Highway Department).

Encourage long-term care facilities that house senior citizens or other vulnerable populations to have emergency plans and generators in place to deal with severe weather, power outages, and extreme temperatures.

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.

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.

Some roads, bridges, and culverts within Wright 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.

PART D: SURVEY PARTICIPANTS

Seth Hansen, Emergency Management Director
Richard Ward, Emergency Management Deputy Director
Barry Rhineberger, Planning and Zoning Administrator
Virgil Hawkins, P.E., Wright County Engineer
Chad Hausmann, Assistant Highway Engineer
Nathaniel Helgenson, Highway Maintenance Superintendent

CITY OF ALBERTVILLE

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	High	No change
Windstorms	X	High	No change
Lightning	X	High	No change
Hail			
Flooding	X	Moderate	No change
Extreme Cold			
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.

The last 5 years we have fortunately seen much less damage from storms than the 5-years prior. In the 2010's Albertville had recorded damage from severe storms, every other year, for 5 or 6 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</u> community assets are susceptible to damage or loss from hazard events.
Flooding	Portions of the "Albertville Villas" and areas along 57 th St NE are very prone to local flooding with heavy rain events. The city storm sewer infrastructure in these older areas is not able to keep up with these events. During a recent storm our waste water plant was overrun, and storm water had to be diverted into two holding ponds. Some of the areas prone to flooding are near our senior citizen townhome developments.

Winter Storms	Much of the electrical power in the older part of Albertville is all carried by overhead power lines and electrical poles. Many of these poles are only being replaced during road construction projects, and not run under ground.
Tornadoes	Much of the electrical power in the older part of Albertville is all carried by overhead power lines and electrical poles. Many of these poles are only being replaced during road construction projects, and not run under ground.
Windstorms	Much of the electrical power in the older part of Albertville is all carried by overhead power lines and electrical poles. Many of these poles are only being replaced during road construction projects, and not run under ground.

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.

The city has constructed large flood mitigation basins to help protect flood prone properties. The city has enlarged and oversized several of its critical storm sewer outfalls and graded and improved several critical stormwater ditches. Storm sewer conveyance systems are replaced and upsized as part of road construction projects.

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.

Residential, commercial, and industrial construction in Albertville are at an all-time high. A 70-home residential neighborhood is underway, and a 180-unit multi-family development will be breaking ground in summer 2022 as well as several large industrial and commercial buildings that are currently being constructed.

We have both an assisted living facility, and two large concentrations of senior citizen townhouse neighborhoods in the city.

With an increase in population and the construction of more homes and commercial properties, we have also witnessed more storm water discharging to our storm water system.

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, quarterly city newsletter, and both our city and Fire Department Facebook Pages. The city also has an Instagram page, and the Fire Department has a Twitter 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, there is link to the Wright County Emergency Alert Information page on our city website, under the Fire Department page.

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

The city of Albertville is participating in NFIP but has no FEMA mapped high risk areas. The city does have zoning and development regulations in place that set minimum structure elevations to prevent flooding (Ordinance No. 2011-007). All new construction is required to meet a minimum freeboard requirement above the area emergency overflow and/or adjacent high-water level. Since the city does participate in the NFIP, this means that anyone who would like to purchase flood insurance has the option to buy an NFIP backed policy, and that if there is a bigger flood and there is a presidential declaration, the city is eligible for the cost share assistance from FEMA for repairs to roads and other public infrastructure.

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

The city has a capital improvement plan used to plan and budget for infrastructure. Programmed infrastructure improvements include capacity improvements for sewer systems, lift station improvements, generator improvements, etc.

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

Our Fire Chief is designated as the Emergency Management Director of the city. The city Council also has an Emergency Management Committee consisting of the Fire Chief and two city Council members. Our city administrator is also the city engineer and is active with the public works supervisor and wastewater supervisor on working on resolving any long-term flooding issues.

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

Our city works with Wright County to participate in the National Weather Service's annual Severe Winter/Spring Weather Awareness Week by posting severe weather awareness information on our city and Fire Department Facebook page. Our Fire Chief is a Weather Ready Nation Ambassador. Our local schools practice tornado drills on an annual basis.

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. We have also worked closely with the county highway department and MnDOT engineers on local flood mitigation projects for new roads.

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)

Both Xcel Energy and Wright-Hennepin service the city.

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

Yes, the Fire Department needs a stationary back-up power generator. The city needs two portable back-up generators to help power our lift stations.

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 Fire Department needs a stationary back-up power generator. The city needs two portable back-up generators to help power our lift stations.

The city will need assistance from our State and County construction partners, to bury overhead power lines and increase our storm water capacity, during future road / infrastructure projects.

The city has multiple storm water ditches that need improvement.

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. Funding for local mitigation measures is always a struggle for a small city, such as Albertville.

PART D: SURVEY PARTICIPANTS

Eric Bullen, Fire Chief
Adam Nafstad, City Administrator

CITY OF ANNANDALE

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</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	High	No Change
Tornadoes	X	High	No Change
Windstorms	X	High	No Change
Lightning	X	Moderate	No Change
Hail			
Flooding			
Extreme Cold	X	High	No Change
Extreme Heat			
Drought			
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.

Private water service lines have frozen due to extreme cold.

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.
Flooding/Rain	The city has I&I in our sanitary sewer system. During periods of heavy rain, the sanitary sewer collection system could get overloaded.
Ice Storms, Blizzards	Much of the city's 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 with approximately 300 units. They have a storm shelter, but the units are susceptible to wind damage. Many homes in new developments 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. In the past we have experienced frozen water services from extended extreme cold.
Lighting	The city has 10 lift stations that pump sanitary sewer to the treatment facility. If any of these are damaged by lightning or storm, the city would have issues with backups with sanitary sewer service.

- 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 2020 the city fixed water service lines that were prone to freezing in conjunction with a reconstruction project.

In 2021, the city removed a culvert from the main stormwater outlet for town which removed risk that the stormwater would back up during wet weather event.

The city is continuing to work on reducing I&I with Sewer Compliance and Sump Pump inspection program.

- 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.**

Since 2017 the city has constructed 77 homes, which increases the cost of damage due to tornado, wind or hail. We have also seen an increase of slab-on-grade construction, which leaves some residents more vulnerable to wind events without a basement to take cover in.

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 website and Facebook. We also provide inserts in monthly utility bills to keep residents informed.

- 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 promoted this on the city’s Facebook page and on our website.

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

Yes, the city participates in the NFIP but does not have any FEMA-mapped high-risk areas. The city code that references these items is Chapter 150.

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

The city requires a sump pump inspection and sewer compliance at the time of sale to mitigate against overload of the city’s I&I.

The city has a Comprehensive Plan that is designed to plan for future growth of the city and appropriate land uses.

The city works closely with the owners of the Mobile Home Park to ensure they are in compliance with MDH standards.

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

The city's Fire Chief is the designated Emergency Manager. The city Engineer and Public Works Director address road maintenance issues for flooding and ensure the city's stormwater system is operating properly.

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

The city continues to educate residents on reducing infiltration from service lines and sump pumps.

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

The city primarily uses local funds to address mitigation projects, such as management of stormwater ponds and ditches.

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)

Xcel Energy

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

Water Treatment Facility, Fire Hall (Command Center), Wastewater Treatment Facility Lift Stations, and Training Center.

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 would like to see the overhead electrical buried.

Add a portable generator for city Hall.

Continued public education with residents.

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

Kelly Hinnenkamp, City Administrator
 Joe Haller, Public Works Director
 Chief Standafer, Police Chief
 Jacob Thunander, Community Development Director

CITY OF BUFFALO

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</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	High	No change
Tornadoes	X	High	No change
Windstorms	X	High	No Change
Lightning			
Hail			
Flooding	X	Moderate	No change
Extreme Cold	X	Moderate	No Change
Extreme Heat			
Drought	X	Moderate	Increased
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.

In March of 2019 we experienced localized flooding of streets and area lakes had minor flooding. This flooding did cause some minor damage to the city parks and walking paths. We have had several high wind events over the last few years. Each of these events have damaged trees and power lines. In May of 2022, we again had heavy rains that caused localized flooding in areas where the storm drains were overwhelmed. This storm also damaged trees and power lines.

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.
Flooding	We have homes along Lake Pulaski that require sand bagging when the lake level rises. Lake Pulaski requires pumping to keep the lake level controlled to prevent flooding. This pumping is only allowed when Buffalo Lake is at a low enough level to accept water from Lake Pulaski.
Ice Storms, Blizzards	15% of the city owned electric infrastructure is overhead and a good portion of the city is provided power by an electrical coop with overhead power. These lines are prone to failure in ice and windstorms.
Windstorms and Tornadoes	Overhead power lines are prone to damage from wind and falling trees. We have 2 trailer parks that do not have storm shelters. Residents need to find shelter in other locations during severe storms. Our city is expanding, and we have a couple of areas that have poor siren coverage. Sirens need to be installed in those areas.
Extreme Cold	We have several nursing homes and assisted living facilities that have a large population of senior citizens that can be vulnerable during extreme cold events. We have had a major gas outage in the past which makes this a concern.
Drought	The aquifer that the city of Buffalo gets it water from is limited. The city needs to limit water usage during dry years so the water levels in the aquifer are maintained at an acceptable level.

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.

Public works has a maintenance program to keep the storm sewers clean of debris. They also have procedures in place to verify that all the holding ponds are functioning correctly.

The city code has regulations in place to limit the amount of impervious surface area within the city.

The wastewater department has a program in place to inspect sanitary lines. They have a program in place to televise clay tiles and jet all sanitary lines.

The electric utilities continue to bury power lines to protect them from storm damage.

The city has a shoreline management ordinance.

All residents and businesses have been encouraged to enroll in the county notification system.

- 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.**

Buffalo is a growing community and we have seen a large population growth. This will cause an increase in cost damage due to large storms. The population growth has caused larger flows in both sanitary and storm water discharge. We have had an increase in assisted care facilities. These facilities require more resources during emergency events.

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 the city’s website and Facebook accounts. We mail inserts or notices along with the resident’s utility bill. We provide information on the cities local cable channel and during council meetings.

- 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 and information on the city website. The county website also has information.

- 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 an ordinance in place that is enforced. Division 3. – Shoreland Overlay District Sec. 50-112 to Sec. 50-137.

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

The city is working on their 2040 Comprehensive Plan that will plan for future growth and land use. The plan will address conservation and sustainable storm water management. The city also has a city/county emergency operations plan. The city has adopted regulations to minimize flood losses.

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

We have a city engineer and a public works director that address road maintenance issues for flooding (culverts, repetitive flooding). We have our own municipal utility that is responsible for mitigating against power outages. We work closely with the Wright County Emergency Management team. Our Fire Chief pre-plans buildings and reviews the emergency plans for the hospital, schools, and nursing homes.

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

Our schools and care facilities practice tornado drills.

Each fall our Public Works Department clears leaves and debris from our city streets and maintain our holding ponds to prevent flooding.

The city has a pump in place to lower the water level of Lake Pulaski if its level gets high.

The electric utilities will continue to bury power lines to protect them from wind and ice.

The city has a contract in place for maintenance and testing of the severe weather sirens.

The city has a back-up generator maintenance contract for maintenance and testing of all the city facilities that have generators.

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

The city mainly uses its own budget for hazard mitigation but has also used the following for funding assistance or grants: Wright Soil and Water Conservation District (SWCD), State of Minnesota Department of Transportation, and Wright County MN for joint road projects.

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

Yes. Our EPA and MN State, Risk, and Resilience Plan is ever evolving and growing. We have drought protocols that must be followed. There are several levels of action to be taken as to the severity of a drought. Continuing efforts to adapt and conserve water through capital improvements in our infrastructure and development as our community grows. Efficiencies and improvements to our water and water reclamation facilities to resist storms, flooding and reduce power usage. Improvements to our electric grid and an additional substation are planned to make our system more resilient to storms, heat, and a growing energy demand. As new housing and commercial developments are being added to our community, requirements are in place to use efficient water and electrical fixtures and devices to lower the impact on our infrastructure. Community outreach and education is viewed as one of our greatest opportunities to prepare for our future and climate change. As we grow our plan, so will our residents' knowledge as to how we all can prepare and contribute to what lies ahead.

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

We use both municipal and a rural electric coop.

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

We have several lift stations that do not have back-up generators. Our community center and civic center could also use generators. Both facilities could be used as emergency shelters if many residents need to be relocated.

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 will need to continue to upgrade the cities severe weather sirens.

Electric utilities would like to add a 2nd substation so that they can continue to provide power if the main substation is damaged.

The 2 trailer parks need storm shelters.

Improvements to our water and water reclamation facilities to resist storms, flooding and reduce power usage.

Continue to educate the public on water conservation, severe weather preparation, and using the county's emergency notification system.

Obtain generator backup power for lift stations, community center and civic center.

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

We have limited financial resources to address local mitigation projects.

PART D: SURVEY PARTICIPANTS

John Harnois, Fire Chief

Ray Wurm, Water Reclamation Supervisor

Cara Hesse, Chief Water Operator

Craig Boeve, GIS/Engineering Coordinator

Terry Nelson, Electric Utilities

David Kelly, Community Planning and Economic Development Director

CITY OF CLEARWATER

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	High	No Change
Tornadoes	X	Moderate	Increased
Windstorms	X	Moderate	Increased
Lightning		Low	No Change
Hail		Low	No Change
Flooding	X	Moderate	Increased
Extreme Cold		Low	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.

We have experienced high wind events that have brought down trees and branches along with causing power outages.

We have had heavy rain events that have caused localized flooding of storm drains and streets.

Each winter there are one or more ice storms or blizzards that result in motor vehicle accidents in the area and create the potential for power/heat outages.

In addition, extreme cold or extreme temperature changes can cause water line breaks.

- 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.
Winter Storms	<p>Poor road conditions due to weather can cause vehicle crashes. At times, these have included vehicles hitting electric poles or fire hydrants.</p> <p>The Clearwater Estates neighborhood has private water/sewer lines which are not at standard depths that the city recommends. This causes freezing of some lines in the winter. Since they are connected to city mains, when they freeze, it can cause backups or broken pipes at the city main.</p> <p>Winter storms can cause power outages, which results in closures at City Hall. Our server system and internet system do not have a generator to keep them operational. Power outages can also affect water and sewer systems that do not have a generator or require a manual switchover to the generators. Power outages impact heat and water resources for residents and businesses.</p>
Tornadoes/High Winds	<p>Our newer housing development south of I-94 requires an additional storm siren. Residents have asked for this, but funding has been an issue. The siren north of I-94 in the older area of town is owned/maintained by Xcel Energy.</p> <p>We have a lot of overhead electric lines in the city. Storms create regular risk for power outages. These can impact water/sewer operations if they are not resolved quickly.</p> <p>There are a lot of older trees in city limits, particularly the areas north of I-94. These are at risk to come down in storms/high winds.</p>
Flooding	<p>Storms and spring thaws cause both street flooding and some residential flooding in areas without storm sewers. Our public works staff have had to pump water from some neighborhoods to prevent flooding of homes/basements.</p> <p>Our city has two rivers that run through it, so river flooding is a moderate concern, however, most buildings are built at a height to reduce this risk.</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.

The city has upgraded generators for our emergency teams and discussed options to add more to address power outages. We have generators for our Fire Department and our water/sewer lift stations.

The city reviews storm sewer options when completing new road projects to try to minimize spring and storm flooding.

The city participates in the FEMA flood program (NFIP) and reviews the ordinance requirements to ensure no new construction goes into vulnerable areas without meeting flood prevention requirements.

The city has implemented a text alert system for emergency response and have also posted links on our Facebook page for the county's alert system.

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.

Recent population growth along with commercial growth has increased our vulnerability.

We have a larger number of heavy vehicles/semi-trucks on the road due to commercial transportation businesses, which increases the road hazards from any weather-related events.

We have also been building about 15 new homes per year, plus a new apartment building. Each new structure creates a new opportunity for damage from tornadoes/wind/ice/hail.

Our neighborhood closest to the Mississippi River has a lot of seniors and is more vulnerable to flooding than other areas. Because much of the infrastructure there is private/HOA, the city has concerns about its age and level of maintenance.

We are also concerned about the age of private infrastructure in the area. The electric grid and cable/internet services are a concern. Loss of electricity and internet services can impact heating/cooling, water resources, food access, etc. Because many businesses now operate on a point-of-sale electronic system, they close or can't process transactions without electricity. So, local businesses, including food businesses, shut down. Local water/sewer run on electric pumps. Generators can help, but only until they run out of gas.

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.

Text alerts, city website, Facebook. This is mainly used for snow-plowing emergencies. The city has a single tornado siren owned by Xcel Energy to alert for other severe weather events.

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?

The city has posted a link on our Facebook page to the county's sign-up page for alerts. The city also has our own text alert system that residents can sign-up for.

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

Yes, the city participates in the NFIP and has a flood plain ordinance in place that is enforced. See City Code Chapter 109 on our website www.clearwatercity.com. The city reviews the ordinance requirements to ensure no new construction goes into vulnerable areas without meeting flood prevention requirements.

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 and transportation plan in place to govern land use, including flood-prone areas.

The city and our joint sewer authority have alarm systems and generators to address storms/power outages.

We also have an overflow area for high sewer/I&I inflow periods, if needed.

Xcel Energy operates a local tornado siren to warn of storms.

The Fire & Rescue Department also addresses local emergencies in their operating guidelines.

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

We have a government-affairs contact at Xcel Energy who helps communicate updates in the event of power outages related to weather.

Our Mayor and Fire Chief are the designated Emergency Managers and work with Wright County's emergency management team in the event of a regional emergency.

The local Fire and Rescue Service responds to local emergency calls and weather alerts.

We have on-call public works staff who regularly monitor water/sewer services and respond to emergency alarms in the event of an outage, provide services to address localized flooding of roads or storm sewers, and provide snow/ice control.

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

The city recently launched a text-alert system to send emergency messages to residents related to weather or project work.

We are also working on a native plantings project with Wright County's SWCD.

We also have ordinance provisions that are meant to help conserve water during drought conditions and limit burning/fires during dry or high-wind conditions.

We post messages to our website and Facebook page from other agencies when there are burning restrictions, water reduction measures, or other actions needed from residents.

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

The city is working with Wright County's SWCD on a native plantings project to restore natural areas and assist with storm water management.

We have also worked with the MN DNR on erosion issues along the Clearwater River near our city parks.

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

None that I am aware of.

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

Xcel Energy and Wright-Hennepin Electric.

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

We currently do not have any generator backup power for City Hall operations, so need to close down for power outages.

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.**

Native Plantings Project, water conservation ordinance.

Generator for City Hall.

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

Residents of the housing development south of I-94 have repeatedly asked for an additional tornado siren in their neighborhood, however, the city has not been able to meet this need due to cost of the equipment, installation, and ongoing maintenance.

We have some neighborhoods where storm sewer facilities are not yet installed due to cost. These areas have localized flooding every spring until frost is out of the ground.

Not all residents have access to technology/smart phones, etc. The methods used to communicate emergency information very often does not reach them.

PART D: SURVEY PARTICIPANTS

Annita Smythe, City Administrator
Deb Petty, Deputy Clerk
Sarah Johnson, Accountant
John Schmidt, Public Works Supervisor

CITY OF COKATO

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)		Low	No change
Tornadoes	X	Low	No change
Windstorms	X	Low	No change
Lightning		Low	No change
Hail		Low	No change
Flooding	X	Low	No change
Extreme Cold		Low	No change
Extreme Heat		Low	No change
Drought		Low	No change
Wildfire		Low	No change
Landslides		Not applicable	Not applicable
Dam Failure		Not applicable	Not applicable

- 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 2017, a hailstorm moved through the community. There was associated hail damage to structures, siding, and roofs.

- 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.
Tornadoes	Mobile home park residents in two mobile home park shelters are more vulnerable to tornado 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.

Flooding	The city is taking into account possible flooding near Sucker Creek that runs through the community.
-----------------	--

- 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 2020 and 2021, the city had two street projects that were completed. The city completed a street reconstruction project which included improving the sanitary sewer lines, water lines and underdrains were placed in the street. Homeowners were encouraged to put sump pumps and drain tiles into the storm sewer system and not the sanitary sewer system. This helps the sanitary sewer system during heavy rain and inflow events.

The city has also increased use of our website and Facebook page to communicate with residents relating to issues and letting them know what is going on within the community.

The city of Cokato is having its consulting engineer Bolton and Menk study the Sucker Creek area and its floodway and 100-year flood areas.

- 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.**

Population growth has been minimal, and conditions have remained consistent therefore vulnerability has not changed.

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 uses our city website, Facebook and location cable access television to disseminate information 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?**

No, our city does not currently do this.

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

Yes, the city does participate in the NFIP and has a Floodplain Ordinance for the community.

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

The city has an ordinance that prohibits Sump Pumps and Drain Tiles from going into the sanitary sewer system which helps prevent backups.

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

The city Fire Chief is the city of Cokato's designated Emergency Manager. The city engineer and public works director address road maintenance issues for flooding (culverts, repetitive flooding).

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

The city Fire Department has members that are trained weather spotters.

The City Hall is unlocked by the fire department for residents of the mobile home parks to take shelter in severe weather.

Public Works has staff working, or on call year-round to monitor public water, sanitary sewer, and storm water facilities as well.

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 stormwater issues, however when applicable the city will bring in the county, State or local SWCD. The city of Cokato is having its consulting engineer Bolton and Menk study the Sucker Creek area and its floodway and 100-year flood areas.

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)

Xcel Energy and Wright-Hennepin Cooperative

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

None needed. The city currently has generators at the city water facilities, Sewer facilities and Fire Hall.

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 would like to work on additional stormwater ponds in the community that would help retain stormwater during large rain events in the community.

The city will continue to look for ways to reline sanitary sewer lines and replace them to reduce the Inflow and Infiltration.

We will continue to monitor and test the city sirens.

The city of Cokato is having its consulting engineer Bolton and Menk study the Sucker Creek area and its floodway and 100-year flood areas.

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

The necessary funding to accomplish the stormwater projects and the sanitary sewer line replacements in the community is a large financial commitment.

PART D: SURVEY PARTICIPANTS

Brad Potter, City Administrator
 Megan Gustafson, City Clerk
 Jeff DeGrote, Public Works Director

CITY OF DELANO

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</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)			
Tornadoes	X	Low	No Change
Windstorms	X	Medium	No Change
Lightning	X	Low	No Change
Hail	X	Medium	No Change
Flooding	X	High	Increased
Extreme Cold			
Extreme Heat			
Drought			
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.

In the last 5 years there have seen sporadic events that have impacted the community, including windstorms that have downed trees and nearby hail storms (not immediately within our jurisdiction that have caused substantial damage).

Our most frequent emergencies in Delano relate to flooding – both flash flooding from extreme rain events and flooding of the South Fork of the Crow River. In the past 5 years, there was only one Crow River flood incident in March of 2019 that rose to major action stage. In the prior years, however, we had three significant river level events that activated our emergency management protocols in 2010, 2011, and 2014. All four of those years between 2010-2019 saw river levels rising up to or within one foot of 100-year flood levels. We expect to see an increased frequency of these events compared to historic outcomes in the future.

Localized flash flooding is also becoming a greater concern. The most significant emergency event in recent years occurred in June 2002, but significant rainfall events that exceed standard levels of engineering design seem to be occurring with a greater frequency. Being a river town with many areas of natural water collection, these flash flooding events present a concern in the future for emergency management.

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 community assets</u> are susceptible to damage or loss from hazard events.
Flooding	<p>The city’s earthen levee system consists primarily of an uncertified levy that was constructed in 1969. The city has acted to replace and/or fortify a number of areas that have shown signs of weakness in past flooding events, but the majority of original construction remains. The city continues to monitor, evaluate, and maintain the levee to maintain its effectiveness.</p> <p>There are residential areas along the Crow River, particularly along River Street south of downtown, that are threatened with potential flooding from river floods.</p> <p>A significant portion of the city’s downtown is located just above the 100-year floodplain elevation. In 2015 the city constructed a removable floodwall system to provide additional protection for downtown. The floodwall has been deployed on at least two occasions in preparation for potential flooding, but to date hasn’t been fully tested in action.</p> <p>The city has a number of neighborhoods that were historically constructed to an engineering standard less than current design would dictate. As a result, storm water capacity and emergency overflow designs are susceptible to flash</p>

	flooding from extreme rain events. In these situations, failure of critical infrastructure due to events exceeding design limits can cause property and infrastructure damage.
Windstorms and Tornadoes	Much of the city is heavily forested with mature trees within neighborhoods, parks, and developed areas. The threat of heavy windstorms and tornadoes – in addition to the potential direct impacts – also present the potential for indirect damage due to falling trees.
Hail and Lightning	Similar to windstorms and tornadoes, the potential of spring/summer storms to create hail and lighting impacts remains an emergency concern. With growth and the addition of new homes and businesses, the potential community impacts from these potential natural disasters increases.

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.

The city has taken many proactive actions to reduce potential for loss during natural disaster events. Among the many actions, the city has purchased and removed properties from the floodplain, fortified levees, and installed new gate valves within the storm water system to replace aging/ineffective floodgates.

The city has also constructed emergency water pumping stations on both sides of the river to handle flash flooding events that may occur simultaneous with high river water events.

The city has also implemented new FEMA flood elevation standards within its development review process, requiring additional protections prior to actual implementation by FEMA.

The city and its Municipal Utility continue to follow past practice of burying all power lines within the community, reducing potential loss from windstorms, tornadoes, and winter storms.

The city has completed street reconstruction projects in 2013, 2016, and 2020 which improved stormwater inlet and conveyance capacity.

The city has backup generators in place for electric, water, and sanitary sewer systems. The storm water pumping stations also have the ability for quick connection to emergency power generation.

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.

The city continues to see increased occurrences of flooding due to external circumstances and more frequent high intensity rain events. New development is also increasing, but developments are using current engineering standards for design and therefore this alone is not considered an increase of vulnerability from flooding in particular. The added physical improvements and additional property value does raise the potential of loss in potential hail, lightning, windstorm, tornado, and winter storms.

Localized flash flooding is also becoming a greater concern. Significant rainfall events that exceed standard levels of engineering design seem to be occurring with a greater frequency. Being a river town with many areas of natural water collection, these flash flooding events present a concern in the future for emergency management.

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 maintains an emergency siren network and uses our website and social media pages (Facebook, Twitter, Instagram, and Nextdoor), paper and electronic newsletters to help educate the community. The city also recognizes Severe Weather Awareness Week, publishing information and reminders about local resources in various communication pieces.

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, the city has a variety of regular communication methods including its monthly and quarterly newsletters, Facebook, Twitter, Instagram, Nextdoor, website, and a community message board sign. The city encourages residents through these methods to sign up for the county's emergency notification system.

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

Yes, the city participates in the NFIP and has a Floodplain Ordinance that it enforces and uses to test all development proposals.

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 and is currently in process of updating that plan. The Comprehensive Plan guides future physical growth of the city and appropriate land uses. It also contains planning for transportation, storm water management, utilities, and the Crow River floodplain. One of the primary policy statements in this plan addresses the reduction of community impacts from natural hazards.

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

The city's Fire Chief is currently designated as the Emergency Management Director. The mayor and city council lead a review of emergency management practices and periodically conduct tabletop exercises to practice roles and process in the event of an emergency. The city administrator, city engineer, administrative services coordinator, and other staff also perform key leadership roles during emergency management efforts. The frequency of river flooding also allows the city to engage its emergency response process on a regular basis.

The city also works with Wright County Emergency Management and other neighboring communities in the event of natural hazards. The city also has partnerships in place with the Army Corp of Engineers, MN DNR, and other state and federal agencies.

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

The city has a variety of maintenance programs and BMP's that are part of normal Public Works operations to help improve mitigation efforts. These practices include regular maintenance of storm water pumping stations, testing of the downtown removable floodwall system, cleaning of storm water catch basins and culverts, and ditch cleaning.

The city participates in Severe Weather Awareness week and conducts a public education campaign. The Delano Public School system regularly conducts tornado drills.

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

The city has worked very well with the MN DNR Flood Hazard Mitigation Grant Assistance program since 2002, using joint funding to purchase and remove many structures from the floodplain and improve the city's levee system.

The city has also received funding partnership from FEMA for the construction of emergency pumping stations on both the east and west sides of the Crow River.

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's Comprehensive Plan update, currently in progress, will likely add policy guidelines and plan adaptations related to climate change.

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

Delano Municipal Utilities.

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

None needed. The city has backup generators in place for electric, water, and sanitary sewer systems. The storm water pumping stations also have the ability for quick connection to emergency power generation.

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.

Potential future mitigation activities would include installing additional automated pumping stations in critical areas, rehabilitation of levee systems, and additional removal of properties

within the floodplain area. In older areas of town, updates to the storm water infrastructure to provide greater capacity could help undersized areas.

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

The city has invested heavily over the past 20 years in natural hazard mitigation, particularly along the Crow River. The biggest barrier to implementing additional local mitigation measures is funding. The city has leveraged outside funding in the past to cover greater than 50% of hazard mitigation efforts and similar funding partnerships will be needed to implement additional measures.

PART D: SURVEY PARTICIPANTS

Phil Kern, City Administrator
 Bob Van Lith, Fire Chief/Emergency Management Director
 Paula Bauman, Administrative Services Coordinator
 Shawn Louwagie, City Engineer

CITY OF HANOVER

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</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	High	Increased
Tornadoes	X	High	Increased
Windstorms	X	High	Increased
Lightning		Moderate	
Hail	X	Moderate	
Flooding	X	High	
Extreme Cold		Low	
Extreme Heat		Low	
Drought		Moderate	
Wildfire		Low	
Landslides		Low	
Dam Failure		Low	

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.

None noted.

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.
Flooding	<p>A portion of the city along Crow River and the large wetland complex in the middle of the city are covered under FEMA 100-year and 500-year floodplains. There are several existing buildings which are within the FEMA 100-year floodplain and are at risk of flooding during larger storm events. Any sanitary infrastructure within the 100-year floodplain is also susceptible to flooding.</p> <p>There are also three stormwater structures located within the FEMA floodplain, resulting in flooding problems at Mill Pond Trail during high water level conditions. The 48" culvert and weir under CSAH 23 connects the wetland complex in the city with the Crow River and is within the FEMA floodplain and may be susceptible to flooding/additional maintenance to maintain flow between the two waterbodies.</p> <p>There were several areas identified in the city's Comprehensive Water Resource Management Plan (CWRMP) that were noted for flooding issues or concerns:</p> <ul style="list-style-type: none"> - High water levels occur in a landlocked wetland near Jonquil Lane with the potential of flooding adjacent properties. - The Quail Pass development is located within a landlocked basin that will need an outlet when additional development occurs or may cause flooding issues. - The Hilltop Bar Ravine has flooding and ravine erosion concerns due to stormwater back up issues. - Repeated spring flooding has been identified on a property near the intersection of River Road NE and 12th Street. - Several other sub-watersheds/wetlands are identified as landlocked with the potential for flooding risks. <p>The existing bridge over the Crow River in the city may be vulnerable to increased flooding risk and should be monitored in the future for potential vulnerabilities.</p>
Windstorms/Tornadoes	<p>Our city fire chief notes an event from a few years back where overhead power lines were damaged in the area and brought down the power grid in the area for some time. Many overhead lines still exist in Hanover which leaves the community susceptible to additional damage and handicap with emergency response and recovery times due to likelihood of loss of power.</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.**

The city worked with WSB in 2017 to create a Storm Water Asset Management Program (SWAMP) which helps to inventory and track stormwater infrastructure and BMPs in the city. SWAMP is also used to identify potential BMPs in need of maintenance or improvements which can reduce the risk of flooding to adjacent properties.

City ordinances now require power lines to be buried in new developments.

- 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.**

As noted in the city’s Comprehensive Plan, the city has been experiencing a growth pattern with respect to population since the 1980s and between 2010-2017 experienced an 18% population growth. This increase in population is reflected by an increase in residential developments within the community. Multiple large residential developments (200+ unit developments) have been constructed in the last several years or are in construction currently. The new developments would increase the cost of damage due to a tornado, wind or hail. While new development is required to meet the city’s stormwater management requirements, the additional impervious from new development can lead to additional runoff in the city, which can put more strain on existing stormwater infrastructure.

In addition, higher precipitation rain events have become more frequent in the last 5-10 years.

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 posting and information on city website around spring Severe Weather Awareness Week. Also post on Facebook when hazards are advertised like threat of severe storms, excess heat, drought, etc. Required stormwater permit public education pieces posted on website.

- 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 – County’s system

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

Yes. The city does participate in the National Flood Insurance Program. The city has a floodplain ordinance in place that is enforced (Hanover Code of Ordinances, Section 10.32, Floodplain Overlay District). This ordinance regulates development in the flood hazard areas of the City of Hanover. The city reviews all proposed development and redevelopment within the city to

confirm sites meet the city's floodplain ordinances where applicable.

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

The city has a 20-year Comprehensive Plan that was last updated in 2018 which plans for the future development and growth within the city and helps to define appropriate land uses. The city has a Pavement Management Plan (last updated 2019) which is used to schedule and plan road improvements projects, which are opportunities to analyze and improve existing storm sewer infrastructure to reduce the risk of roadway flooding in the city.

The city also has a Comprehensive Water Resource Management Plan (CWRMP) which identifies areas of risk for flooding as well as other water relate concerns. The CWRMP also identifies programs and projects to help address the issues identified in the Plan. The city's Ordinances include design standards required for stormwater management and erosion and sediment control which must be met for all new development and redevelopment within the city. One of these requirements is to limit the runoff rate for large site projects for the 100-year storm event to 0.1 cubic foot per second per acre, which is intended to help reduce flooding risks throughout the city and reduce the strain on existing infrastructure. The city also has floodplain and shoreland ordinances which layout requirements for development within these areas in the city.

The city is also a Municipal Separate Storm Sewer Systems (MS4) permit holder and implements and follows the MS4 permit requirements. The city went through the MS4 permit reauthorization process in 2021.

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

The city has a city engineer, public works supervisor, and public works support staff who help manage and address roadway or utility issues which impact flood risk on the roadways such as clearing culverts and inlets and doing maintenance on infrastructure as needed.

Working to identify property owners who may be looking to sell in floodplain so that property could become park/greenspace.

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

The city hosts at least one public involvement activity centered around pollution prevention or water quality to help connect with the public on the importance of these topics, in the past these have been done with a site cleanup project.

The city posts information on their website on potential spring flooding and various preparedness tips for reducing the risk of flooding and what to do in case of flooding.

Maximum impervious standards are in place within the city's zoning ordinance as well broader Shoreland and Floodplain sections of the zoning ordinance. Standards comply with State DNR requirements.

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 flood risk projects, such as street reconstruction, culvert replacement, or ditch improvement work.

The city has also worked with Wright and Hennepin counties on county roadway projects, typically which include drainage improvements.

The city also coordinated with FEMA in 2016 when updates to the Hennepin County Flood Insurance Study and maps were released to notify residents of the updated floodplain boundaries and elevations.

The city also worked with the MN DNR to update their floodplain ordinance in lieu of these updates to the floodplain mapping.

The city's EDA has been growing a capital fund which may be able to help with acquisition and/or redevelopment of some properties within the floodplain in the future should opportunity arise.

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)

Xcel Energy and Wright Hennepin Electric

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

Yes – the fire department needs a backup generator and functions as our local emergency response headquarters.

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 is in need for additional storm sewer upgrades and may need additional pumps to help address flooding risks, especially for the currently landlocked areas.

Potentially purchase some properties within the floodplain to help mitigate stormwater and floodplain issues. We are working to identify property owners who may be looking to sell in floodplain so that property could become park/greenspace.

the fire department needs a backup generator and functions as our local emergency response headquarters.

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

The city would like to update their Comprehensive Water Resource Management Plan to address consideration for future hazard events surrounding water resources, like flooding. Gaps in funding for larger projects like redevelopment of floodplain/shoreland properties.

Our emergency responders have a large concern about nearby access across the river should our one bridge crossing ever be damaged or unpassable. They note the next closest river crossing for our community that is bisected by the Crow River is approximately 15 minutes away. The Crow River is also a jurisdictional line between Hennepin and Wright Counties, so upgrading the existing crossing has been challenging to try to approach even though this is a very busy road.

PART D: SURVEY PARTICIPANTS

Kendra Fallon (WSB), Water Resources Engineering Support Staff
 Dave Malewicki, Fire Chief
 Jennifer Nash, City Administrator

CITY OF HOWARD LAKE

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</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)			
Tornadoes	X	Low-Moderate	No Changes
Windstorms	X	Moderate	No Changes
Lightning	X	Moderate	No Changes
Hail			
Flooding	X	Moderate	No Changes
Extreme Cold			
Extreme Heat			
Drought	X	High	Increased
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.

The city experienced extreme drought in 2021.

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 community assets</u> are susceptible to damage or loss from hazard events.
Flooding	The city has three lakes, numerous & large wetland areas, and about two dozen storm ponds. Flooding has and will occur. When it does, properties – including public parks, lift stations and related infrastructure – is susceptible to
Ice Storms, Blizzards	Much of the city’s municipal electrical damage 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	High rate of overhead power lines, old/established trees make for vulnerabilities. An estimated 65% of our housing stock predates the adoption of the UBC Building Code.
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, frozen culverts that cause localized flooding.
Drought	The extended heat and drought of 2021 further exposed threats to our water system. The city currently has enough water capacity for about 1-day reserves; best practice suggest much more. The 2021 drought stressed our water system. Need new water treatment plant and water storage/tower.

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 2020, the city received a donation of a small rescue raft. We have three lakes that see regular use. Having the rescue raft may expedite response time in the event of water-based incidents.

In 2021, we replaced two of our three civil defense sirens. These new sirens rotate and are quantifiably 50% louder than the old sirens.

Once per year, police and fire assist with practice drills at schools and nursing/assisted living centers.

- 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.**

Howard Lake has experienced steady single-family development over the last 3-5 years. Once empty subdivisions are now nearing capacity. The two largest subdivisions, Turning Trails and Lake Ridge were built out by different developers than originally intended. This has led to slightly larger homes being built leading to less pervious surface for run off. Additionally, storm ponds are filling with sediment which could lead to increased chance of localized flooding. Added development is also leading to more channelized run-off going to newly replaced culverts. During extreme rain conditions these act as super-highways carrying sediment, debris etc. that may get plugged and lead to more localized flooding.

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 adopted a Communications Plan that covers the methods and means we communicate with our residents. Specifically: Print on bulletin board, city’s public access TV, Facebook, city website (currently being redesigned and will have a feature for “emergency alerts” we will encourage residents to subscribe to), and quarterly newsletters.

- 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, but we will as it’s an easy way to promote awareness.

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

The city of Howard Lake is participating but does not have FEMA mapped high risk areas. The city’s code of ordinances includes Part 17. Building and Land Use Regulations, Chapter 17.01-95 FP, Floodplain Overlay District serves as the city’s floodplain ordinance. Up until very recently, we were not mapped. Even now, the draft maps are super hard to read and as I understand it, have not been formally adopted. So for us, we participate in NFIP – but the verification short of FIRM status is relying on more blanket ordinances that dictate freeboard, shoreland overlay district etc.

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

The city’s Comp Plan and city ordinances have regulations regarding shoreline and floodplains. We make deliberate effort to work with DNR and/or Wright County Soil and Water to minimize adverse impacts near waterways. The city has a CIP that seeks to replace all infrastructure in the next 10 years as well as a sump pump ordinance – both aimed to reduce I&I.

In 2020, we established third party monitoring for our 13 lift stations. Prior to that, alarm lights would rely on staff or residents seeing the alarm and contacting the city. Now, this process is automated.

The city follows Minnesota Department of Health and DNR protocols relating to water usage and conservation. During intense or prolonged heat, watering bans are established to preserve water for firefighting purposes.

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

The city has held table top exercises with key city staff including mayor/council, admin, public works, police and fire to discuss roles and responsibilities across a wide range of possible community hazards.

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

The city places “dump no waste” stickers on all catch basins. We have established best practices around street sweeping, cleaning culverts and other preventative maintenance programs.

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

The city uses general fund/annual budget allocations to assist with mitigation activities.

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

No official policies. However, we would be receptive to draft ordinances to review. The city also recognizes this as a general priority. We are in the design phase of a new library facility that is intended to be net-zero energy consumption.

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

The city is served by Xcel Energy and Wright Hennepin Electric Cooperative.

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

Having at least one (preferably 3) lift stations on permanent generators would be valuable. The fire station, water treatment plant and key lift stations are served by generators. The city has additional portable generators as well to go where 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.

In 2021, the city sold a portable generator with the understanding it's worth would fund the purchase and installation of two permanent mount generators to lift stations. Increased costs led to only one being purchased and installed. Having at least one (preferably 3) lift stations on permanent generators would be valuable.

We are in the design/engineering phase for an estimated \$30 Million in public improvements including well, storage tank, water treatment plant and street reconstructions. The drought of 2021 which was further exacerbated by new home construction (more users/watering sod) really stressed our system. Our community already has the highest utility rates in Wright County. Any financial assistance that could assist with that would further ensure redundancy and affordability in our utility system.

Howard Lake is home to an infamous low clearance railroad bridge on CSAH 6 North. This bridge results in upwards of two dozen strikes per year. Each incident poses a risk to users of the road, anyone nearby when it occurs, emergency response personnel. While the bridge is inspected by BNSF after each incident, it is intuitive to assume the structural integrity for actual train traffic is compromised slightly with each event.

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

Howard Lake has limited staff and no dedicated staff relating to hazard mitigation. To affect meaningful change, existing employees and volunteer staff will need to act deliberately anywhere and anytime there are gaps/deficiencies.

Howard Lake residents are commuters (78% per American Community Survey), of the non-working population a large percentage are retirees with limited access to the internet. Therefore, reaching residents is a challenge and one that requires multiple means of contact: newspaper, website, Facebook, sirens etc.

Specific to train/rail safety – previously, BNSF has upgraded crossings thereby permitting faster speeds through town. None of our crossings are whistle free. BNSF, like all railroads, is incredibly difficult to work with or even get in contact with at times.

PART D: SURVEY PARTICIPANTS

Nick Haggemiller, City Administrator

CITY OF MONTICELLO

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	
Tornadoes		Moderate	No Change
Windstorms	X	High	
Lightning	X	Moderate/High	
Hail		Moderate	
Flooding	X	High	Increased
Extreme Cold		Moderate	
Extreme Heat		Moderate	
Drought		Moderate	
Wildfire		Moderate	
Landslides		Low	
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.

Typically, the most common severe weather or disaster events have been related to severe storms and wind damage. Monticello has overhead power lines throughout the entire community that are particularly at risk.

We have also had issues related to flooding, particularly in the area of the River Terrace Park and Campground. The area is right on the river and quite susceptible to flooding.

In 2021 there was a drought throughout the region that required additional enforcement of watering restrictions throughout the city.

- 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.
Flooding	<p>The city currently has a few areas of the right-of-way that are within the 100- and 500-year floodplain. Within this right-of-way there is utility infrastructure including sanitary sewer, storm sewer, and watermain systems. If flooding caused water to enter the cities sanitary sewer system, a lift station and the wastewater treatment facility could be impacted which could cause flooding into households or untreated waste could be discharged to the river. The roadway systems could also become flooded causing the need for traffic to be re-routed.</p> <p>In addition, River Terrace Park and Campground is right on the river and quite susceptible to flooding.</p>
Ice Storms, Blizzards	<p>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. These down trees and branches would also pose a risk to the transportation networks ability to move people throughout the city. A large blizzard with significant amounts of snowfall could cause delays in clearing the roadways resulting in delays for utility repair companies or emergency services. The loss of power could be impactful the city’s utility infrastructure which would require the city to utilize standby generators to operate the utility system.</p>
Windstorms and Tornadoes	<p>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 windstorms and tornadoes that may bring down trees and branches. Downed trees and branches would also pose a risk to the transportation networks ability to move people throughout the city. The loss of power could impact the city’s utility infrastructure which would require the city to utilize standby generators to operate the utility system.</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 2019 the city completed a comprehensive water resource management plan where the entire city’s stormwater system was modeled utilizing the most recent National Oceanic Atmospheric Administration (NOAA) Atlas 14 precipitation frequency models. This model identified several areas where system deficiencies were present that could flood existing properties. Utilizing this study, the city has developed a capital improvement plan (CIP) for completing these deficiencies and to ensure that new developments are constructed in a manner that don’t cause any adverse downstream impacts.

In 2020 a project was completed that more than doubled the size of a stormwater pond that was shown to flood homes by up to three feet during a rainfall event that had a 1% chance of occurring.

The city has purchased and has a fleet replacement policy for our large equipment including front end loaders and dump trucks that could be counted on to assist with cleanout following a weather or disaster event.

- 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.**

Monticello has continued to experience steady growth in all sectors: commercial, industrial, and residential. We have seen a significant amount of multi-family projects – creating additional density in specific areas that could be vulnerable to natural disasters. We also have one new senior facility and a second senior multi-family project planned for construction this year – both could have significant populations that could need assistance during a disaster.

During the recent updates to the Emergency Operations Plan, we determined our city does not have a designated shelter. We’ve reached out to the Red Cross to have at least two locations identified, but nothing has been finalized yet.

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.**

Monticello uses our city website and social media, including Facebook and Twitter. We do targeted campaigns during severe weather week and general reminders during the year. We also use digital monitors in our community center, DMV, and municipal liquor store, public service announcements at City Council meetings, and information in our city print and electronic newsletters to provide guidance as well as resources the public can access for more information.

- 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, using the resources listed in B1, we encourage the public to sign up for the emergency alerts. We’ve also provided the information to our City Council members so they can encourage residents too when the public contacts them with questions.

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

Yes, Monticello participates in the National Flood Insurance Program. Title XV, Monticello Zoning Ordinance, Chapter 3, Section 7(C) - Floodplain District.

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

The Monticello 2040 Comprehensive Plan is the guide for land use and future growth of the community.

Natural Resource Inventory and Assessment with maps and analysis of land, water, and air resources to help guide and protect priority natural areas during the development of the city over time.

Wellhead Protection Program & Backflow Prevention Program to help ensure safe drinking water and protect public health.

Individual departments have emergency response plans and policies in place to highlight both response and mitigation efforts related to their designated areas of influence – for example, severe weather plans for the Monticello Community Center, flood monitoring in the building department, etc.

Draft EOP that mirrors the Wright County Emergency Management Plan.

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

The Monticello Fire Chief is designated our emergency manager and the Chief Building Official is the backup. The city's Public Works Director/City Engineer is responsible for anything impacting street/utility/stormwater infrastructure – he communicates with the Fire Chief and Chief Building Official to ensure coordination as needed.

The Monticello Fire Department has been outfitted with specialized tools for specific risks like grass fires, river flooding, etc.

Monticello works with Wright County, the Association of Minnesota Emergency Managers (AMEM), the MN DNR, etc. to access resources beyond our internal staff.

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

Monticello is committed to educating residents using as many resources as possible throughout the year. Using our various communications resources, we provide tips and guidance for the public. During Severe Weather Awareness Week, we run drills in our public facilities for all staff and encourage the public to participate as well, so they know how to stay safe if they are in a park, city facility, or at home.

The City's code enforcement program focuses primarily on education to help ensure the public knows what steps to take to protect their homes and businesses.

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

Any infrastructure improvements are primarily funded out of the city budget. We utilize Radiological Emergency Preparedness (REP) funding to reimburse for expenses related to preparedness as a nuclear power plant host community. We have potential upcoming projects with Wright County to help with large-scale improvements to prevent flooding in specific areas of the community.

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

Sustainability and climate resilience are a primary theme within the Monticello 2040 Comprehensive Plan. The theme is referenced in all chapters of the plan as it guides future growth and development in the city.

Monticello also utilizes various sustainable incentive programs through the State of Minnesota for new commercial and industrial development.

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

Public Utility – Xcel Energy

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

Yes, we have been adding back-up generators as projects as funding become available, but we still have needs:

- We have a city well that needs a backup generator – if portable it can also be shared with one of Monticello’s lift stations.
- The generator for the community center is significantly undersized and only operates the emergency lights. A more robust generator would allow us to use the building more effectively during a disaster recovery.

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 would like to replace a culvert that could be prone to being plugged by beavers which causes a risk of the roadway being washed out. This roadway provides secondary access to a campground community that is within the 100-year floodplain. Much of this roadway is also within the 100-year floodplain.

The city plans to continue to install stormwater system along with future infrastructure and to complete existing deficiencies to the stormwater system as identified in the 2019 plan.

The city plans to purchase an additional generator for another well and to purchase a larger generator for the Monticello Community Center.

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

Many of the potential areas that are prone to flooding are controlled by private property owners. Coordination will be required to complete these efforts.

PART D: SURVEY PARTICIPANTS

Rachel Leonard, City Administrator
 Matt Leonard, Public Works Director/City Engineer
 Angela Schumann, Community Development Director

CITY OF MONTROSE

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	High	No Change
Tornadoes	X	High	No Change
Windstorms		Moderate	No Change
Lightning	X	High	No Change
Hail		Moderate	No Change
Flooding		Moderate	No Change
Extreme Cold		Moderate	Increased
Extreme Heat		Moderate	Increased
Drought	X	High	Increased
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.

Throughout the summer of 2021, the state experienced a severe drought and drew down our water levels and reduced the overall aquifer level. We had to implement a watering ban for most of the summer in order to try to maintain the aquifer level.

We have had multiple instances of lightning damaging lift station controls and causing power going out throughout the city.

The extreme cold in the winter of 2021 caused the city to have three water main breaks.

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.
Winter Storms and extreme cold	<p>All of the residents are susceptible to the extreme cold – there have been a few times in the past five years when the power has gone out during extreme cold events. We also have a lot of elderly and lower-income residents who are even more susceptible to the extreme cold and winter weather.</p> <p>The city had three broken water main lines this past winter from the extreme cold and temperature fluctuations.</p>
Tornadoes/Summer Storms	<p>We have 2 mobile home parks within town – one does have a storm shelter, but we have heard it is not a very sound building itself. Their trailer homes are vulnerable to high wind and tornado events.</p> <p>We only have two emergency sirens in town which does not service the northwest side of town as well as should. The city should probably install another outdoor warning siren in the northwest part of town as well as the far southern part if it starts to develop.</p> <p>We also have some homes that are built slab-on-grade with no basements. These homes do have a “strong room”, but big storms are still a concern.</p>
Drought	<p>During the summer of 2021, the city experienced an extreme drought situation which caused our municipal water reserves to be drained to an alarming level. This type of ongoing situation would perhaps cause us to not be able to provide water to community residents.</p>
Ice Storms/Hail	<p>The city municipal buildings are very old and vulnerable to ice and hail storm damage. Most of the power lines in town are still above-ground and vulnerable to being brought down with a heavy ice storm, which would also cut the power to residents.</p>
Flooding	<p>We have many catch basins that were not repaired correctly in the past and have issues with them eroding each time we get a lot of precipitation. Since we had drought weather in 2021, this was not as big of an issue, but weather patterns change often.</p>
Lightning	<p>We have had lift stations be damaged by lightning storms multiple times and had to make repairs.</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 2021 the city completed a street reconstruction plan to fix many of the street and catch basin issues we have during very wet weather. We have an emergency management team that

continues to address issues that come up and possible actions we can take to help mitigate loss within the city assets.

We will be upgrading the WWTP in the next few years, as well as building a water treatment plant and another water tower in the next 10 years to help ensure reserves of water in drought situations.

The city just started a large “2021 Downtown Improvement Project” which is replacing all of the streets and infrastructure, including curb and gutter, water, sewer and storm water upgrades in the “older” part of town that has not had those upgrades since the late 1960’s. This will help mitigate any potential flooding due to upgraded storm water drainage as well as ensure we do not have a major sewer backup due to damage from trees or other natural events.

We have several backup generators for lift stations, the new well house, the WWTP and emergency services at the fire department.

- 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.**

Since 2017, the City of Montrose has issued approximately 50 building permits each year to new development, which increases the strain on the storm drainage system as well as the WWTP and water reserves. We are near capacity with the WWTP and are currently working on an upgrade for the plant. If we continue to have drought conditions, the increase in population will draw even more on our water reserves in the aquifer we pull from.

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 currently use the City Website, Facebook and the City Newsletter to get information to people about being prepared for severe weather. We post information at the Community Center, Post Office and Bank in order to reach more residents. The Emergency Management Director will put out information at each season in the newsletter on severe weather and emergency preparedness. We are working on getting a couple of the digital information signs to replace our city welcome signs that would help disburse emergency information to residents.

- 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 about signing up for the county’s emergency notification system on our website as well as in our information center at City Hall.

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

Response: “The city does not have FEMA mapped high-risk areas and is not participating.” /
Note – The NFIP status for Wright County shows that the city of Montrose is not participating

but does have FEMA Mapped High Risk areas (annexed & mapped on preliminary maps). The city has been put in touch with the MN DNR Floodplain Manager to learn about their city's NFIP status and receive information on 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.

The City of Montrose has an Emergency Management team that helps make plans to mitigate risk from natural hazards in the community. We try to disseminate information to residents regarding emergency preparedness through our newsletter.

We have a sump pump ordinance in place to help mitigate against overload in the city's I&I/stormwater system.

We have a street reconstruction plan for the next 5 years that identifies high priority streets needing reconstruction and infrastructure overhaul.

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

The emergency management director and the emergency management team work together to mitigate risks to the community.

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

The emergency management team and volunteer fire department team up to promote the Severe Weather Awareness each spring and fall to get information out to residents to help keep residents informed about severe weather. We put out a quarterly newsletter that always has information about fire safety and any seasonal weather information and warnings.

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

The city of Montrose primarily uses its own budget to address mitigation projects, such as the WWTP upgrade and replacement of culverts and catch basins. We have received some project money over the years, and will use some of the money received from COVID to help pay for infrastructure updates.

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

Not at this time; we just try to mitigate for known weather conditions.

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

Xcel Energy and Wright Hennepin Co-Op.

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

We need upgraded/full backup generators to support the water and waste water facilities in the case of an ongoing power outage.

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 needs another tornado/emergency siren in the northwest part of town since we have two in the central and northeast part of town.

We need upgraded/full backup generators to support the water and waste water facilities in the case of an ongoing power outage.

We are in the process of getting digital signs on both ends of town on US Hwy 12 to keep residents informed.

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

One large gap we have is financial means to do upgrades to build a water treatment facility and upgrade the WWTP, as well as the amounts needed for smaller projects such as digital signage and generators. We are working on increasing taxes each year in order to save up for some larger projects and the purchase of other equipment that public works department needs. With our increasing population, we can use some of that money, but there will still be a gap that we will need to fill with loans or if grant money is available. We are a small city of 3,775 population, only 8 staff members, a volunteer Fire Department/Emergency Management and have limited financial resources.

PART D: SURVEY PARTICIPANTS

Jessica Bonniwell, City Administrator
Tom Marszalek, City Councilor
Sam Solarz, City Councilor
Dan Remer, Public Works Director
Kevin Triplett, City Emergency Manager/Fire Chief

CITY OF OTSEGO

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</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	High	No Change
Tornadoes	X	High	No Change
Windstorms	X	High	No Change
Lightning	X	High	No Change
Hail		High	No Change
Flooding		Moderate	No Change
Extreme Cold	X	Moderate	No Change
Extreme Heat		Moderate	No Change
Drought		Low	Increased
Wildfire		Low	No Change
Landslides		Low	No Change
Dam Failure		Low	No Change

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.

Flooding: The city has experienced flooding events during the last five years from the Crow River on CSAH 36 east of TH 101. The flooding is primarily seasonal to the spring thaw but can be caused by extended heavy rain periods. The flooding causes the primary access route to residential neighborhoods in the SE corner of the city and would increase response times for emergency responders.

Lightning: The city has experienced numerous occasions over the past five years where lightning strikes have caused equipment damage and instrumentation control functionality for water supply, sewer lift stations, and information technology assets such as phones and internet.

Thunderstorms: The city has experienced occasions where thunderstorms caused mild damage with wind damaging trees and street signs, and hail causing property damage to vehicles and homes.

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.
Flooding	CSAH 36 east of TH 101 is vulnerable to seasonal flooding with the spring thaw or extended heavy rain periods. The flooding likely causes shortened life

	<p>expectancies for the roadway, but mostly causes issues with primary access to residential neighborhoods in the southeast corner of the city.</p>
Ice Storms, Blizzards	<p>Portions of the city are serviced by 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>
Windstorms and Tornadoes	<p>The city has one mobile home park and one seasonal RV campground where residents and visitors would be more vulnerable to high wind and tornado events.</p> <p>Power loss during these events risk effectiveness of the city water and wastewater systems.</p> <p>Access to city services sites can be obstructed for operations staff to respond to emergencies including equipment failures.</p> <p>Communication antennas can be destroyed, impeded, or knocked down to disrupt information technology assets such as phones and internet and eliminates remote monitoring and equipment capabilities.</p> <p>Certain homes in new developments 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.</p> <p>In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold.</p>
Drought	<p>Water production and supply well operation is strained during drought events to meet customer demands. Loss of equipment because of extreme operation is elevated.</p>
Extreme Heat	<p>Various lift stations and well control panels have maximum temperature stipulations with reliance on an in-panel AC unit. In event of failure can render site in operable.</p> <p>Energy grids are susceptible to extreme heat. Loss of power can result for 9 Lift Stations, 1 Water Pressure Control Station, 2 Public Water Supply Wells and 4 Water Treatment. These locations are susceptible to power loss with no automatic backup power. Fire protection, water system pressures and wastewater conveyance are risked during outages.</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.

Siren: The city installed an additional emergency siren in 2016 to improve audible coverage for severe weather events.

Water System: The city is in the design phase of a project that will connect the city's two water systems with construction anticipated for 2023-2024. This project will improve redundancy of the system in the event well pumps would lose power.

Notifications: We have encouraged businesses and residents 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 social media platforms 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.**

Population Growth: The city has experienced a 47% population growth from the 2010 to the 2020 US Census and is one of the fastest growing cities in the State of Minnesota.

New Development: There have been more than 1,700 new single-family homes, 267 apartment units and 142 units of senior housing constructed in the city over the past five years. In addition to the residential development, there have been numerous commercial-industrial projects and two new schools constructed in the city.

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 uses our website and social media platforms to post information about severe weather awareness week. The city encourages businesses and residents to enroll in the county's emergency notification system so they will be aware of dangerous storm events.

- 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, there is a place on our website Emergency Management page with a link to the county's emergency notification system.

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

Yes, city Code Title 11, Chapter 94 is the Floodplain Overlay District ordinance.

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

The city's Comprehensive Plan approved in 2012 is currently in an update process and should be approved later in 2022. The Plan is designed to plan for the future of physical growth of the city and appropriate land uses to guide said development. The Plan includes major infrastructure components such as Park locations and Transportation projects.

The city maintains Master Plan documents for both Water and Sanitary Sewer utilities. These plans guide for future trunk system extensions, capacity additions and capital improvements.

The city has Emergency Warning Sirens throughout the city to provide audible notice in the event of severe weather events.

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

The city administrator is the city's designated emergency manager. City staff receive occasional training opportunities focused on implementation of the city's Emergency Operations Plan.

The city council has established a Public Safety Commission who meet monthly with law enforcement, ambulance, and fire protection partners to discuss public safety issues.

The city partners with three surrounding communities of Albertville, Elk River, and Rogers for fire protection services. City staff maintains a good working relationship with them and routinely discuss emergency service implications.

The city contracts with a professional engineering firm that guides implementation, maintenance, and communications regarding the city's road and storm water infrastructure.

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

The city uses our website and social media platforms to post information about severe weather awareness week. The city also uses newsletter communication to help educate residents on the city's storm water infrastructure and that debris should not be deposited in these street drains and holding ponds.

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 for the storm water system.

The city works closely with the Wright County Highway Department on the county road system within the city and have reconstructed a number of major county roadways over the past five years.

The city worked in conjunction with a residential developer and respective state agencies to complete a bank restoration project on the Crow River.

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

Not at this time.

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

There are three electric providers in the city: Xcel Energy, Wright-Hennepin Coop and Elk River Municipal Utilities.

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

Yes. The city would ideally have backup generators for: Wellhouses (4); Pressure Control Booster Station (1); Sanitary Sewer Lift Stations (10); Wastewater Treatment Facilities (2); Prairie Center (1) and city Hall/Public Works Facility (1).

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.

Additional portable or standby generators would greatly assist in reducing risk of critical system failures for water and sanitary sewer operations and would allow for continued administrative operations during an emergency.

As the city continues to develop rural areas into more urban landscapes, continued conversion of overhead power and other utilities would decrease risks of power loss.

The city is bordered by the Mississippi and Crow Rivers. Continued efforts to stabilize and restore riverbanks subject to erosion as well as monitoring of flood levy infrastructure.

The city needs to continue focus on communication and education aspects to the residents and businesses within the city.

The city is in the design phase of a project that will connect the city's two water systems with construction anticipated for 2023-2024. This project will improve redundancy of the system in the event well pumps would lose power.

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

The city has limited staff resources to address emergency operations planning and mitigation efforts and will need to incorporate these responsibilities into a dedicated position as the city staff continues to grow.

The city needs funding assistance to address the purchase of portable and standby generators.

The city needs partnerships and funding assistance to address stabilization and restoration of riverbanks that are subject to erosion issues.

PART D: SURVEY PARTICIPANTS

Adam Flaherty, City Administrator
Kurt Neidermeier, Utility Operations Manager

Kevin Lamson, Street Operations Manager
 Sabrina Hille, Assistant City Administrator
 Richard Ward, Wright County Emergency Management

CITY OF ROCKFORD

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			
Lightning	X	Moderate	No change
Hail			
Flooding	X	High	Increased
Extreme Cold			
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.

During a 2019 flood event we experienced increased infiltration in our wastewater facility of approximately 100,000-200,000 additional gallons.

In 2014 a significant flood happened within the Crow River. Several portions of town were sandbagged and additional sandbags and materials were prepared within downtown as we were near shutting down the county road into downtown and blocking the entrance. Significant resources went into the downtown sewer and stormwater systems to mitigate impacts.

- 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.
Flooding	A significant portion of downtown is within a mapped floodplain and the existing earthen dam is not a certified levee. The sanitary and water systems in these areas are susceptible to the impacts flooding may cause as well.
Winter Storms	The majority of the Rockford downtown areas has aging overhead power lines which would be susceptible to damage from winter storms.
Tornadoes	The majority of the Rockford downtown areas has aging overhead power lines which would be susceptible to damage from tornadoes. Rockford's water storage is all overhead storage with no surface storage. If a significant tornado were to hit the city it could impact these storage reservoirs.
Lightning	Lightning has previously caused damage to the electrical components at the Public Works Facility and wastewater treatment facilities which could happen again.

- 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 2015 the embankments near the canoe launch were reinforced with riprap to help prevent erosion from the highwater during flood events.

- 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.**

In recent years a development in the city of Rockford has been built out which is adjacent to the floodplain. While this development was constructed in accordance with all regulatory requirements, stormwater patterns are ever changing and if new flood models are developed in the future, this could be a concern.

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.**

Rockford utilizes their siren system for weather-related emergencies and utilizes the city website and Facebook pages to communicate other emergencies to the community.

- 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 encourage residents whenever possible to sign up for these systems but do not send out routine notifications to the public.

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

Yes, the city is participating in the NFIP and has a floodplain ordinance in place that is enforced and a portion of the floodplain within downtown is mapped.

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

The city has a sump pump ordinance in place to mitigate against overloading the city's sanitary system with I&I. The city also has an ordinance requiring the repair of deficient sanitary lateral services to also mitigate against overloading the city's sanitary system with I&I.

The city has a flood preparedness plan in place for flooding of the Crow River. Whenever the city enters into the flood stage, it reviews the plan to ensure it meets the requirements of the current conditions.

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

The city participates in MnWARN. The city also has a water cross connection with the City of Greenfield in case its water distribution system was impacted.

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 has an odd/even watering ban that it has used in the past to help mitigate drought conditions.

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

In the past, the city of Rockford has applied for FEMA grant funding for impacts from flooding that has occurred. Currently, the city locally funds all of its infrastructure improvements but will explore all available funding opportunities.

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

None currently.

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

Wright Hennepin and Xcel Energy

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

Backup generators are needed to run the wastewater lift stations out in the collection system.

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 of Rockford continues to explore ways to mitigate the potential for damage from flooding of the Crow River. We have done this through available FEMA emergency funding in the past and would explore any additional funding alternatives, if available.

Backup generators are needed to run the wastewater lift stations out in the collection system.

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

The City of Rockford does not have any specific gaps in our local management practices on a global basis. The ability to fund and construct a certified downtown levee is a potential gap in the long-term planning.

PART D: SURVEY PARTICIPANTS

Trevor Brummer, Public Works Director
 Steven Hegland, City Consultant Engineer

CITY OF ST. MICHAEL

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</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	Low	No change
Tornadoes			
Windstorms	X	Low	No change
Lightning			
Hail	X	Low	No change
Flooding			
Extreme Cold			
Extreme Heat			
Drought	X	Low	Increased (since 2021)
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.

We experienced the 2021 drought, which caused lots of lawn damage to yards and city recreational parks/fields. However, experiencing drought has not been common prior to 2021.

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, 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	Many homes in new developments are built on slab with no basement. These residents are at greater risk during severe wind events. We also have lots of older homes with mature trees that are at risk of being impacted by high wind events.
Extreme Cold	The city has also experienced damages to roads from spring frost heaves and frozen culverts that cause localized flooding.

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.

All new developments have city water and sprinkling if required.

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.

We’ve had about 20% population and development growth over the past 10 years.

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 newsletter, website, Twitter, and 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, via our website.

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

Yes. The city of St. Michael enforces its Floodplain Management Ordinance and regulates all building and zoning within the floodplain.

- 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 the 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.

We have backup generators to keep our Public Works and Utility system running during outages.

- 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. We have a city engineer and a public works director that address road maintenance issues for flooding (culverts, repetitive flooding). We have our own storm sirens.

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

Our local school practices tornado drills on an annual basis. We do outreach to homeowners to clear leafy and woody debris from roadside gutters to prevent clogging and over the road flooding in these areas.

- 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.

- 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)**

Xcel Energy and Wright Hennepin

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

City Hall and some lift stations

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.

Continue to encourage residents to sign up for the county’s emergency notification system and continue to share information with residents on personal preparedness for major storms and power outages.

Acquire generators for City Hall and some lift stations.

The city has no major infrastructure projects identified as needed for mitigation measures. I don’t believe there’s any practical mitigation the city can and should be doing regarding any hazards noted, as the regularity for dealing with these issues varies greatly and I don’t have any actual data to say they are occurring more frequently and causing more issues.

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

I am not aware of any.

PART D: SURVEY PARTICIPANTS

Steve Bot, P.E, City Administrator/Public Works Director

CITY OF WAVERLY

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</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)			
Tornadoes	X	High	Decreased
Windstorms			
Lightning			

Hail			
Flooding	X	High	Decreased
Extreme Cold	X	Moderate	Decreased
Extreme Heat			
Drought			
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.

There have not been any major events in the last five years. In 2002, Waverly experienced damage due to flooding with extreme rain events. There have not been any tornado or heavy storm events that caused the city numerous repairs and clean-up efforts.

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.
Flooding	The city of Waverly previously had a lake sewer system that was vulnerable to high rain events and flooding, causing the sewer system to fail and cause back up to residences. The city has completed a water and gravity sewer project around the lake improving the system. Due to the location of the lake to residences, the city is always vulnerable to flooding with extreme rain events.
Windstorms and Tornadoes	The cabins and seasonal residences around the lake are at risk during tornado events. Many of the seasonal cabins have been converted to full-time residences, however, the potential for storm damage to residences and possible mudslides are a concern.
Extreme Cold	Periods of extreme cold can cause the city to experience water main breaks. This is a concern of the city along with extreme ice storms that are difficult to manage with heavy equipment. It is also concerning that some residents do not have proper heating systems and may be susceptible to fire hazard or malfunction of their main heat source in extremely cold weather.

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 2022 the city completed a lake sewer project and installed water service around Waverly Lake to serve its residents. Many of the wells were outdated and the new water service has improved the area along with a manageable sewer system in the lake area. Concerns of water contamination were resolved. The concern of losing sewer during high storm events has been corrected.

- 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.**

No increases in vulnerability were noted in a review of city policies and infrastructure. A capital improvement plan and utility study have been done; however, the major improvement of the lake utility system has been completed.

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 website, community sign, and Facebook page are used to communicate with residents during emergencies.

- 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 currently have the information.

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

Yes, we participate in the NFIP and we have a floodplain ordinance. The City Engineer reviews elevations proposed for new construction at the time a permit is applied for. The main concern is the lake area, but all of the city is included in the drainage review and survey/elevation requirements.

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

We have a point-of-sale sanitary sewer inspection requirement that requires repair to leaking systems and a sump pump section in our city ordinance.

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

We participate in MnWARN and other programs to cooperate with communities who need assistance.

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

The city cooperates with the county and state and adopts policies to prevent excessive drainage situations.

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

The city funds its projects with federal/state grants/loans and other sources or revenue.

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

No, this has not been discussed.

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

Xcel Energy

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

We have portable generators for our main lift stations.

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.**

Due to our growing population on the south side of the city, it would be beneficial to have another storm shelter in addition to the Village Hall which is located in downtown.

We don't have any other specific projects in progress. The lake utility improvements have been completed.

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

Due to our growing population on the south side of the city, it would be beneficial to have another storm shelter in addition to the Village Hall which is located in downtown.

PART D: SURVEY PARTICIPANTS

Deborah Ryks, Clerk/Treasurer City of Waverly

Appendix D – Plans & Programs in Place

Wright County

MHMP Plans in Place Form

Planning & Regulatory

<i>Plans/Programs</i>	<i>Yes/No</i>	<i>Comments</i>
Comprehensive/Master Plan	Yes	Wright County Land Use Plan
Capital Improvements Plan	Yes	
Economic Development Plan	No	
Emergency Operations Plan	Yes	Updated by Wright County Emergency Management
Climate Adaptation Plan	No	
Continuity of Operations Plan	Yes	
Transportation Plan	Yes	5yr Plan with Highway
Stormwater Management Plan	Yes	Cities have in place
Community Wildfire Protection Plan	No	MN DNR notes no CWPP for Wright County
FireWise Program	No	
Comprehensive Water Management Plan	Yes	Wright County Local Water Management Plan (2006-2015)
One Watershed, One Plan (1W1P)	Yes	3 Watersheds, Mississippi and North and South Fork Crow River in this plan.
Wellhead Protection Plan	Yes	(Municipal plans)
Database of dry hydrants/well access	Yes	Not on county level but cities have their own.
Burning permits/restrictions	Yes	Through DNR & Cities
Zoning ordinance	Yes	Wright County Code of Ordinances (Subdivisions)
Subdivision ordinance	Yes	Chapter 154 Zoning Ordinance
Floodplain ordinance	Yes	Section 155.056 Zoning Ordinance (Floodplain Overlay District)
Natural hazard specific ordinance (i.e., stormwater, steep slope, wildfire)	Yes	Cities have their own in place – example (flood ordinances and trigger points.)

Flood insurance rate maps	Yes	Wright County Planning and Zoning Department
Acquisition of homes (buyouts) due to repetitive flood damage or imminent risk of failure from erosion	Yes	Have done in Otsego
School closing policy/communications plan in event of inclement weather/temperatures	Yes	Schools maintain their own polices.
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)	No	
Outdoor Warning sirens (list all locations)	Yes	City Sirens: Albertville (2) Annandale (4), Buffalo (6), Clearwater (1), Cokato (3), Hanover (3), Howard Lake (3), Monticello (5), Montrose (3), Otsego (1), Rockford (5), St. Michael (6), Waverly (2), Delano (7)
SKYWARN Program	Yes	
Emergency Mass Notification System (provide type, i.e., CodeRED)	Yes	Active911/RAVE
Severe Weather Awareness Week	Yes	
Winter Weather Awareness Week	Yes	
NOAA Weather Radios	Yes	
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	On file in the Sheriff's Office (EM)
<i>Staff</i>	<i>Yes/No</i>	<i>Comments</i>
Chief Building Official	Yes	
Floodplain Administrator	Yes	Wright County Planning and Zoning Department

Emergency Manager	Yes	
County Administrator	Yes	
Civil Engineer	Yes	
GIS Coordinator	Yes	
<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	Through our local WCPH EMAC we work with community hospitals, access and functional needs groups, red cross etc.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Work through various groups EM wise, Rotary Wright county Safe Communities. Local PD's and FD's work on other programs within their jurisdictions.
Natural disaster or safety related school programs	Yes	
StormReady certification	No	
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	Yes	Work with Wright County Safe Communities, severe weather awareness week, emergency preparedness month, winter weather awareness, work with WCPH in a joint EMAC with area cities and emergency response agencies
<i>Other *please list & describe</i>		

Appendix E – Past Mitigation Action Review Status Report

Wright 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 Wright 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
Flooding	Review and update the FEMA flood maps for Wright County and its cities and townships so as to accurately map the actual floodplain and identify structures, both residential and commercial, not already on the FEMA maps.	Delano, Wright County	Completed	Floodplain maps are in place for Wright County.
Flooding	Improve the flood levee in the City of Rockford.	Rockford	Ongoing	Rockford continues to address local flood mitigation measures via the levee improvement and through other projects.
Flooding	Acquire residential properties in the floodplain in the City of Rockford.	Rockford	Ongoing	Property buyouts are an ongoing effort by the city.
Flooding	Study trends and continue to develop stormwater management plan for Wright County and the City of Delano.	Delano, Wright County	Ongoing	Wright County and all municipalities continue to plan for future high rain events through stormwater management planning and projects to reduce flood risk.
Flooding	Modify control structure (phase 2) and upsize downstream culverts.	St. Michael	Ongoing	This and other flood mitigation projects are ongoing by the City of St. Michael.
Flooding	Install sluice gates at Cedar Street and Lieder Street through levee.	Rockford	Ongoing	This and other flood mitigation projects are ongoing by the City of Rockford.
Flooding	Install watertight manhole frames/lids on sanitary sewers within floodplain.	Rockford	Ongoing	This and other flood mitigation projects are ongoing by the City of Rockford.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Flooding	Raise Co. Rd. 20 through levee on north edge of town.	Rockford	Ongoing	This and other flood mitigation projects are ongoing by the City of Rockford.
Flooding	Certify levee, or adjust downtown to move homes off of floodplain properties.	Rockford	Ongoing	This and other flood mitigation projects are ongoing by the City of Rockford.
Flooding	Repair/prevent drainage-ways from erosion.	Rockford	Ongoing	This and other flood mitigation projects are ongoing by the City of Rockford.
Flooding, Dam/Levee Failure	Coordinate flooding mitigation and communication with USACE and Sherburne County regarding the levee on the Mississippi River in Otsego.	Otsego	Ongoing	This and other flood mitigation projects are ongoing by the City of Otsego.
Tornadoes	Evaluate current needs and identify locations of new sirens, acquisition of new activation system and new sirens.	Buffalo, Wright County	Ongoing	Wright County Emergency Management (WCEM) and all cities continue to ensure warning siren coverage is addressed for communities.
Tornadoes	Encourage retrofitting of existing and future public schools with special high wind resistant films for doors and windows.	Wright County	Ongoing	School districts continue to consider storm resistant elements into facility upgrades as appropriate.
Tornadoes	Determine best practices for setting up needed services, identify resources available for the building department, and identify staff that can be reallocated to the building department.	Monticello	Delete	Not a necessary mitigation action. This falls under school emergency response planning.
Tornadoes	Educate individual communities and county on tornado safety with open houses at local police, sheriff, and fire departments.	Wright County & All Cities	Ongoing	WCEM and local jurisdictions continue to promote tornado safety and awareness.
Tornadoes, Severe Summer Storms	Identify facilities throughout Wright County that need backup generators to provide emergency power in case of power outages due to tornadoes/storms.	Annandale and Wright County	Ongoing	Wright County and all jurisdictions continue to identify where backup power is needed for critical facilities and services and to obtain backup generator power.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Tornadoes, Severe Summer Storms	Equip all county and city recreation parks with adequate early severe weather warning devices and lightning detection devices.	Wright County & All Cities	Ongoing	Wright County and municipalities continue to address the need for outdoor warning sirens or other storm safety equipment at public parks as needed.
Severe Summer Storms	Develop a public awareness program about the installation of lightning grounding systems on critical infrastructure, residential and business properties.	Wright County	Delete	Lightning is deemed a low-priority hazard for the Wright County MHMP update.
Tornadoes, Severe Summer Storms	Develop and distribute flyers by mail to citizens to promote education on the hazards of severe summer storms.	Wright County & All Cities	Ongoing	This falls under WCEM ongoing public outreach & education. WCEM utilizes the Wright County website, Wright County social media, and local news media to communicate with residents and visitors on emergency preparedness.
Tornadoes, Severe Summer Storms	Install warning sirens in rural areas.	St. Michael	Ongoing	Wright County and all jurisdictions continue to identify and address any existing needs for additional outdoor warnings sirens.
Tornadoes, Severe Summer Storms	Build a storm shelter at the Rec Park Facility in the city of Annandale.	Annandale	Ongoing	Storm shelter project is an ongoing effort by the city of Annandale.
Tornadoes, Severe Summer Storms	Build storm shelters at the Schroeder Park & Campground and the Collinwood Park & Campground.	Annandale, Wright County	Ongoing	Same as above.
Severe Winter & Summer Storms	Bury power lines leading to critical facilities in the city during road construction or re-construction projects.	Annandale, Albertville, and Otsego	Ongoing	All jurisdictions continue to implement powerline undergrounding projects as feasible during road construction projects.
Severe Winter Storms, Extreme Cold	Develop and implement an education and preparedness strategy such as a Citizens Emergency Response Team (CERT) in an effort to reduce the effects of winter storms on our citizenry.	Wright County	Ongoing	Revise - A CERT program is not planned for development. Wright County participates in and promotes the NWS Severe Winter Weather Awareness Week every November.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Severe Winter Storms	Identify lines in danger of being affected by winter storms (high winds, heavy snow/ice).	Montrose, Wright County	Ongoing	Electric providers continue to identify and address mitigation measures for vulnerable powerlines across all of Wright County.
Wildfires	Identify specifications, schedule and procure appropriate vehicles to protect the City of Hanover and acquire an emergency generator to supply power to the City of Hanover Fire Department in the event of a wildfire.	Hanover	Delete	Delete - Wildfire deemed a low-priority hazard for Wright County plan update.
Wildfires	Identify areas to install and acquire dry water pump and portable generator.	Hanover	Delete	Delete - Wildfire deemed a low-priority hazard for Wright County plan update.
Wildfires	Identify and acquire equipment to improve county fire department response capabilities throughout Wright County.	Delano, Wright County	Delete	Delete - Wildfire deemed a low-priority hazard for Wright County plan update.
Wildfires	Implement stricter enforcement of countywide outdoor burning regulations to prevent wildfires.	Wright County	Delete	Delete - Wildfire deemed a low-priority hazard for Wright County plan update.
Drought	Identify vulnerable areas (i.e. farms) and develop a protective action plan.	Wright County	Delete	Not covered under Wright County emergency operations planning. Farmers work with the State and the Wright SWCD on water conservation issues during times of severe drought.
Drought	Educate citizens and farmers about the potential negative effects that arise from extended drought conditions.	Wright County	Ongoing	WCEM works to raise awareness of severe drought conditions and dangers as per MN DNR guidance during periods of extended drought.
All Hazards	Provide NIMS (National Incident Management System) training to all emergency response personnel throughout Wright County.	Wright County	Delete	This is an ongoing element of WCEM emergency management planning and training with local units of government in coordination with HSEM.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
All Hazards	Work with local cable and radio providers to develop and broadcast public education on Emergency Preparedness.	Wright County	Delete	Local media works independently to share information from the National Weather Service on severe weather and preparedness information recommended by NWS in advance of storm events.
All Hazards	Conduct public education and awareness campaigns targeting nursing homes regarding the development and testing of emergency plans to include possibility of complete evacuation of facility.	Wright County	Delete	Facilities that serve vulnerable populations such as hospitals and long-term care facilities are responsible by law to have emergency plans in place. WCEM is available as a resource if requested for assistance with questions on emergency planning.
All Hazards	Identify areas that have a single point of access throughout residential developments in Wright County.	Wright County	Delete	Not a necessary mitigation action.
All Hazards	Implement and expand Wright County GIS and identified cities' and townships' GIS departments.	Wright County	Ongoing	WCEM and local jurisdictions continue to incorporate GIS information into emergency planning to support mitigation and response plans.
All Hazards	Meet with MNDOT and discuss construction of a pedestrian overpass/underpass in the City of Rockford.	Wright County	Delete	Not a necessary mitigation action.
All Hazards	Inventory storm shelters.	Wright County	Ongoing	WCEM maintains a list of shelters within the county and has trained staff prepared for shelter operations.
All Hazards	Purchase backup generators for city hall and fire hall.	Albertville	Ongoing	Purchase of generators is an ongoing effort for the City of Albertville.
All Hazards	Install generator to provide emergency power in critical emergency buildings and shelter (City Hall and Civic Building).	St. Michael	Ongoing	Purchase of generators is an ongoing effort for the city of St. Michael.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
All Hazards	Support the mitigation efforts of Rockford Area Schools as outlined in their 2015 Hazard Mitigation Plan, in particular the development of safe rooms, the proper dissemination of hazard warnings to school staff, and the training of school staff to respond to hazards.	Wright County	Ongoing	Rockford Area Schools continue to work with WCEM as needed on school safety emergency planning and projects such as development of future tornado safe rooms for school facilities.

Appendix F – Planning Team Meetings

Wright County MHMP Update

Appendix F - Kickoff Meeting Documentation

Overview:

On July 14, 2021, U-Spatial@UMD hosted a kickoff meeting online that was attended by the Wright County Deputy 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

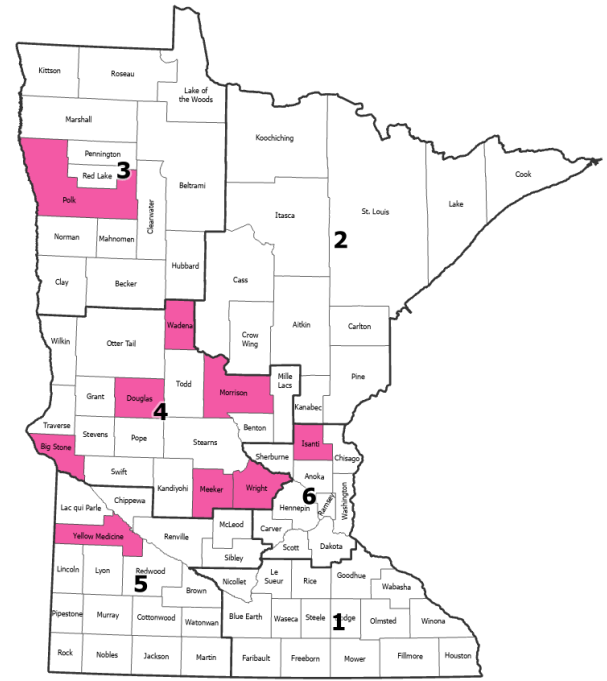
The U-Spatial@UMD team will coordinate with each Emergency Manager throughout the plan update process to engage participating jurisdictions and other stakeholders in the planning process. Following is an overview of key tasks that the U-Spatial@UMD team will facilitate to meet FEMA requirements in the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

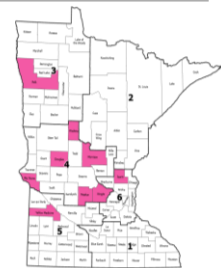
Minnesota HSEM:

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>

Wright County MHMP Update

JURISDICTIONAL CONTACT LIST

County Contacts

Name	Title	Phone	Email
Seth Hansen	Emergency Management Director	763-684-2371	seth.hansen@co.wright.mn.us
Richard Ward	Deputy EM Director	763-684-2364	richard.ward@co.wright.mn.us
Sean Deringer	County Sheriff	763-682-7622	sheriff@co.wright.mn.us
Virgil Hawkins	Highway Engineer	763-682-7388	virgil.hawkins@co.wright.mn.us
Chad Hausmann	Assistant Highway Engineer	763-682-7387	Chad.Hausmann@co.wright.mn.us
Barry J. Rhineberger	Planning and Zoning Administrator	763-682-8947	Barry.Rhineberger@co.wright.mn.us
Lee Kelly	County Administrator	763-682-7378	Lee.Kelly@co.wright.mn.us
John Holler	County PIO	763-684-4532	john.holler@co.wright.mn.us
Tim Dahl	Risk Manager	763-684-2309	Tim.Dahl@co.wright.mn.us
Sarah Grosshuesch	Public Health Director	763-335-0280	sarah.grosshuesch@co.wright.mn.us
Marc Mattice	Parks & Recreation Dept. Director	763-684-8606	<u>Marc.mattice@co.wright.mn.us</u>

City Contacts

CITY OF ALBERTVILLE

Name	Title	Phone	Email
Adam Nafstad	City Administrator	763-497-3384 Xt. 100	<u>anafstad@ci.albertville.mn.us</u>
Eric Bullen	Fire Chief/EM	763-497-3384 Xt. 107	<u>ebullen@ci.albertville.mn.us</u>

CITY OF ANNANDALE

Name	Title	Phone	Email
Kelly Hinnenkamp	City Administrator	320-274-3055	<u>khinnenkamp@annandale.mn.us</u>
Pete Standafer	Police Chief/EM	320-274-3055	<u>petes@annandale.mn.us</u>
Brian Haag	Fire Chief	320-274-8466	<u>bhaag@whitemorefire.com</u>

CITY OF BUFFALO

Name	Title	Phone	Email
Laureen Bodin	City Administrator	763-682-1181	<u>cityoffices@ci.buffalo.mn.us</u>
Pat Budke	Police Chief	763-682-5976	<u>Pat.budke@ci.buffalo.mn.us</u>
John Harnois	Fire Chief/EM	763-682-5550	<u>firechief@ci.buffalo.mn.us</u>

CITY OF CLEARWATER

Name	Title	Phone	Email
Annita Smythe	City Administrator	320-558-2428 #3	<u>asmythe@clearwatercity.com</u>
Ryan Pridgeon	Fire Chief/EM	320-267-9635	<u>clearwaterfirechief@gmail.com</u>

CITY OF COKATO

Name	Title	Phone	Email
Brad Potter	City Administrator	320-286-5505	bpotter@cokato.mn.us
Hutch Erickson	Fire Chief/EM	320-493-6466	ericksonhutch@gmail.com

CITY OF DELANO

Name	Title	Phone	Email
Phil Kern	City Administrator	763-972-0565	pkern@delano.mn.us
Bob VanLith	Fire Chief/EM	763-972-0581	bvanlith@delano.mn.us

CITY OF HANOVER

Name	Title	Phone	Email
Jennifer Nash	City Administrator	763-497-3777	jennifern@ci.hanover.mn.us
Kevin Astrup	Assistant Fire Chief	763-497-3777	Kastrup@cityofdaytonmn.com

CITY OF HOWARD LAKE

Name	Title	Phone	Email
Nick Haggemiller	City Administrator	320-299-0000	cityadmin@howard-lake.mn.us
Dave Thompson	Police Chief/EM	320-543-3670	dthompson@howard-lake.mn.us
Keith Bobrowske	Fire Chief	320-543-2001	firechief@howard-lake.mn.us

CITY OF MAPLE LAKE

Name	Title	Phone	Email
Renee Eckerly	City Administrator	320-963-3611	renee.eckerly@ci.maple-lake.mn.us
Steve Peterson	Fire Chief	612-290-0480	firechief@ci.maple-lake.mn.us
Brad Hennen	EM	320-963-3612	BHennen@maplelakelumber.com

CITY OF MONTICELLO

Name	Title	Phone	Email
Rachel Leonard	City Administrator	763-271-3295	Rachel.leonard@ci.monticello.mn.us
Dan Klein	EM	763-271-7463	Dan.klein@ci.monticello.mn.us

CITY OF MONTROSE

Name	Title	Phone	Email
Jessica Bonniwell	City Administrator	763-575-7425	jbonniwell@montrose-mn.com
Kevin Triplett	Fire Chief/EM	763-575-7480	montrosefd@gmail.com

CITY OF OTSEGO

Name	Title	Phone	Email
Adam Flaherty	City Administrator	763-441-4414	aflaherty@ci.otsego.mn.us
Kevin Lamson	EM	763-441-4414	klamson@ci.otsego.mn.us

CITY OF ROCKFORD

Name	Title	Phone	Email
Dan Madsen	City Administrator	763-477-6565	danm@cityofrockford.org
Ben Sanderson	Fire Chief/EM	320-420-6950	Rfdchief1@gmail.com

CITY OF SOUTH HAVEN

Name	Title	Phone	Email
Melissa Stenson	City Clerk	320-236-2424	sohavenc@windstream.net
Kenneth Laney	Fire Chief/EM	320-236-2279	l3machining@yahoo.com

CITY OF ST. MICHAEL

Name	Title	Phone	Email
Steven Bot	City Administrator	763-416-7931	sbot@ci.st-michael.mn.us
Steve Hosch	Fire Chief/EM	763-416-7927	shosch@ci.st-michael.mn.us

CITY OF WAVERLY

Name	Title	Phone	Email
Deb Ryks	City Clerk	763-658-4217	waverlymn@gmail.com
Ben Duske	Fire Chief/EM	763-658-4217	Duske74@hotmail.com

Township Contacts

Name of Township	Name & Title	Phone	Email
Albion Township	Debbie Uecker, Clerk	612-716-0465	albiontownship@gmail.com
Buffalo Township	Mark Hoffman, Clerk/Treas	763-267-3712	mkh.lvh.89@gmail.com
Chatham Township	Jim Bischoff, Clerk/Treas	612-237-7996	townshipclerk60@gmail.com
Clearwater Township	Jean Just, Clerk/Treas	320-980-0302	clearwatertwp@frontiernet.net
Cokato Township	Brad Morris, Clerk	320-286-2051	bmorris@centurylink.net
Corrina Township	Mary Barkley-Brown, Clerk/Treas	320-274-8049	clerk@corinnatownship.com
Franklin Township	Stephanie Russek, Clerk/Treas	763-972-2017	franklintwnshp@gmail.com
French Lake Township	Breanna Chapman, Clerk	320-583-0157	FrenchLakeTwpClerk@outlook.com
Maple Lake Township	Esther Doran, Clerk	320-963-3927	clerk.maplelaketownship@gmail.com
Marysville Township	Deb Uecker, Clerk/Treas	612-716-0465	marysvilletownship@gmail.com
Middleville Township	Joey Berg, Clerk	612-247-4348	middlevilleclerk@gmail.com
Monticello Township	Cathy Shuman, Clerk	763-295-3422	monticellotownship@tds.net
Rockford Township	Rachelle L. McDougall, Clerk/Treas	763-682-3499	rockfordtownship@yahoo.com
Silver Creek Township	Nancy Betzler, Clerk	763-878-0141	silvercreektwp@tds.net
Southside Township	Carmen Merrill, Clerk/Treas	320-274-8602	cmerrill@southsidetownship.com
Stockholm Township	Jody Selseth, Clerk	612-270-3409	stockholmtwp@gmail.com
Victor Township	Sharon Glessing, Clerk	320-543-3702	sglessing@centurylink.net
Woodland Township	Gloria Janikula, Clerk	763-658-4177	woodland.township@gmail.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	Doug Grindberg, Area Specialist	651-602-7794	douglas.grindberg@usda.gov
MN Homeland Security & Emergency Management	Lisa Dumont, HSEM	320-429-0348	Lisa.Dumont@state.mn.us
Wright County Soil & Water Conservation District	Luke Johnson, District Manager	763-682-1970	luke.johnson@mn.nacdnet.net
Wright County Soil & Water Conservation District	Dan Nadeau, Senior Resource Conservationist	763-682-1933 Ext. 3	daniel.nadeau@mn.nacdnet.net
Natural Resources Conservation Service	Julie Reberg, NRCS District Conservationist	763-682-1933	julie.reberg@mn.usda.gov
Clearwater River Watershed District	Rebecca Carlson, Administrator & Engineer	320-274-3935	rebecca@resilience-resources.com

Neighboring Jurisdiction Contacts

Name of Jurisdiction	Name & Title	Phone	Email
Sherburne County	Kyle Breffle, Emergency Management Director	763-765-3531	Kyle.Breffle@co.sherburne.mn.us
Anoka County	Terry Stoltzman, Emergency Management Director	763-324-4761	terry.stoltzman@co.anoka.mn.us
Hennepin County	Eric Waage, Emergency Management Director	612-596-0250	Eric.waage@hennepin.us
Carver County	Deb Paige, Emergency Management Director	952-361-1292	dpaige@co.carver.mn.us
McLeod County	Kevin Mathews, Emergency Management Director	320-864-3134	kevin.mathews@co.mcleod.mn.us
Meeker County	Stephanie Johnson, Emergency Management Director	320-693-5420	stephanie.johnson@co.meeker.mn.us
Stearns County	Erin Tufte, Emergency Management Director	320-259-3940	Erin.Tufte@co.stearns.mn.us

Wright County MHMP Planning Team Meeting #1

January 24, 2022 - Meeting Summary & Documentation

Summary: On Monday, January 24, 2022, Wright 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 Wright County Multi-Hazard Mitigation Plan (MHMP). The purpose of the meeting was to formally present information about the Wright 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: Wright 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 **37** people attended the meeting. Representation included elected officials and departmental staff from Wright County and the following cities: Albertville, Annandale, Buffalo, Clearwater, Cokato, Delano, Hanover, Otsego, South Haven, Monticello, and St. Michael. The cities of Howard Lake, Maple Lake, Montrose, Rockford, and Waverly were not able 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. **(9/26) 35%**
- No, but I am familiar with hazard mitigation planning. **(9/26) 35%**
- No, and this is all new to me. **(8/26) 31%**

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 Wright 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
Tornadoes	High	High
Windstorms	High	High
Winter Storms	High	High
Landslides	High	Low
Dam/Levee Failure	High	Low
Lightning (with Summer Storms)	High	Low
Hail (with Summer Storms)	High	High
Wildfire	Moderate	Low
Extreme Cold	Moderate	Moderate
Extreme Heat	Moderate	Moderate
Drought	Moderate	Moderate

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
Dan Nadeau, Wright SWCD, Senior Resource Conservationist	<i>Regarding Dam Failure:</i> Countywide this is a low priority risk. However, there is a noted localized concern along the Mississippi River in the city of Otsego that the Wright SWCD would like to make sure to address in the plan for that community. The water is starting to erode behind that levee and someday will be a problem.	Bonnie Hundrieser – Information noted for follow up with the City of Otsego and the SWCD as we work on the Local Mitigation Survey reports to identify local hazard priorities and local vulnerabilities, as well as development of local mitigation actions to reduce risk.

Meeting Participant	Comment, Question or Mitigation Idea Submitted	Facilitator Feedback / How to be Addressed in Plan Update
Eric Waage, Hennepin County Emergency Management Director	<i>Regarding Flooding Risk Assessment:</i> For flooding we've started to look at adding types of flooding that are beyond riverine/stream flooding and their designated flood plains. Other types include non-moving surface water flooding (aka pluvial) as well as very shallow groundwater flooding. Are you considering these types?	Stacey Stark: If that is something that Wright County is concerned about that is something we can definitely explore. It is not something within our regular flood modeling process right now, but I'd be interested in seeing what Hennepin County is doing. Thank you Eric!
Eric Waage, Hennepin County Emergency Management Director	<i>In regards to landslides:</i> Hennepin County has done a landslide assessment based on historical records, LIDA, and field study. We have information on the Wright-Hennepin border areas.	Stacey Stark: Noted, thank you; I will be able to follow up with you on this.
Eric Waage, Hennepin County Emergency Management Director	<i>Regarding development of flood mitigation actions and FEMA HMA grant funding:</i> How about markers that inform residents of past events such as high water signs for historic floods, or other disaster memorialization markers? Also, does the Mitigation Preparedness & Response Support mitigation strategy support activities that are eligible for FEMA HMA grant funding?	Bonnie Hundrieser: Those are good ideas for Wright County or individual jurisdictions to consider as part of Public Education & Awareness efforts. As for FEMA HMA grant funding, there could be possibilities for some related mitigation activities under the 5% Initiative funding, for example purchase of a permanent generator for a critical facility. This source of funding allows for some potential to fund projects that are aligned with the goals of the MHMP, but which are difficult to conduct a benefit cost analysis on. But overall, the answer would be probably not...many of the measures included under this strategy are using within the existing efforts of an overall emergency management program since they are not strictly mitigation.
Barry Rhineberger, Wright County Planning and Zoning Administrator	<i>In regards to the vulnerability of mobile home parks to tornado and other high wind events:</i> Is there a list available to show the MHPs that have storm shelters and the status of those shelters?	Sara Grosshuesch, Wright County Public Health Director: The Minnesota Department of Health has this information.
Annita Smythe, City of Clearwater City Administrator	<i>In regards to dam failure:</i> Is there a list of the dams in Wright County? We have one of unknown ownership in Clearwater.	Stacey Stark: In our analysis we look at both the MN DNR Dam Finder database and the National Dam Inventory to be comprehensive.

Following the discussion, participants were encouraged to fill out and return the “Mitigation Ideas” worksheet that they were provided with to Wright 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 Wright County MHMP Meeting #1:

- 1-24-22 Mtg. #1 Email Invitation
- 1-24-22 Mtg. #1 List of Participants
- 1-24-22 Mtg. #1 Power Point Slides
- 1-24-22 Mtg. #1 Handouts

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

From: [Richard P. Ward](#)
To: [Seth W. Hansen](#); [Virgil Hawkins](#); [Chad D. Hausmann](#); [Sean Riley](#); [Stacy Marquardt](#); [Lee Kelly](#); [Tim J. Dahl](#); [Sarah L. Grosshuesch](#); [Marc Mattice](#); [Eric Bullen](#); "Officer Pete Standafer"; bhaag@whitemorefire.com; cityoffices@ci.buffalo.mn.us; Pat.budke@ci.buffalo.mn.us; firechief@ci.buffalo.mn.us; asmythe@clearwatercity.com; clearwaterfirechief@gmail.com; bpotter@cokato.mn.us; [Erickson, Hutch](#); tgoodroad@cityofdaytonmn.com; [Jason Mickelson](#); pkern@delano.mn.us; [Van Lith, Bob](#); brianh@ci.hanover.mn.us; Chief1@ci.hanover.mn.us; cityadmin@howard-lake.mn.us; firechief@howard-lake.mn.us; cityadmin@ci.maple-lake.mn.us; [Steve Peterson](#); [Rachel Leonard](#); [Dan Klein](#); jbonniwell@montrose-mn.com; [Montrose Fire](#); aflaherty@ci.otsego.mn.us; klamson@ci.otsego.mn.us; danm@cityofrockford.org; Rfdchief1@gmail.com; sohavenc@windstream.net; Oscar.Laney.13machining@yahoo.com); sbot@ci.st-michael.mn.us; [Hosch, Steve](#); waverlymn@gmail.com; Duske74@hotmail.com; albiontownship@gmail.com; mkh.lvh.89@gmail.com; townshipclerk60@gmail.com; clearwatertwp@frontiernet.net; bmorris@centurylink.net; clerk@corinnatownship.com; franklintwnshp@gmail.com; FrenchLakeTwpClerk@outlook.com; clerk.maplelaketownship@gmail.com; marysvilletownship@gmail.com; middlevilleclerk@gmail.com; monticellotownship@tds.net; silvercreektwp@tds.net; cmerrill@southsidetownship.com; stockholmtwp@gmail.com; sglesing@centurylink.net; woodland.township@gmail.com; douglas.grindberg@usda.gov; Lisa.Dumont@state.mn.us; luke.johnson@mn.nacdn.net; julie.reberg@mn.usda.gov; rebecca@resilience-resources.com; [Kyle Breffle](#); terry.stoltzman@co.anoka.mn.us; Eric.waage@hennepin.us; [Debra Paige](#); [Kevin Mathews \(McLeod\)](#); [Stephanie Johnson](#); [Tufte, Erin](#); anafstad@ci.albertville.mn.us; khinnenkamp@annandale.mn.us; dthompson@howard-lake.mn.us; rockfordtownship@yahoo.com; [John V. Holler](#)
Cc: hundrieserconsulting@outlook.com; [Seth W. Hansen](#)
Subject: WRIGHT COUNTY MULTI-HAZARD MITIGATION PLAN UPDATE – MEETING INVITATION
Date: Monday, December 6, 2021 7:59:57 AM

Greetings,

Your presence is requested at a Planning Team Meeting for the update of the **Wright 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: Monday, January 24, 2022

Time: 1:00 – 3:00 p.m.

Zoom Link: https://umn-private.zoom.us/webinar/register/WN_Q7ZyO3bITDy-FmhQ3-i2jA

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 Wright 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 Wright 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 Wright 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,

Richard Ward

Deputy Director of Emergency Management

Wright County Sheriff's Office

3800 Braddock Ave NE - Buffalo, MN 55313

Office: 763-684-2364

Cell: 630-886-2300

NOTICE: This E-mail (including attachments) is covered by the Electronic Communications Privacy Act, 18 U.S.C. 2510-2521. This E-mail may be confidential and may be legally privileged. If you are not the intended recipient, you are hereby notified that any retention, dissemination, distribution, or copying of this communication is strictly prohibited. Please reply back to the sender that you have received this message in error, then delete it. Thank you.

Wright County

1/24/22 MHMP Planning Team Meeting #1

List of Participants (37)

	First Name	Last Name	Organization	Job Title
1	Seth	Hansen	Wright County Sheriff's Office	Emergency Management Director
2	Richard	Ward	Wright County Sheriff's Office	Deputy EM Director
3	Lee	Kelly	Wright County	County Administrator
4	Tim	Dahl	Wright County	Risk Manager
5	Marc	Mattice	Wright County	Director of Parks and Recreation
6	Barry	Rhineberger	Wright County	Planning and Zoning Administrator
7	Sarah	Grosshuesch	Wright County	Public Health Director
8	Jami	Goodrum	Wright County	Health & Human Services Director
9	Chad	Hausmann	Wright County	Assistant County Engineer
10	Adam	Nafstad	City of Albertville	City Administrator
11	Eric	Bullen	City of Albertville Fire Dept.	Fire Chief
12	Pete	Standafer	City of Annandale Police Dept.	Chief of Police
13	Pat	Budke	City of Buffalo Police Dept.	Chief of Police
14	John	Harnois	City of Buffalo Fire Dept.	Fire Chief
15	Annita	Smythe	City of Clearwater	City Administrator
16	Brad	Potter	City of Cokato	City Administrator
17	Phil	Kern	City of Delano	City Administrator
18	Shawn	Louwagie	City of Delano	City Engineer
19	Robert	Van Lith	City of Delano Fire Dept.	City Emergency Manager
20	Jennifer	Nash	City of Hanover	City Administrator
21	Sabrina	Hille	City of Otsego	Assistant City Administrator
22	Melissa	Stenson	City of South Haven	City Clerk
23	Adam	Flaherty	City of Otsego	City Administrator
24	Steven	Hosch	City of St Michael Fire Dept.	Fire Chief
25	Dan	Klein	City of Monticello Fire Dept.	Emergency Manager
26	Steve	Bot	City of St. Michael	City Administrator
27	Dan	Nadeau	Wright SWCD	Senior Resource Conservationist
28	Julie	Reberg	NRCS	District Conservationist
29	Gloria	Janikula	Woodland Township	Clerk
30	Gene	Janikula	Woodland Township	Chairman of the board
31	Dean	Mahlstedt	Cokato Township	Supervisor
32	Kevin	Yonak	Monticello Township	Supervisor
33	Karen	McDougall	Rockford Township	Supervisor
34	Greg	Eckblad	Rockford Township	Supervisor
35	Derek	Baas	Sherburne County	Deputy EM Director
36	Eric	Waage	Hennepin County	Emergency Management Director
37	Stephanie	Johnson	Meeker County Sheriff's Office	Emergency Management Director

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

January 24, 2022



Welcome & Introductions

U-Spatial@UMD Project Leads



Stacey Stark
Project Manager
U-Spatial@UMD



Bonnie Hundrieser
HM Planning Specialist
Hundrieser Consulting LLC

Wright County Project Lead

- Seth Hansen, Wright County Emergency Management Director
- Richard Ward, Deputy Emergency Management Director



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



2019 Flood, Delano

The purpose of this meeting is to formally convene the **Wright 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 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



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

- ✓ 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.

Wright County MHMP Update 2022

- 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 Wright 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



Wright County Planning Team

- Wright 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)



PRESENTER: STACEY STARK

Wright County Review of Existing Hazard Risk Prioritization

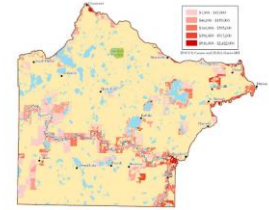
HAZARD	EXISTING PLAN	2022 PLAN
Flooding	High	
Tornadoes	High	
Windstorms	High	Please consider any changes for these priorities in 2022 based on:
Winter Storms	High	
Landslides	High	• Increase or decrease in risk over the last 5 years (probability + severity)
Dam/Levee Failure	High	
Lightning (with Summer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

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



Distribution of Estimated Economic Loss: 1% annual chance flood.

PRESENTER: STACEY STARK

Tornadoes (High)



- Based on NCEI Storm Events Database through 2021, the relative frequency of tornadoes is .35 per year (25 total)
- Tornadoes occurred in 2019 (EF1) and 2012 (EF1)
- Identify mobile home locations



Sept. 5, 2019 Howard Lake Tornado

PRESENTER: STACEY STARK

Windstorms (High)



- Each summer storm is addressed individually
- The relative frequency of all wind-related events (high wind, strong wind, thunderstorm wind)
 - Since 1996 is 9.5 / year.
 - Since 2012 is 5.2 / year



CBS Minnesota storm front photo



Kare 11 hail photo

PRESENTER: STACEY STARK

Winter Storms (High)



- 27 winter weather related events (blizzards, heavy snows, ice storms, winter storms, and winter weather) have occurred since January 2012 (2.7 year)
- Based on all records in the NCEI Storm Events Database, the relative frequency of winter-related storm events is 2.9 per year.



Nov. 2020, Snow Squall on I-94, Monticello

PRESENTER: STACEY STARK

Landslides (High)



Damage from Landslide on Lake Ann, 2002 (Jensen & Guerningsma)

- Historic flooding in 2002 caused mudslide that damaged residences

PRESENTER: STACEY STARK

Lightning (High)



- In 2015 plan, included with summer storms
- NCEI storms database under-reports lightning
- between 1997 and July 2015 five events caused \$120,000 in property damage and 3 injuries due to lightning
- Hazards deemed low risk and without significant mitigation actions, can be dropped from the plan.



CBS Minnesota storm front photo



Kare11 hail photo

PRESENTER: STACEY STARK

Hail (High)



- There were 26 hailstorms with hail greater or equal to 1-inch since 2012 (2-3 per year)
- The relative frequency of ALL hail events is 7.5 per year.



CBS Minnesota storm front photo



Kare11 hail photo

PRESENTER: STACEY STARK

Wildfire/Wildland Fire (Moderate)



- Low risk relative to other MN counties
- \$0 crop indemnity claims through 2017
- Very few DNR fires reported
- Wildfire Hazard Potential (fuels and WUI) very low



August, 2021 Pelican Lake Wildfire

PRESENTER: STACEY STARK

Extreme Cold (Moderate)



- From 2012 - 2021, daily low temperatures < -18 °F were recorded 23 times at Delano station. Wright County experiences an average of 2-3 extreme cold days each year.
- -34°F recorded by the Delano station on January 31, 2019
- The relative frequency of cold-related events (NWS Warning issued due to wind chill of -35 °F or colder) in Wright County is 1.1 per year

PRESENTER: STACEY STARK

Extreme Heat (Moderate)

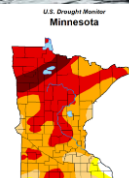
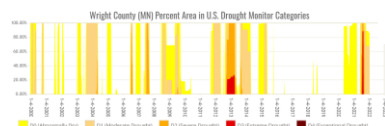


- From 2012 - 2021, daily high temperatures > 90 °F were recorded 54 times at Delano station. Wright County experiences an average of 5-6 extreme heat days each year.
- Three Excessive Heat Warnings (Heat Index > 100 °F) in NCEI database.

Drought (Moderate)



- From 2000 – 2018, Wright County was in at least Moderate (D1) Drought 22 - 25% of the time.



August 17, 2021



July, 2021 drought - low lake levels

PRESENTER: STACEY STARK

Dam Failure (Low)



- No high hazard potential dams in Wright County
- 8 dams in Wright County. All with the hazard risk of “low”.
- Must state any mitigation actions if the county wishes to be eligible for the High Hazard Potential Dam Rehabilitation Grant Program

Wright County Review of Hazard Risk Prioritization

HAZARD	EXISTING PLAN	2022 PLAN
Flooding	High	
Tornadoes	High	
Windstorms	High	
Winter Storms	High	
Landslides	High	
Dam/Levee Failure	High	
Lightning (with Summer Storms)	High	
Hail (with Summer Storms)	High	
Wildfire	Moderate	
Extreme Cold	Moderate	
Extreme Heat	Moderate	
Drought	Moderate	

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



1998 Tornado damage to MHP in Le Center, MN.

- 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



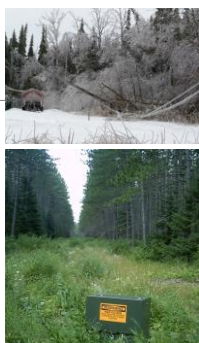
Warba, MN mobile home park tornado safe room, FEMA grant funded



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

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.

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 Wright County Resulting from HMA Funding

Year	Project Type	Subgrantee	Project Amount	Federal Share
2013	91.1: Local Multihazard Mitigation Plan	Wright (County)	\$28,240	\$21,180
2007	91.1: Local Multihazard Mitigation Plan	Wright County Emergency Management	\$33,000	\$24,750
2002	400.1: Utility Protective Measures (Electric, Gas, etc.)	Delano	\$1,019,273	\$764,456
2002	401.1: Water and Sanitary Sewer System Protective Measures	Delano	\$47,529	\$35,647
2000	401.1: Water and Sanitary Sewer System Protective Measures	Cokato	\$155,768	\$116,826
1996 and 1993	103.1: Feasibility, Engineering and Design Studies 200.1: Acquisition of Private Real Property (Structures and Land) - Riverine	MnDOT - Metro Dist Rockford	\$29,368 \$708,229	\$22,026 \$503,956

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

U-SPATIAL

UNIVERSITY OF MINNESOTA DULUTH
Driven to Discover

Bonnie Hundrieser, Consultant

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
Natural Systems Protection	<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>
Education and Awareness Programs	<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>
Mitigation Preparedness and Response Support	<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

Wright County MHMP Planning Team Meeting #2

October 25, 2022 - Meeting Summary & Documentation

Summary: On Tuesday, October 25, 2022, Wright 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 Wright County Multi-Hazard Mitigation Plan (MHMP). The purpose of the meeting was to formally convene the Wright 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: Wright 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 11 people attended the meeting. Representation included departmental staff from Wright County and the cities of Albertville, Buffalo, Howard Lake, Montrose, Monticello, and South Haven. The cities of Annandale, Clearwater, Cokato, Delano, Hanover, Maple Lake, Otsego, Rochford, St. Michael, and Wavery were unavailable 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
Eric Waage, Hennepin County Emergency Management Director	<i>Regarding the Prioritization of Hazards to Include in the Plan / FEMA HMA Grant Funding:</i> You said projects must address hazards of moderate to high risk, but what happens if there is not enough data or existing research to be able to categorize the hazard into a moderate or high-risk category? For instance, thorough investigation could discover that a hazard has been underappreciated and actually be moderate to high. Examples of understudied hazards include landslides, sinkholes, groundwater flooding, etc. In some cases, ongoing climate change effects will push relatively obscure hazards into higher risk regimes. Can Haz Mit funds be used to investigate hazards that cannot be currently given a risk rating due to insufficient data?	Stacey Stark: Eric - I would talk to Jen Davis (State Hazard Mitigation Officer) about this. Because of all the recent disasters, there has been a little more funding flexibility. For sure "need more information" is a legitimate mitigation action.

There were no other questions or comments during 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 Wright County MHMP Meeting #2:

- 10-25-22 Mtg. #2 Email Invitation
- 10-25-22 Mtg. #2 List of Participants
- 10-25-22 Mtg. #2 Power Point Slides
- 10-25-22 Mtg. #2 Handouts

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

From: [Seth W. Hansen](#)
To: [Seth W. Hansen](#); [Richard P. Ward](#); [Sheriff Mail Distribution List](#); [Virgil Hawkins](#); [Chad D. Hausmann](#); [Barry Rhineberger](#); [Lee Kelly](#); [John V. Holler](#); [Tim J. Dahj](#); [Sarah L. Grosshuesch](#); [Marc Mattice](#); [anafstad@ci.albertville.mn.us](#); [ebullen@ci.albertville.mn.us](#); [khinnenkamp@annandale.mn.us](#); [petes@annandale.mn.us](#); [bhaag@whitemorefire.com](#); [cityoffices@ci.buffalo.mn.us](#); [Pat.budke@ci.buffalo.mn.us](#); [firechief@ci.buffalo.mn.us](#); [asmythe@clearwatercity.com](#); [clearwaterfirechief@gmail.com](#); [bpotter@cokato.mn.us](#); [ericksonhutch@gmail.com](#); [tgoodroad@cityofdaytonmn.com](#); [jmickelson@cityofdaytonmn.com](#); [pkern@delano.mn.us](#); [bvanlith@delano.mn.us](#); [jennifern@ci.hanover.mn.us](#); [Kastrup@cityofdaytonmn.com](#); [cityadmin@howard-lake.mn.us](#); [dthompson@howard-lake.mn.us](#); [firechief@howard-lake.mn.us](#); [cityadmin@ci.maple-lake.mn.us](#); [firechief@ci.maple-lake.mn.us](#); [BHennen@maplelakelumber.com](#); [Rachel.leonard@ci.monterello.mn.us](#); [Dan.klein@ci.monterello.mn.us](#); [jbonniwell@montrose-mn.com](#); [Clay.T.Wilfahrt](#); [montrosefd@gmail.com](#); [aflaherty@ci.otsego.mn.us](#); [klamson@ci.otsego.mn.us](#); [danm@cityofrockford.org](#); [Rfdchief1@gmail.com](#); [sohavenc@windstream.net](#); [l3machining@yahoo.com](#); [sbot@ci.st-michael.mn.us](#); [shosch@ci.st-michael.mn.us](#); [waverlymn@gmail.com](#); [Duske74@hotmail.com](#); [albiontownship@gmail.com](#); [mkh.lvh.89@gmail.com](#); [townshipclerk60@gmail.com](#); [clearwatertwp@frontiernet.net](#); [bmorris@centurylink.net](#); [clerk@corinnatownship.com](#); [franklintwshp@gmail.com](#); [FrenchLakeTwpClerk@outlook.com](#); [clerk.maplelaketownship@gmail.com](#); [marysvilletownship@gmail.com](#); [middlevilleclerk@gmail.com](#); [monticellotownship@tds.net](#); [rockfordtownship@yahoo.com](#); [silvercreektwp@tds.net](#); [cmerrill@southsidetownship.com](#); [stockholmtpw@gmail.com](#); [sglessing@centurylink.net](#); [woodland.township@gmail.com](#); [douglas.grindberg@usda.gov](#); [Lisa.Dumont@state.mn.us](#); [luke.johnson@mn.nacdnet.net](#); [daniel.nadeau@mn.nacdnet.net](#); [julie.reberg@mn.usda.gov](#); [rebecca@resilience-resources.com](#); [Kyle.Breffle@co.sherburne.mn.us](#); [terry.stoltzman@co.anoka.mn.us](#); [Eric.waage@hennepin.us](#); [dpaige@co.carver.mn.us](#); [kevin.mathews@co.mcleod.mn.us](#); [stephanie.johnson@co.meeker.mn.us](#); [Erin.Tufte@co.stearns.mn.us](#)
Cc: [Bonnie K Hundrieser](#)
Subject: Wright County Multi- Hazard Mitigation Plan Update
Date: Monday, September 26, 2022 7:40:29 AM

WRIGHT COUNTY

MULTI-HAZARD MITIGATION PLAN UPDATE – MEETING INVITATION

Greetings,

Your presence is requested at the **2nd Planning Team Meeting** for the update of the **Wright 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: Tuesday, October 25, 2022

Time: 9:00 a.m. – 11:00 a.m.

Zoom Link: https://umn-private.zoom.us/webinar/register/WN_NpE3valBS4-W7vVQYIiISA

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 Wright 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 Wright 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,

Seth Hansen

Director of Emergency Management
Wright County Sheriffs Office
3800 Braddock Ave NE, Buffalo, MN 55313
Direct Phone: 763-684-2371
Cell Phone: 763-274-8409
Email: seth.hansen@co.wright.mn.us

NOTICE: This E-mail (including attachments) is covered by the Electronic Communications Privacy Act, 18 U.S.C. 2510-2521. This E-mail may be confidential and may be legally privileged. If you are not the intended recipient, you are hereby notified that any retention, dissemination, distribution, or copying of this communication is strictly prohibited. Please reply back to the sender that you have received this message in error, then delete it. Thank you.

Wright County

10/25/22 MHMP Planning Team Meeting #2

List of Participants (11)

	First Name	Last Name	Organization	Job Title
1	Richard	Ward	Wright County Sheriff's Office	Deputy Emergency Management Director
2	Eric	Bullen	City of Albertville	Fire Chief
3	Nick	Haggenmiller	City of Howard Lake	City Administrator
4	Pat	Budke	City of Buffalo	Police Chief
5	Jessica	Bonniwell	City of Montrose	City Administrator
6	John	Harnois	City of Buffalo Fire Department	Fire Chief
7	Melissa	Stenson	City of South Haven	Clerk- Treasurer
8	Rachel	Leonard	City of Monticello	City Administrator
9	Eric	Waage	Hennepin County	Emergency Management Director
10	Stephanie	Johnson	Meeker County Sheriff's Office	Emergency Management Director
11	Kyle	Breffle	Sherburne County Sheriff's Office	Emergency Management Director

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

October 25, 2022



Welcome & Introductions

U-Spatial@UMD Project Leads



Stacey Stark
Project Manager
U-Spatial@UMD



Bonnie Hundrieser
HM Planning Specialist
Hundrieser Consulting LLC

Wright County Project Lead

- Seth Hansen, Wright County Emergency Management Director
- Richard Ward, Deputy Emergency Management Director



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



2019 Flood, Delano

The purpose of this meeting is to formally convene the **Wright 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

Wright 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 Wright 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

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

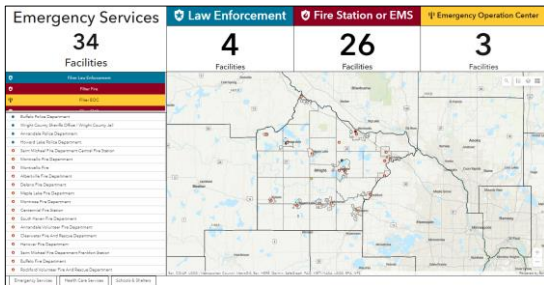
Website companion

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



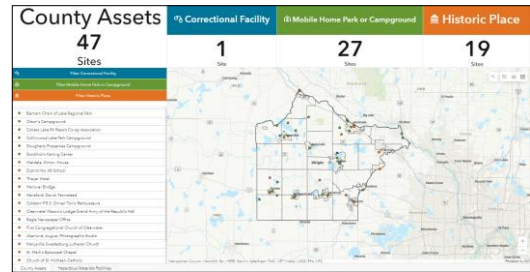
PRESENTER: BONNIE HUNDRIESER

All Hazards - Critical Infrastructure



PRESENTER: STACEY STARK

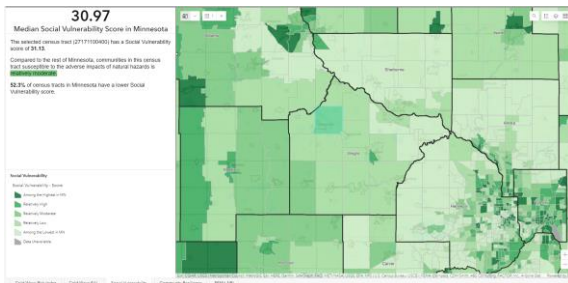
All Hazards - Critical Infrastructure



- Correctional facilities
- Mobile home parks/ RV campgrounds
- Historic Places
- EPA Resource Conservation and Recovery Act (RCRA) Registry

PRESENTER: STACEY STARK

All Hazards – Population Vulnerability



PRESENTER: STACEY STARK

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



Sept. 5, 2019 Howard Lake Tornado

PRESENTER: STACEY STARK

Prioritization of Hazards for Wright County



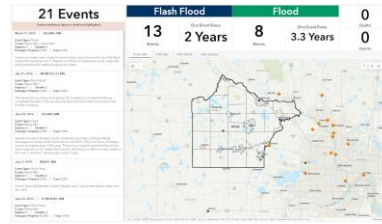
Prioritization of hazards by the Wright County planning team included consideration of:

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

PRESENTER: BONNIE HUNDRIESER

WRIGHT COUNTY: Flooding (High)

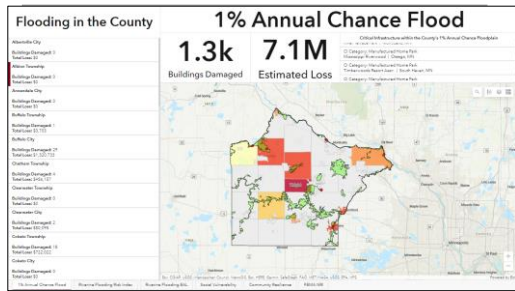


- Obtained building and parcel values
- Used statewide building footprint data
- Obtained FEMA Flood Insurance Rate Maps
- Ran flood model to estimate economic loss
- Identified Critical Infrastructure in flood zone

PRESENTER: STACEY STARK

WRIGHT COUNTY: Flooding (Moderate)

March 23, 2019
DeSaino Flood

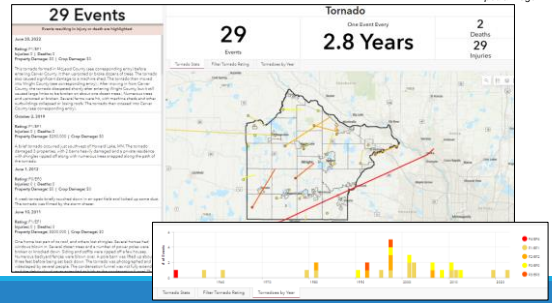


PRESENTER: STACEY STARK

WRIGHT COUNTY: Tornadoes (High)



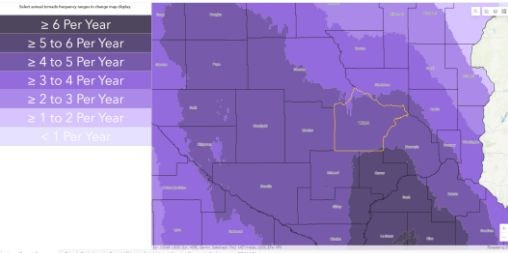
Wikipedia image



PRESENTER: STACEY STARK

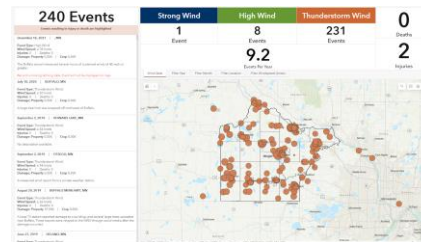
WRIGHT COUNTY: Tornadoes (High)

Annual tornado frequency within 50 miles of any location in Minnesota

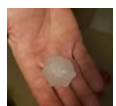


PRESENTER: STACEY STARK

WRIGHT COUNTY: Windstorms, Hail (High)



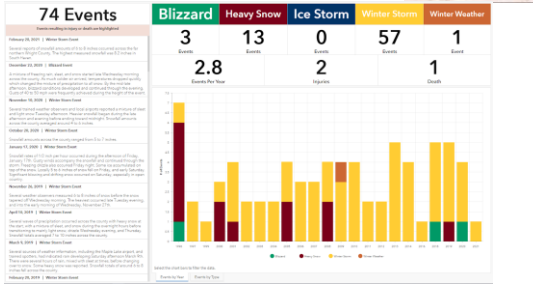
July 18, 2020 windstorm - quarter inch hail



July, 2020 hail storm - quarter inch hail

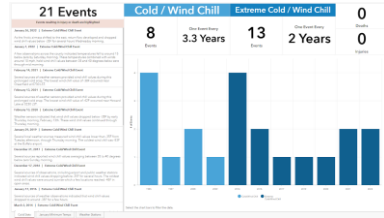
PRESENTER: STACEY STARK

WRIGHT COUNTY: Winter Storms (High)



PRESENTER: STACEY STARK

WRIGHT COUNTY: Extreme Cold (Moderate)



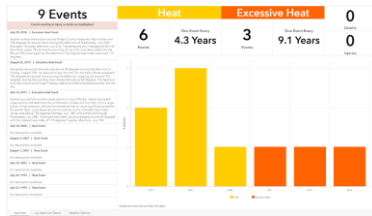
The Litchfield station (in Meeker County) experiences a daily minimum temperature of $\leq -18^{\circ}\text{F}$ an average of 15 days per year.

Program Gaps and Deficiencies:
Obtaining generators for backup power to healthcare facilities and designated shelter facilities.

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

PRESENTER: STACEY STARK

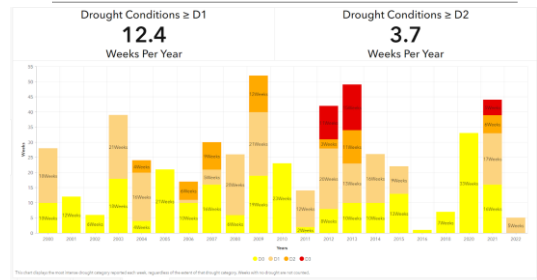
WRIGHT COUNTY: Extreme Heat (Moderate)



The Litchfield station (in Meeker County) experiences a daily maximum temperature of $\geq 90^{\circ}\text{F}$ an average of 33 days per year.

PRESENTER: STACEY STARK

WRIGHT COUNTY: Drought (Moderate)



PRESENTER: STACEY STARK

Comments and Questions?

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



PRESENTER: BONNIE HUNDRIESER

Local Planning & Regulations



Wright County Examples:

- Participating in the NFIP
- Planning for stormwater management in areas of new development.
- Collaborating with SWCD to address flooding and erosion (Wright County Water 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

Wright 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)
- Wright 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

Wright 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

Wright County Examples:

- Promoting sign-up for the County's RAVE emergency alert 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

Wright 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



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

HAZARD MITIGATION ASSISTANCE

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

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

Who is eligible for grant funding?

All applicants must have or be covered under an approved Hazard Mitigation Plan. Eligible applicants include: State and local governments; certain private non-profit organizations or institutions; and Tribal Communities

What types of projects can be funded?

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

- **Advance Assistance** may be used to develop mitigation strategies and obtain data, including for environmental and historic preservation compliance considerations, and develop complete project applications in a timely manner.
- **Aquifer Storage and Recovery** (ASR) projects serve primarily as a drought management tool, but can also be used to reduce flood risk and restore aquifers that have been subject to overdraft. The concept is to capture water when there is an abundant supply, store the water in subsurface aquifers, and recover water from the storage aquifer when needed. Storing water underground can help protect it from pollutants, evaporation, and weather events.
- **Floodplain and stream restoration** (FSR) projects are used primarily to reduce flood risk and erosion by providing stable reaches, and may also mitigate drought impacts. FSR projects restore and enhance the floodplain, stream channel and riparian ecosystem's natural function. They provide base flow recharge, water supply augmentation, floodwater storage, terrestrial and aquatic wildlife habitat, and recreation opportunities by restoring the site's soil, hydrology and vegetation conditions that mimic pre-development channel flow and floodplain connectivity.
- **Flood Diversion and Storage** (FDS) projects often are used to reduce flood risk, but also can be used to mitigate drought and improve ecosystem services. These projects involve diverting floodwaters from a stream, river, or other body of water into a conduit such as a canal, pipe, or wetland and storing them in an above-ground storage facility. Water is then slowly released, reducing flood risk.

- **Green Infrastructure Methods** are a sustainable approach to natural landscape preservation and storm water management. Include in *eligible hazard mitigation activities* as well as provide additional ecosystem benefits. Ecosystem-based approach to replicate a site's pre-development, natural hydrologic function. Benefits include: Increase water supply, improved water quality, can be scaled to size and designed to fit site conditions.
- **Property Acquisition and Structure Demolition or Relocation** – The voluntary acquisition of an existing at-risk structure and the underlying land, and conversion of the land to open space through the demolition or relocation of the structure. The property must be deed-restricted in perpetuity to open space uses to restore and/or conserve the natural floodplain functions.
- **Retrofit Flood-Prone Residential Structures** are changes made to an existing structure to reduce or eliminate the possibility of damage to that structure from flooding, erosion, or other hazards. Examples of this mitigation are primarily elevation of structures above flood levels and floodwalls.
- **Safe Room Construction** - Safe room construction projects are designed to provide immediate life-safety protection for people in public and private structures from tornado and severe wind events. Includes retrofits of existing facilities or new safe room construction projects, and applies to both single and dual-use facilities
- **Minor Localized Flood Reduction Projects** - Projects to lessen the frequency or severity of flooding and decrease predicted flood damages, such as the installation or up-sizing of culverts, and stormwater management activities, such as creating retention and detention basins. These projects must not duplicate the flood prevention activities of other Federal agencies and may not constitute a section of a larger flood control system.
- **Infrastructure Retrofit** - Measures to reduce risk to existing utility systems, roads, and bridges.
- **Soil Stabilization** - Projects to reduce risk to structures or infrastructure from erosion and landslides, including installing geotextiles, stabilizing sod, installing vegetative buffer strips, preserving mature vegetation, decreasing slope angles, and stabilizing with rip rap and other means of slope anchoring. These projects must not duplicate the activities of other Federal agencies. *New tools for Bioengineered Shoreline Stabilization, Bioengineered Streambank Stabilization.*
- **Wildfire Mitigation** - Projects to mitigate at-risk structures and associated loss of life from the threat of future wildfire through: Defensible Space for Wildfire, Application of Ignition-resistant Construction and Hazardous Fuels Reduction. *New tool for Bioengineered Wildfire Mitigation.*
- **HMGP only - 5 Percent Initiative Projects** – These projects, which are only available pursuant to an HMGP disaster, provide an opportunity to fund mitigation actions that are consistent with the goals and objectives of approved mitigation plans and meet all HMGP program requirements, but for which it may be difficult to conduct a standard Benefit-Cost Analysis (BCA) to prove cost-effectiveness.

How do I apply?

Start by submitting a Notice of Interest, available on HSEMs website at:

<https://dps.mn.gov/divisions/hsem>

Where can I obtain further information?

For additional information about the HMA grant program, you can refer to the FEMA website:

<http://www.fema.gov/hazard-mitigation-assistance>

Mitigation Strategies & Action Types

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

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

Mitigation Strategy	Description	Example Mitigation Actions
Local Planning and Regulations	These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built.	<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
Natural Systems Protection	<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>
Education and Awareness Programs	<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>
Mitigation Preparedness and Response Support	<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.

Appendix G – Public Outreach & Engagement Documentation

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

Overview: On September 14, 2021, Wright 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. Wright 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 Wright 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 Wright 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.

COMMENT #1

9/16/21 Email from Wright SWCD to Wright County Emergency Management

Dan Nadeau, Senior Resource Conservationist, Wright SWCD submitted an email with photograph attachments of an eroding levee of concern in the City of Otsego and asked for the information to be shared for the MHMP update.

9/16/21 Return email from Wright County EMD

Seth Hansen, Wright County EMD noted that the information would be shared with Bonnie Hundrieser on the streambank & levee erosion issue/project for the Wright County MHMP update for follow up with the SWCD and City of Otsego.

COMMENT #2

9/16/21 Email from a City of St. Michael resident

Seth, we live in a new development St Michael. We are in the Creekside Estates. I have concerns about hearing the siren for warnings. Unless you are standing outside listening for a siren you will not hear it. I'm not sure if this is what your looking for, but thought I would bring to your attention.

Thank you, Deb

9/17/21 email response from Wright County EMD

Deborah,

Thank you for submitting your feedback to the Wright County news release on our Multi-Hazard Mitigation Plan update. You are correct that outdoor warning sirens may be difficult to hear when indoors; they are intended to be more for those that are outdoors and will hear it. Since outdoor warning sirens do not reach everyone as an auditory warning device, we strongly encourage all residents to be signed up for our county's emergency citizen alert system, Everbridge. You can sign up for it here if you have not done so already: <https://member.everbridge.net/453003085615682/login>

Thank you for your time to respond!

Seth Hansen

Director of Emergency Management
Wright County Sheriffs Office
3800 Braddock Ave NE, Buffalo, MN 55313
Direct Phone: 763-684-2371
Cell Phone: 763-274-8409
Email: seth.hansen@co.wright.mn.us

COMMENT #3

9/16/21 Email from public citizen to Wright County Emergency Management

My concern is that in the future we will be seeing increasing drought and flooding extremes. I know the Mississippi River is used to cool the nuclear power plant. How low can it go before the river's ability to cool the plant is impaired? Conversely, is there a high water level on the river that can cause mechanical issues? How will we know and what is the strategy? If the strategy during low water times is to reroute water from the city... how do we prioritize and maintain that? I know in Idaho right now a community that gets their water from a local lake had to prioritize agriculture over residential due to the drought. As a result, many homes have been without water for over two months with no end yet in sight. I have asked this question of the power plant and cannot get a response, so I am hopeful someone from emergency management can let me know if the risk is valid or not.

In addition, in an effort to save water, especially during drought times, I would appreciate county support in replacing lawns with pollinator gardens or prairie restoration. Currently that is not possible due to city rules and subsequent fines.

I would also appreciate efforts to support residential solar panels. I can see a future where we might have power outages. Homes with solar generators which can operate during outages (which is a significant cost above panels and a separate item) would be helpful within communities. Imagine if one home per block was able to keep the heat on during extended periods without power during the winter. People could go to that house for safety and still have easy access to their personal homes for supplies, rather than having entire cities end up at community centers or high schools. (Assuming those locations have power.)

Thank you for taking my input and I hope to receive an answer about any risk of river levels.

Helene

Email response from Richard Ward, Wright County Deputy EMD

Helene,

Your mitigation suggestions and concerns have been forwarded to the team working on the update. In response to your concerns about the river levels and how it affects the nuclear plant, it may comfort you to know those have already been planned for by Xcel energy, HSEM, FEMA, and the DOE. Unfortunately, I cannot discuss what those mitigation and planning factors are because it is a security concern, which is likely why you haven't received a response from Xcel on the topic. Please let me know if you have any further questions or mitigation proposals, otherwise have a great weekend!

Respectfully,

Richard Ward

Deputy Director of Emergency Management
Wright County Sheriff's Office
3800 Braddock Ave NE - Buffalo, MN 55313
Office: 763-684-2364
Cell: 630-886-2300

COMMENT #4

9/8/21 Email from public citizen to Wright County Emergency Management

Hello Seth,

This is in response to the Annandale Advocate newspaper article: *Public input sought for Hazard Mitigation Plan*. I suggest that as part of any hazard mitigation plan ongoing community connections and communication is key. When communication grids go down, there must be a way to coordinate emergency personnel – whether first responders, hospitals, police, fire departments, as well as community leaders. I recommend that your committee look into Plum Laboratories for portable, data communication devices. Hennepin County recently purchased Plum Cases for their emergency management. To learn more please visit: <https://plumcases.com/>. Contact information: 855-537-9990. Email: info@plumcases.com.

As I read Hennepin County's Hazard Mitigation Plan, attention to each community's details including risk-solutions was impressive including the background and county profile, and the hazard inventory. I look forward to reading the Wright County Multi-Hazard Mitigation Plan. Thank you for inviting input.

Vicki

9/8/21 Wright County EMD Response

An email was returned from Seth Hansen thanking Vicki Morgan for her input. Emergency communications are covered under other specific Wright County Emergency Management emergency planning measures and will not be covered under the Multi-Hazard Mitigation Plan.

From: [Richard P. Ward](#)
To: [Seth W. Hansen](#); [Virgil Hawkins](#); [Chad D. Hausmann](#); [Sean Riley](#); [Stacy Marquardt](#); [Lee Kelly](#); [Tim J. Dahl](#); [Sarah L. Grosshuesch](#); [Marc Mattice](#); [Eric Bullen](#); "Officer Pete Standafer"; bhaag@whitemorefire.com; cityoffices@ci.buffalo.mn.us; Pat.budke@ci.buffalo.mn.us; firechief@ci.buffalo.mn.us; asmythe@clearwatercity.com; clearwaterfirechief@gmail.com; bpotter@cokato.mn.us; [Erickson, Hutch](#); tgoodroad@cityofdaytonmn.com; [Jason Mickelson](#); pkern@delano.mn.us; [Van Lith, Bob](#); brianh@ci.hanover.mn.us; Chief1@ci.hanover.mn.us; cityadmin@howard-lake.mn.us; firechief@howard-lake.mn.us; cityadmin@ci.maple-lake.mn.us; [Steve Peterson](#); [Rachel Leonard](#); [Dan Klein](#); jbonniwell@montrose-mn.com; [Montrose Fire](#); aflaherty@ci.otsego.mn.us; klamson@ci.otsego.mn.us; danm@cityofrockford.org; Rfdchief1@gmail.com; sohavenc@windstream.net; Oscar.Laney.13machining@yahoo.com); sbot@ci.st-michael.mn.us; [Hosch, Steve](#); waverlymn@gmail.com; Duske74@hotmail.com; albiontownship@gmail.com; mkh.lvh.89@gmail.com; townshipclerk60@gmail.com; clearwatertwp@frontiernet.net; bmorris@centurylink.net; clerk@corinnatownship.com; franklintwnshp@gmail.com; FrenchLakeTwpClerk@outlook.com; clerk.maplelaketownship@gmail.com; marysvilletownship@gmail.com; middlevilleclerk@gmail.com; monticellotownship@tds.net; silvercreektwp@tds.net; cmerrill@southsidetownship.com; stockholmtwp@gmail.com; sglessing@centurylink.net; woodland.township@gmail.com; douglas.grindberg@usda.gov; Lisa.Dumont@state.mn.us; luke.johnson@mn.nacdn.net; julie.reberg@mn.usda.gov; rebecca@resilience-resources.com; [Kyle Breffle](#); terry.stoltzman@co.anoka.mn.us; Eric.waage@hennepin.us; [Debra Paige](#); [Kevin Mathews \(McLeod\)](#); [Stephanie Johnson](#); [Tufte, Erin](#); anafstad@ci.albertville.mn.us; khinnenkamp@annandale.mn.us; dthompson@howard-lake.mn.us; rockfordtownship@yahoo.com; [John V. Holler](#)
Cc: hundrieserconsulting@outlook.com; [Seth W. Hansen](#)
Subject: Wright County Multi-Hazard Mitigation Plan Update
Date: Tuesday, September 14, 2021 11:40:17 AM
Attachments: [Wright County MHMP News Release.pdf](#)

Greetings,

Wright County Emergency Management is commencing work on the update of the Wright County Multi-Hazard Mitigation Plan (MHMP). Attached is a news release for your information.

Cities and Townships: In order to reach the greater public, we request your assistance to post this news release for your community. We will be documenting local outreach which is a requirement of the planning process. **Participation by all cities is requested in order to help fulfill required documentation to FEMA for the plan update.** The participation by townships is optional.

Instructions:

- **Post the News Release Electronically and/or as a Hardcopy:** Please post this news release locally using the outreach methods best available to you (your website and/or Facebook page, Post Office or community center bulletin board, or taped physically to a facility such as the City Hall or Town Hall door for public view.) We welcome as many ways of posting that you can cover.
- **If posting this news release electronically,** please email me a link to the posting (i.e. website or Facebook page).
- **If posting it as a hardcopy,** please email me a picture of it hung up and let me know the location (i.e., City Hall, Township Hall, Post Office, local community center).

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

I look forward to your participation in the Wright County MHMP update.

If you have any questions, please let me know.

Respectfully,

Richard Ward

Deputy Director of Emergency Management

Wright County Sheriff's Office

3800 Braddock Ave NE - Buffalo, MN 55313

Office: 763-684-2364

Cell: 630-886-2300

NOTICE: This E-mail (including attachments) is covered by the Electronic Communications Privacy Act, 18 U.S.C. 2510-2521. This E-mail may be confidential and may be legally privileged. If you are not the intended recipient, you are hereby notified that any retention, dissemination, distribution, or copying of this communication is strictly prohibited. Please reply back to the sender that you have received this message in error, then delete it. Thank you.



Wright County Sheriff's Office



Matt Treichler
Chief Deputy
Shawna Athman
Office Administrator
Todd Sandin
Captain
Annette Habisch-Peterson
Captain
Todd Hoffman
Captain
Pat O'Malley
Jail Captain

Sheriff Sean Deringer

3800 Braddock Ave NE
Buffalo, MN 55313

1-800-362-3667
Fax: 763-682-7610

Administration	763-682-7622
Dispatch	763-682-7600
Records	763-682-7630
Civil	763-682-7646
Warrants	763-682-7688
Investigations	763-682-7433
Jail Administration	763-684-2381
Victim Assistance	763-684-4537

WRIGHT COUNTY NEWS RELEASE

September 14, 2021

Public Input Wanted as County Updates Multi-Hazard Mitigation Plan

The Wright 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 Wright County MHMP is a multi-jurisdictional plan that covers Wright County, including the cities of Albertville, Annandale, Buffalo, Clearwater, Cokato, Delano, Hanover, Howard Lake, Maple Lake, Monticello, Montrose, Otsego, Rockford, South Haven, St. Michael, and Waverly. The Wright 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 Seth Hansen, Wright 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 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, Wright County is seeking feedback from residents and businesses from across the county to incorporate into the plan:

- What are the natural hazards you feel pose the greatest risk to your community?
- 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 Wright County Emergency Management by phone or email. Public comments may also be submitted on the Wright 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

Seth Hansen
Wright County Emergency Management Director
Phone: 763-684-2371
Email: seth.hansen@co.wright.mn.us

Wright County MHMP News Release #1

Documentation of News Release Postings

COUNTY POSTINGS

Wright County Website

September 14, 2021

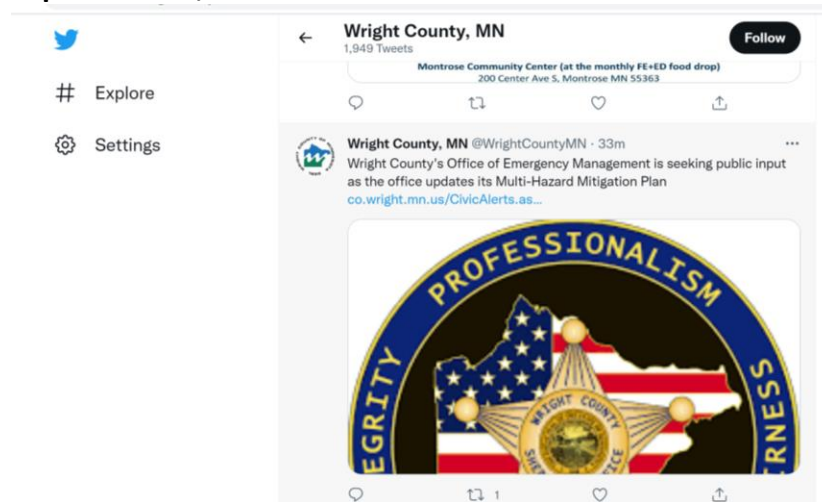


Wright County Facebook

September 14, 2021



Wright County Twitter Page September 14, 2021

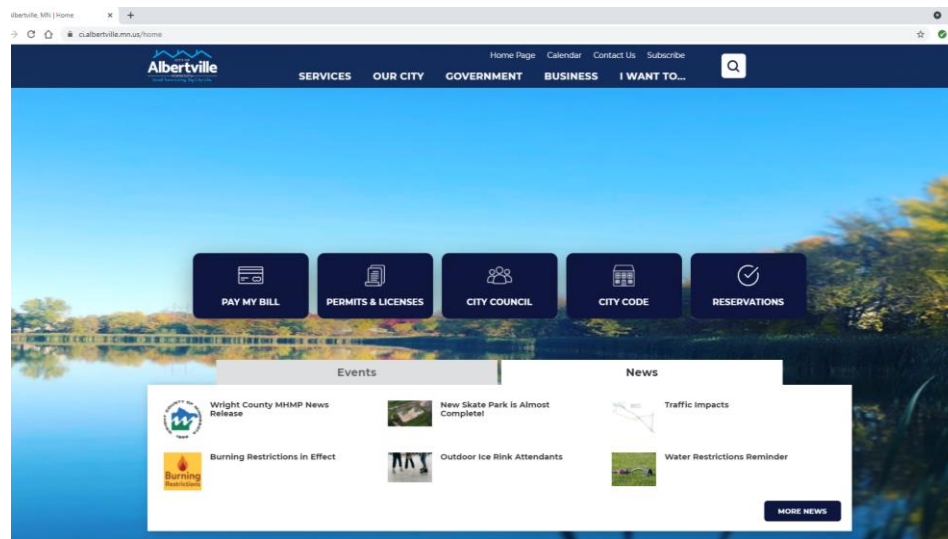


LOCAL MEDIA POSTINGS

No local media postings.

CITY POSTINGS

City of Albertville City Website, September 14, 2021



City of Albertville Facebook Page September 14, 2021

About See All

5959 Main Ave NE Albertville, MN 55301

Situated half way between the Twin Cities and Saint Cloud Metropolitan areas, Albertville's convenient location has proven to be very desirable!

If you're looking for the official source of information about the City of Albertville, please visit our homepage at <http://www.ci.albertville.mn.us>. Thank you.

2,315 people like this including 6 of your friends

2,387 people follow this

285 people checked in here

<http://www.ci.albertville.mn.us/>

City of Albertville - Small Town Living. Big City Life.
33m · 📍

Wright County Emergency Management is commencing work on the update of the Wright County Multi-Hazard Mitigation Plan (MHMP). Attached is a news release for your information.

Wright County Sheriff's Office

Sheriff Sean Deringer
3800 Broadway Ave SE
Duluth, MN 55812
1-800-552-5007
Fax: 763-942-7053

WRIGHT COUNTY NEWS RELEASE
April 14, 2022

Public Input Wanted as County Updates Multi-Hazard Mitigation Plan

The 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 county is currently in the process of updating the plan. 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 county is currently in the process of updating the plan. 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.

City of Annandale City Website, September 16, 2021

Welcome to the City of Annandale's Website

Located in the "Heart of the Lakes", the City of Annandale is known for its abundance of lakes, great shopping and dining opportunities, top rated schools, viable business environment and a strong sense of community amongst area residents.

With a strong local business environment and volunteer base, the Community hosts a number of events throughout the year. [Click Here](#) to list of local events.

If you are unable to find the information you are looking for on our website, please contact City Hall at 320-274-3055 and we will be glad to assist you.

Announcements

[Public Input Wanted as County Updates Multi-Hazard Mitigation Plan](#)

The Wright 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.

[Click the above link to learn more.](#)

City of Buffalo, September 16, 2021 City Website

cityofbuffalo.mn.us/wright-county-emergency-management-seeks-public-input-for-hazard-mitigation-plan/

cityofbuffalo@ci.buffalo.mn.us

Buffalo HOME DEPARTMENTS SERVICES GOVERNMENT COMMUNITY I WANT TO CONTACT US

Wright County Emergency Management Seeks Public Input for Hazard Mitigation Plan

HOME » WRIGHT COUNTY EMERGENCY MANAGEMENT SEEKS PUBLIC INPUT FOR HAZARD MITIGATION PLAN

Please Click Here for the memo from Wright County Office of Emergency Management

Thank you for visiting the city of Buffalo, MN site. Your information portal.

CONTACT INFO
 City of Buffalo, MN
 212 Central Ave. Buffalo, MN 55313
 (763) 682-1181
 City Hall Hours - Monday-Friday 8:00AM-4:30PM
 cityofbuffalo@ci.buffalo.mn.us
 www.ci.buffalo.mn.us

City of Buffalo, September 16, 2021 City of Buffalo Police Dept. Facebook

Buffalo Police Department, Minnesota @BuffaloPD

Home About Posts Photos Events Videos Community Create a Page

Like Share

Like Comment Share

Buffalo Police Department, Minnesota 4 hrs

Emergency Management Seeks Public Input for Hazard Mitigation Plan. The Wright 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. Please see the attached documents for all of the details.

Wright County Sheriffs Office
 Sheriff Sean Deringer
 1880 DuSable Ave SE
 Buffalo, MN 55313
 763.682.1001
 Fax: 763.682.7033

WRIGHT COUNTY NEWS RELEASE
 October 14, 2021

Public Input Wanted as County Updates Multi-Hazard Mitigation Plan

Wright 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, 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.

Wright County MHMP is a multi-jurisdictional plan that covers Wright County, including Buffalo, Argonneville, Buffalo, Champlin, Duluth, Detroit, Roseville, Sherburne, Wadena, Lake Park, Minnesota, Chicago, Anckerly, South Haven, St. Michael, and Wrentham. The Wright County Office of Emergency Management is currently reviewing the plan and is seeking input from the public. The plan will be updated by a planning team made up of representative departments, local municipalities, school districts and other key stakeholders.

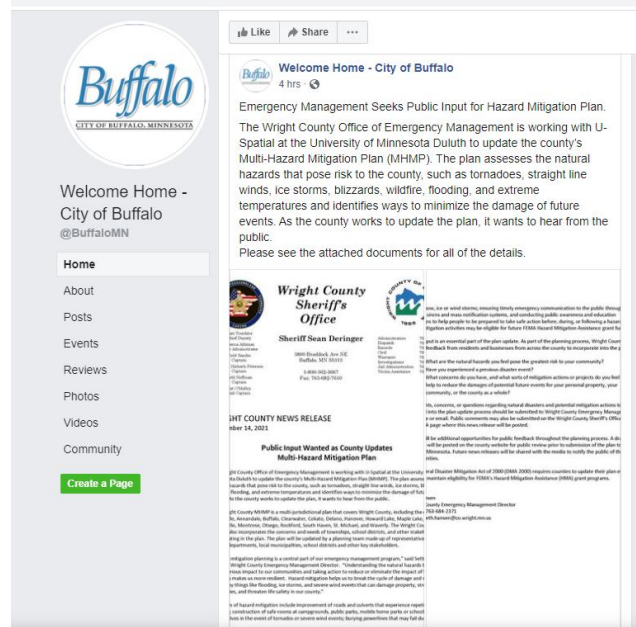
Investigation planning is a central part of any emergency management program," said Scott Wright, County Emergency Management Director. "Understanding the nature of hazards is a key component to any emergency management plan and we are excited to collaborate with the public on this project."

For more information, please contact Scott Wright, County Emergency Management Director, at 763.682.1001 or scott.wright@co.wright.mn.us.

For more information, please contact Scott Wright, County Emergency Management Director, at 763.682.1001 or scott.wright@co.wright.mn.us.

City of Buffalo, September 16, 2021

City of Buffalo Facebook




Welcome Home - City of Buffalo
4 hrs

Emergency Management Seeks Public Input for Hazard Mitigation Plan.

The Wright 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.

Please see the attached documents for all of the details.



Wright County Sheriff's Office
Sheriff Sean Deringer

1800 Broadway, Box 532
Duluth, MN 55812
1-800-855-2847
Fax: 763-288-7529

WRIGHT COUNTY NEWS RELEASE
September 14, 2021

Public Input Wanted as County Updates Multi-Hazard Mitigation Plan

The Wright 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 Wright County MHMP is a multi-jurisdictional plan that covers Wright County, including the cities of Alexandria, Buffalo, Champlin, Coon Rapids, Elk River, Elkton, Forest Lake, Maple Lake, Mankato, Monticello, Ormrod, South Haven, St. Michael, and Wadena. The Wright County Board also represents the counties of Anoka, Benton, Carver, Chisago, and Otter Tail.

The plan will be updated by a planning team made up of representatives from all participating jurisdictions, which also will include other stakeholders.

"This mitigation planning is a critical part of our emergency management program," said Sean Deringer, Wright County Sheriff and Emergency Management Director. "Understanding the natural hazards that pose risk to our county, such as tornadoes, straight line winds, ice storms, blizzards, wildfire, flooding, and extreme temperatures, and identifying ways to minimize the damage of future events, will enable us to better prepare for and respond to these hazards. We want to hear from the public to help us make the plan as effective as possible."

A public input session will be held on September 16, 2021, at 10:00 a.m. at the Wright County Office of Emergency Management, 1800 Broadway, Box 532, Duluth, MN 55812. The session will be held in a virtual format. For more information, please contact the Wright County Office of Emergency Management at 763-288-7529.

Public comments may also be submitted to the Wright County Sheriff's Office at sheriff@wrightcounty.mn.us.

If you are unable to attend the public input session, please see the attached documents for more information.

The plan will be updated by a planning team made up of representatives from all participating jurisdictions, which also will include other stakeholders.

"This mitigation planning is a critical part of our emergency management program," said Sean Deringer, Wright County Sheriff and Emergency Management Director. "Understanding the natural hazards that pose risk to our county, such as tornadoes, straight line winds, ice storms, blizzards, wildfire, flooding, and extreme temperatures, and identifying ways to minimize the damage of future events, will enable us to better prepare for and respond to these hazards. We want to hear from the public to help us make the plan as effective as possible."

A public input session will be held on September 16, 2021, at 10:00 a.m. at the Wright County Office of Emergency Management, 1800 Broadway, Box 532, Duluth, MN 55812. The session will be held in a virtual format. For more information, please contact the Wright County Office of Emergency Management at 763-288-7529.

Public comments may also be submitted to the Wright County Sheriff's Office at sheriff@wrightcounty.mn.us.

If you are unable to attend the public input session, please see the attached documents for more information.

City of Buffalo, September 16, 2021

City of Buffalo Twitter



City of Buffalo
3,724 Tweets

City of Buffalo @BuffaloMN · 4h

As the county works to update the plan, it wants to hear from the public. Please see the attached documents for all of the details.



Wright County Sheriff's Office
Sheriff Sean Deringer

1800 Broadway, Box 532
Duluth, MN 55812
1-800-855-2847
Fax: 763-288-7529

WRIGHT COUNTY NEWS RELEASE
September 14, 2021

Public Input Wanted as County Updates Multi-Hazard Mitigation Plan

The Wright 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 Wright County MHMP is a multi-jurisdictional plan that covers Wright County, including the cities of Alexandria, Buffalo, Champlin, Coon Rapids, Elk River, Elkton, Forest Lake, Maple Lake, Mankato, Monticello, Ormrod, South Haven, St. Michael, and Wadena. The Wright County Board also represents the counties of Anoka, Benton, Carver, Chisago, and Otter Tail.

The plan will be updated by a planning team made up of representatives from all participating jurisdictions, which also will include other stakeholders.

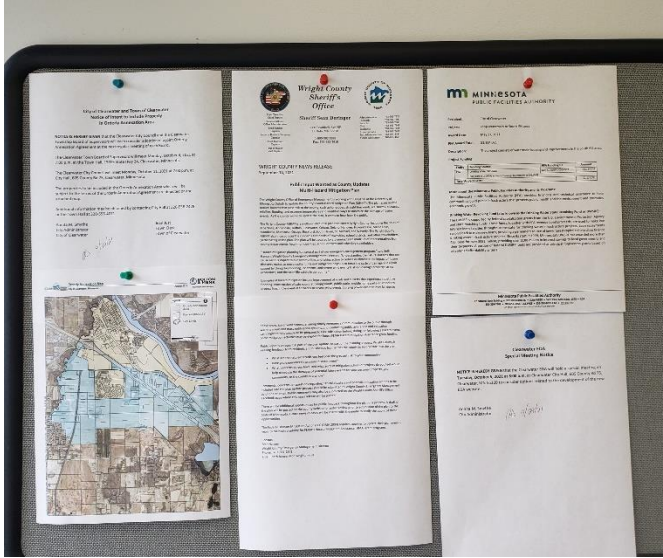
"This mitigation planning is a critical part of our emergency management program," said Sean Deringer, Wright County Sheriff and Emergency Management Director. "Understanding the natural hazards that pose risk to our county, such as tornadoes, straight line winds, ice storms, blizzards, wildfire, flooding, and extreme temperatures, and identifying ways to minimize the damage of future events, will enable us to better prepare for and respond to these hazards. We want to hear from the public to help us make the plan as effective as possible."

A public input session will be held on September 16, 2021, at 10:00 a.m. at the Wright County Office of Emergency Management, 1800 Broadway, Box 532, Duluth, MN 55812. The session will be held in a virtual format. For more information, please contact the Wright County Office of Emergency Management at 763-288-7529.

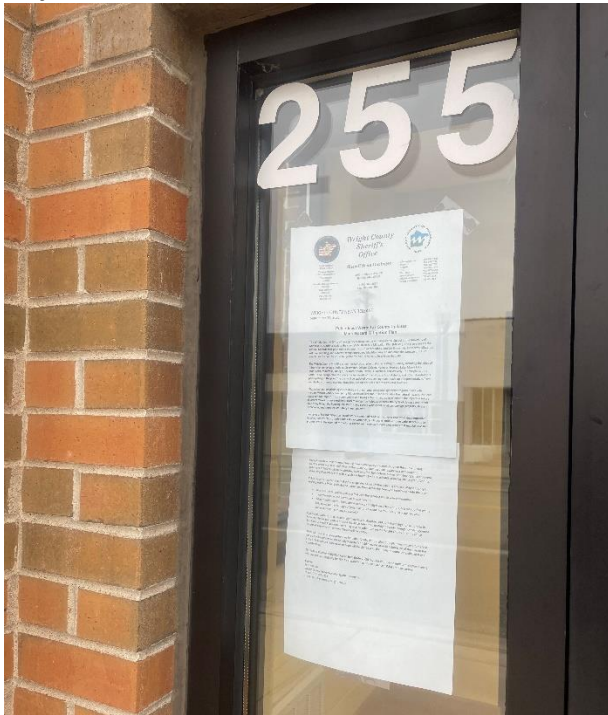
Public comments may also be submitted to the Wright County Sheriff's Office at sheriff@wrightcounty.mn.us.

If you are unable to attend the public input session, please see the attached documents for more information.

**City of Clearwater, October 1, 2021
City Hall Bulletin Board**



**City of Cokato
City Hall Window, October 28, 2021**



City of Cokato
City Website, October 28, 2021



HOME > WRIGHT COUNTY SEEKING PUBLIC INPUT

Wright County Seeking Public Input

The Wright 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. More information can be found in the news release link below.

[Wright County News Release \(pdf\)](#)

City of Delano, September 16, 2021
City Website Posting

A screenshot of the City of Delano website homepage. At the top, there is a navigation bar with links for 'Home', 'Schools', 'Utilities', and 'Most Visited'. Below this is the city logo 'Delano The Spirit of Community' and a search bar. The main content area features a large image of a playground and a 'Welcome!' message. Below the welcome message are four buttons: 'Permits and Licensing', 'I want to...', 'Local Links and Areas of Interest', and 'City Hall Location and Hours'. At the bottom, there is a 'Search City Meetings' section with a search box and a 'Go' button. To the right of the search box is a green box containing a 'Wright County News Release' dated September 14, 2021, with the text 'Public input wanted as County updates Multi-Hazard Mitigation Plan' and a link for more information.

City of Hanover
City of Hanover Facebook page, October 28, 2021



City of Hanover, Minnesota
 The City of Hanover is a small city situated on the banks of the Crow River in both Hennepin and Wri

Posts About Photos Videos

Intro

- 2.1K Followers
- Page · Government Organization
- Hanover, MN, United States, Minnesota
- (763) 497-3777
- cityhall@ci.hanover.mn.us
- hanovereda.com
- hanovermn.org
- Open Now
- Rating · 2.8 (16 Reviews)

City of Hanover, Minnesota
4 hrs · 🌐

Wright County wants public input for its Multi-Hazard Mitigation Plan: What are the natural hazards you feel pose the greatest risk to your community? Have you experienced a disaster event? Check out the info below as well as additional questions. Contact Seth Hansen to give your input. His phone is 763-684-2371 and email is seth.hansen@co.wright.mn.us. Thank you in advance!



← Wright County wants public input for.....

City of Hanover, Minnesota
2 hrs · 🌐

Wright County wants public input for its Multi-Hazard Mitigation Plan: What are the natural hazards you feel pose the greatest risk to your community? Have you experienced a disaster event? Check out the info below as well as additional questions. Contact Seth Hansen to give your input. His phone is 763-684-2371 and email is seth.hansen@co.wright.mn.us. Thank you in advance!



Notes: Review, use or avoid items, creating timely, emergency communication to the public through existing means and new methods, and conducting public awareness and education campaigns to help people be prepared to take such action before, during, or following a hazard event. Emergency activities may be eligible for FEMA 2000 Hazard Mitigation Assistance grant funding.

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

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

- What are the natural hazards you feel pose the greatest risk to your community?
- What are your experiences of previous disaster events?
- What concerns do you have, and what steps of mitigation actions or projects do you feel would help to reduce the damage of government-owned structures for your personal property, your community, or the county as a whole?

Comments, questions, or questions regarding natural disaster and general mitigation actions that are related to the plan update process should be submitted to Wright County, Director Seth Hansen by phone or email. Public comments may be submitted to the Wright 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. It is not all at once. You will be provided with the county website for public input prior to submission of the plan to the State of Minnesota. Please review website or other shared with the county to verify the public of these representatives.

The Hazard Mitigation Assistance Act of 2002 (2002) (2002) requires counties to update their plan every 5 years to maintain eligibility for FEMA's Hazard Mitigation Assistance (HMA) grant program.

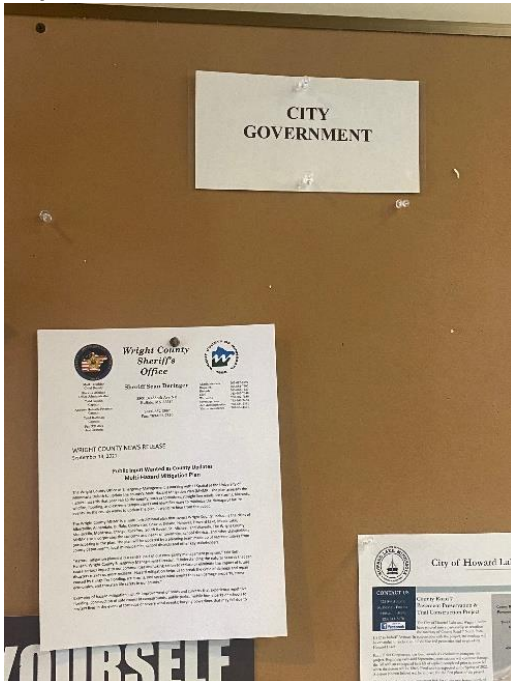
Contact:
 Seth Hansen
 Wright County Emergency Management Director
 Phone: 763-684-2371
 Email: seth.hansen@co.wright.mn.us

👍 Like
💬 Comment
➦ Share

City of Hanover
City Hall Bulletin Board, October 28, 2021



City of Howard Lake
City Hall Bulletin Board, October 27, 2021



City of Howard Lake
City Website, October 27, 2021

City of Howard Lake
City Facebook Page, October 27, 2021

City of Howard Lake
Published by Nick Haggemiller · Just now ·

Wright County is updating the county wide Multi-Hazard Mitigation Plan. To learn more, check out the News Release from Emergency Management Director Seth Hanson.

WRIGHT COUNTY NEWS RELEASE
September 14, 2021

Public Input Wanted as County Updates Multi-Hazard Mitigation Plan

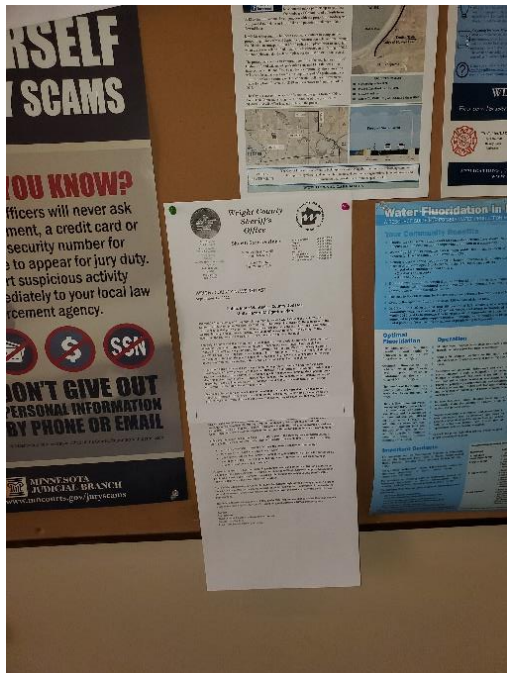
The Wright County Office of Emergency Management is working with its Special At-Large University of Minnesota faculty to update the county's Multi-Hazard Mitigation Plan (MHMP). The plan assesses the natural hazards that pose risks to the county, such as tornadoes, drought, fire, floods, blizzards, earthquakes, flooding, and outdoor recreational and scientific ways to minimize the damage of future events, as the county works to update the plan, it wants to hear from the public.

The Wright County MHMP is a multi-jurisdictional plan that covers Wright County, including the cities of Albertville, Arneville, Buffalo, Eau Claire, Grafton, Grafton, Harlan, Howard Lake, Maple Lake, Monticello, Monticello, Oriskany, Parkersburg, South Haven, St. Michael, and Wadena. The Wright County MHMP also incorporates the concerns and needs of townships, school districts, and other stakeholders participating in the plan. The plan will be updated in a planning team made up of representatives from county departments, local municipalities, school districts and other stakeholders.

"Hazard mitigation planning is a central part of our emergency management program," said Seth Hanson, Wright County Emergency Management Director. "Understanding the natural hazards that can cause destruction to our communities and reduce their resilience is the first step in reducing the impact of those

Like Comment Share

**City of Howard Lake Fire and Ambulance
Community Bulletin Board, October 29, 2021**



City of Maple Lake, September 22, 2021

Posting Locations: Outside bulletin board, city website and city Facebook page.



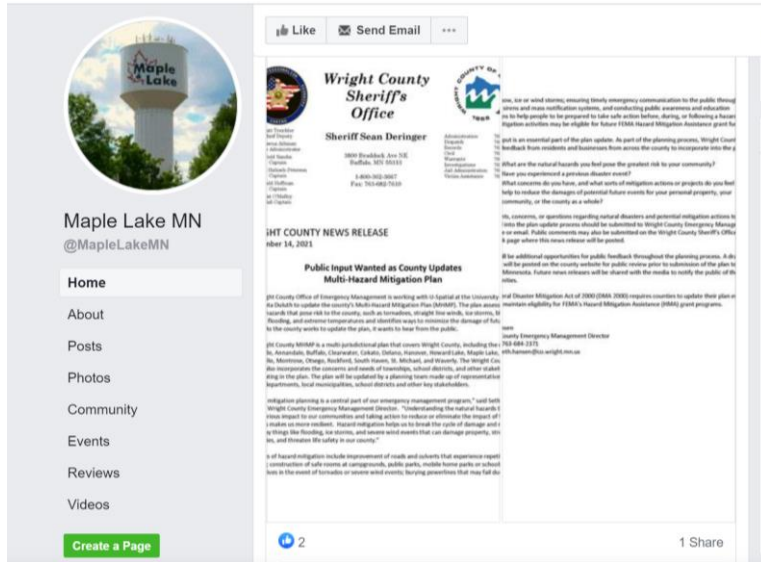
Home Government Departments Residents I Want

Latest News

[Public Input wanted for Multi-Hazard Mitigation Plan](#)

[2021 Project Update](#)

[Water Restrictions- Odd/Even days-4am-8am & 6pm- 10pm](#)



City of Monticello, September 15, 2021
 City Blog, City Website, City Hall Flyer and City Facebook, Twitter, and LinkedIn pages



Latest News

STAY UP TO DATE WITH MONTICELLO



Wright County News Release: Public Input Wanted as County Updates Multi-Hazard Mitigation Plan

The Wright 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). Public input is an essential part of the plan update!



FiberNet Monticello Offices Temporarily Closed

The FiberNet Monticello offices will be temporarily closed due to construction on the building for the new Monticello DMV location.

[Read on...](#)



Fall Swimming Lessons

Swimming Lessons are back at MCC!

[Read on...](#)

City of Monticello, MN
@CityofMonticello

- Home
- About
- Events
- Posts
- Videos
- Photos
- Reviews
- Community

[Create a Page](#)

[Like](#) [Share](#) [Suggest Edits](#) [...](#)

Posts

City of Monticello, MN
42 mins · 🌐

The Wright County Office of Emergency Management updating the county's Multi-Hazard Mitigation Plan (MHMP). The plan assesses natural hazards that pose risk to the county, like tornadoes, ice storms, etc. and identifies ways to minimize the damage of future events.

Public input is an essential part of the plan update! Wright County is seeking feedback on the following questions from residents & businesses across the county:


- What are the natural hazards you feel pose the gre... See More

CI.MONTICELLO.MN.US
Blog • Monticello, MN • CivicEngage
Blog

← City of Monticello, MN
376 Tweets

Explore

⚙ Settings



City of Monticello, MN
@monticello_mn

The official Twitter account of the City of Monticello, MN.

ci.monticello.mn.us Joined September 2019

13 Following · 261 Followers

Tweets Tweets & replies Media Likes

City of Monticello, MN @monticello_mn · 41m

Comments, concerns, or questions regarding natural disasters and potential mitigation actions for the plan update should be submitted to Wright County Emergency Management by phone or email. You can read the full news release on our website at: ci.monticello.mn.us/Blog.aspx?IID=... 4/4

🗨 🔄 ❤ 📤


Show this thread

City of Monticello, MN @monticello_mn · 41m

- 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? 3/

🗨 1 🔄 ❤ 📤

Updates




City of Monticello, MN
5 followers
41m

The Wright County Office of Emergency Management updating the county's Multi-Hazard Mitigation Plan (MHMP). The plan assesses natural hazards that pose risk to the county, like tornadoes, ice storms, etc. and identifies ways to minimize the damage of future events. Public input is an essential part of the plan update! Wright County is seeking feedback on the following questions from residents & businesses across the county:

- 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 for the plan update should be submitted to Wright County Emergency Management by phone or email. You can read the full news release on our website at: <https://lnkd.in/gZ3bFGD4> #WrightCountySheriffsOffice #WrightCounty #WCSE #WCEM #Update #UMD #PublicInput #PublicFeedback #pressrelease #newsrelease #MultiHazardMitigationPlan #MHMP #announcement #blogpost #blogging #blogpostalert #blogposting




Wright County Sheriff's Office

Sheriff Sean Deringer

3800 Braddock Ave NE
Buffalo, MN 55313

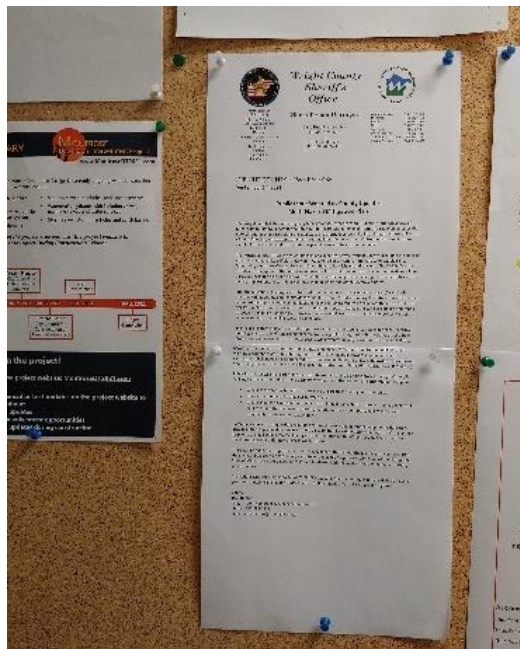
1-800-962-3667
Fax: 763-682-7010



Administration 763-682-7622
Dispatch 763-682-7600
Records 763-682-7630
Civil 763-682-7646
Warrants 763-682-7688
Investigations 763-682-7433
Jail Administration 763-684-2381
Victim Assistance 763-684-4337

City of Monticello - Press Releases

City of Montrose, September 15, 2021
City Website and City Hall Bulletin Board



City of Otsego, September 15, 2021

City Website, City Facebook Post, City Hall Door Post, and Community Bulletin Board

Latest News

News Release from Wright County Sheriff's Department.

Tuesday, September 14, 2021

Wright County Emergency Management is looking for feedback from residents and businesses in Wright County on the Multi-Hazard Mitigation Plan. Comments, concerns or questions should be directed to Wright County Emergency Management.

- 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?

763-684-2371

seth.hansen@co.wright.mn.us

 **City of Otsego, MN**
Published by Sabrina Rae · 7m · 🌐

Attached is a News Release from Wright County Sheriff's Department. Wright County Emergency Management is looking for feedback from residents and businesses in Wright County on the Multi-Hazard Mitigation Plan. Comments, concerns or questions should be directed to Wright County Emergency Management.

- What are the natural hazards you feel pose the greatest risk to your community?
- Have you experienced a previous disaster event?... [See More](#)



Wright County Sheriff's Office

Sheriff Sean Deringer

3800 Braddock Ave NE
Buffalo, MN 55313

1-800-362-3667
Fax: 763-682-7610



low, ice or wind storms; ensuring timely emergency communication to the public through sirens and mass notification systems, and conducting public awareness and education to help people to be prepared to take safe action before, during, or following a hazard; mitigation activities may be eligible for future FEMA Hazard Mitigation Assistance grant funding.

What is an essential part of the plan update. As part of the planning process, Wright County feedback from residents and businesses from across the county to incorporate into the plan.

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

What concerns do you have, and what sorts of mitigation actions or projects do you feel 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 in the plan update process should be submitted to Wright County Emergency Management by email. Public comments may also be submitted on the Wright 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 Minnesota State Board of Emergency Management. Future news releases will be shared with the media to notify the public of the plan update.

WRIGHT COUNTY NEWS RELEASE
September 14, 2021

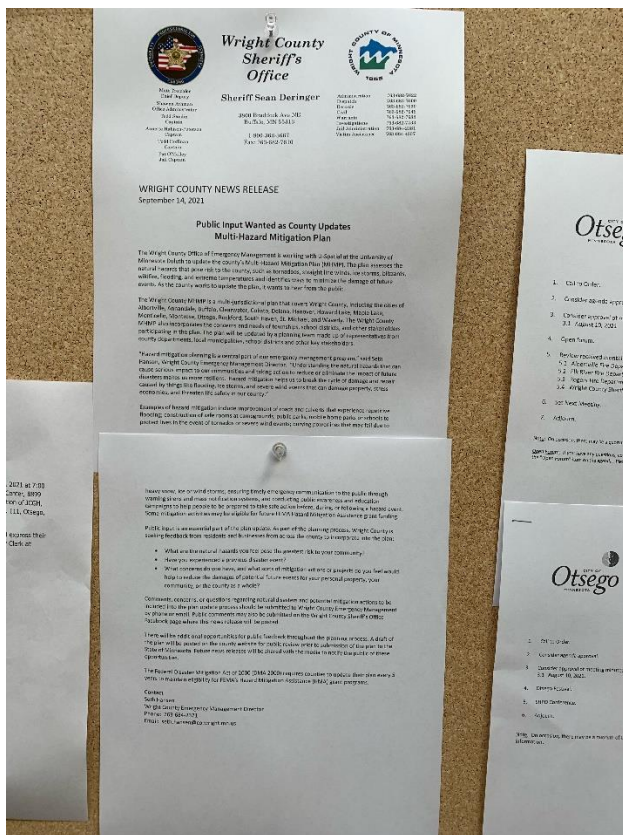
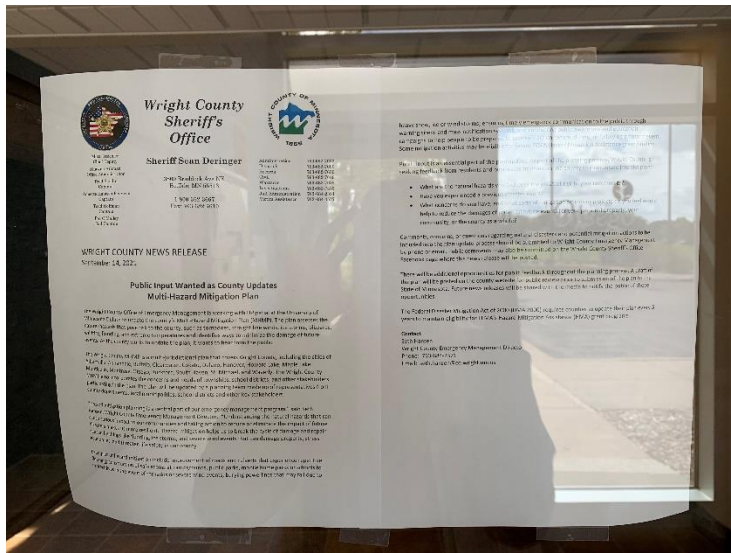
Public Input Wanted as County Updates Multi-Hazard Mitigation Plan

Wright County Office of Emergency Management is working with U.S. Spatial at the University of Minnesota Duluth to update the county's Multi-Hazard Mitigation Plan (MHMP). The plan assesses natural hazards that pose risk to the county, such as tornadoes, straight line winds, ice storms, 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.

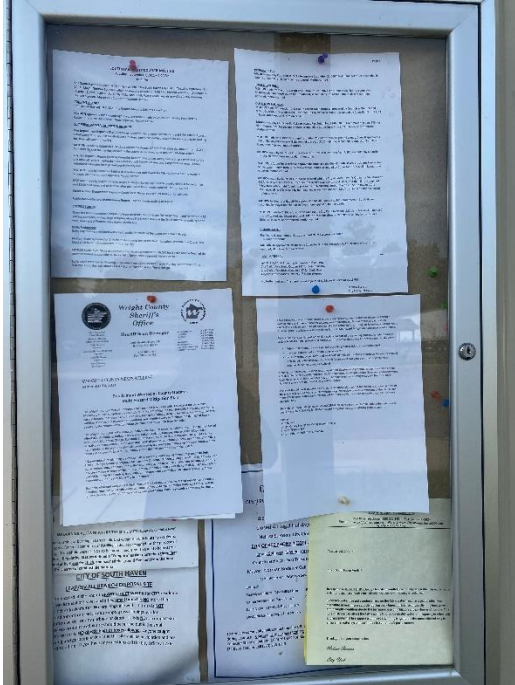
Wright County MHMP is a multi-jurisdictional plan that covers Wright County, including the cities of Annandale, Buffalo, Clearwater, Coakato, Delano, Hanover, Howard Lake, Maple Lake, Mora, Montrose, Otsego, Rockford, South Haven, St. Michael, and Waverly. The Wright County MHMP incorporates the concerns and needs of townships, school districts, and other stakeholders in the plan. The plan will be updated by a planning team made up of representative departments, local municipalities, school districts and other key stakeholders.

"Mitigation planning is a central part of our emergency management program," said Seth Hansen, Wright County Emergency Management Director. "Understanding the natural hazards that pose risk to our communities and taking action to reduce or eliminate the impact of those hazards is essential to our emergency management program. We want to hear from you about the risks you face and how we can best protect your community."

For more information, contact Seth Hansen, Wright County Emergency Management Director at 763-684-2371 or seth.hansen@co.wright.mn.us



**City of South Haven
City Hall Outdoor Community Bulletin Board, September 14, 2021**



**City of St. Michael, September 16, 2021
City of St. Michael Facebook and Twitter page**

 **City of St. Michael**
Published by Katie Langland · 3h · 🌐

The Wright County Office of Emergency Management is working 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, ice storms and blizzards. As the county works on updating the plan, they need help from the public! Follow the link for full details and how you can submit your comments and questions here: <https://bit.ly/3zekbip>.



Waverly Minnesota

A Rich Past and a Bright Tomorrow


Wright County News Release

Thursday, October 28, 2021 at 3:30 PM

 20211028130119394_0001.jpg




 20211028130119394_0002.jpg

City of Waverly City Facebook Page, October 28, 2021



City of Waverly,
Minnesota
@WaverlyMN

Home
About
Photos
Events
Videos
Posts
Community

 Like  Share 

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, Wright County is seeking feedback from residents and businesses from across the county to incorporate into the plan:


- What are the natural hazards you feel pose the greatest risk to your community?
- 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 Wright County Emergency Management by phone or email. Public comments may also be submitted on the Wright 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:
Seth Hanson
Wright County Emergency Management Director
Phone: 763-884-2373
Email: seth.hanson@co.wright.mn.us

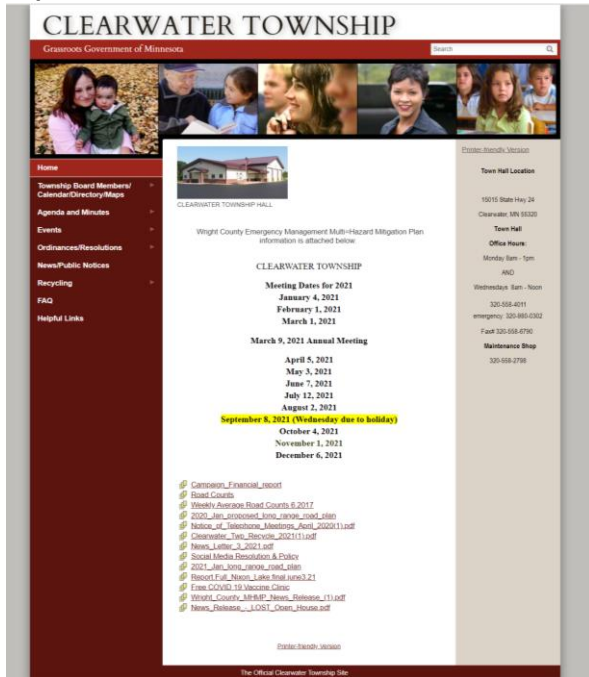


WRIGHT COUNTY NEWS RELEASE
November 9, 2021
Public Input Request on County Hazard Mitigation Plan

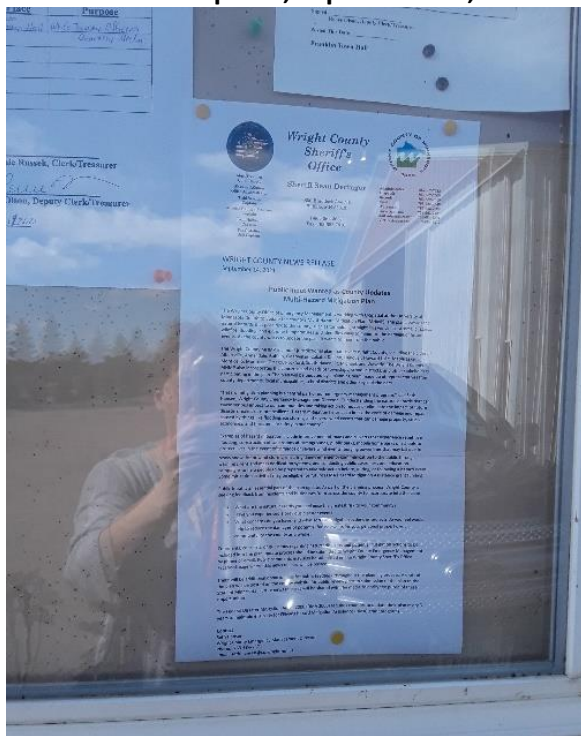


TOWNSHIP POSTINGS

Clearwater Township Website September 4, 2021



Franklin Township Franklin Township Hall, September 21, 2021



French Lake Township
Nextdoor Newsfeed, September 15, 2021



Seeking Public Input

[Seeking Public Input](#)

The Wright County Office of Emergency Management is working to update the county's Multi-Hazard Mitigation Plan. They seek public input a...

nextdoor.com

Monticello Township
Township Website, September 16, 2021

Road Restrictions

Wright County Spring Weight Restrictions for 2021 have been lifted.

To view the Wright County weight restrictions map, click [HERE](#) or visit www.co.wright.mn.us for more information.

These restriction will remain in place until further notice and are dependent on weather conditions affecting roadway strength.

Please note that Monticello Township roads are all posted for 5 ton, except for the following roads which are 7 ton:

- 90th Street from Monticello City limits to Dan and Jerry's Greenhouse at Cahill Avenue
- 120th Street from Co Rd 75 to Cameron Avenue

Wright County resides within the MN Central Frost zone.

Start and end dates for road restrictions and other load limit information can be found at mndot.gov/loadlimits.

Wright County will be updating their Multi-Hazard Mitigation Plan

Click on the link to download a news release:

[Multi-Hazard Mitigation Plan News Release](#)

Southside Township
Township website, September 15, 2021

Southside Township

[Agenda & Minutes](#) [Board](#) [Recycling](#) [Public Notices](#) [Local Links](#)



Public Input Wanted - Wright County

[Multi-Hazard Mitigation Plan](#)

OTHER STAKEHOLDERS

Wright County Soil & Water Conservation District Facebook Page, October 1, 2021



Wright County Soil & Water Conservation District Office Window Posting, October 4, 2021



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

Overview: On January 24, 2023 Wright 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 Wright 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 1/24/23 to 2/7/23, 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 Wright 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 Wright County news release and how the input will be incorporated into the plan update, and if not relevant to be addressed, why.

REVIEWER: Brad Potter, City of Cokato, City Administrator

Comment #1 – *The table on page 9 looks incorrect as it pertains to the population of communities or at least for the City of Cokato which is 2,819 people.*

Response/Incorporation (Stacy Stark, U-Spatial@UMD)

The population you give is indeed incorrect. The township population was inadvertently put in for the City of Cokato, we will change it.

Comment #2 – *Regarding Section 3.3, Climate Change: All through the document the risks identified by all communities are associated with common weather events, cold, heat, flooding, tornadoes. To say that Climate Change has a large impact is incorrect (in blue below). No community came out and said Climate Change is a main factor to their community. The comments regarding rural communities in this section are frankly not true as it pertains to the localized events such as tornados and flooding. Wright County is full of many resource people, processes etc. which can react, repair and move forward with these situations and parts of this section are insulting as it implies the area is full of hapless people, with no hope of recovery since it is “rural”. Overall, I think the section should be eliminated. If you want me to ask the other communities if they think as much or you certainly can. I don’t like the way it positions Wright County.*

Response/Incorporation (Stacy Stark, U-Spatial@UMD)

It is true that individual communities might not recognize direct effects of climate change yet, though there is firm evidence that temperature changes and precipitation changes are happening statewide now. Because the climate is changing and many of the hazard events profiled in the HMP may be more unpredictable or extreme than in the historical record, FEMA requires that we address how and if Wright County is doing anything different to mitigate risk to future hazards. The statements that you see throughout the plan are very general statements about how climate change may impact each hazard (and some hazards it may not!). These statements are not specific to Wright County.

Similarly, the statements about rural areas are not meant to categorize Wright County or any of its communities as rural or urban. There are many definitions of rural, but to some degree, smaller communities will depend on bigger ones, and bigger ones will need help from the county or state depending on the size of the disaster - so what impacts one of us, impacts us all. Furthermore, we definitely are not intending to imply that all rural areas aren't capable or resourced! We have offered general statements about rural areas in Minnesota. For example, it is generally true that the mean age in areas outside of cities is older, and older residents may have more health and mobility issues.

If Seth Hanson and Richard Ward also agree to take out what you have highlighted in your copied section of the plan for the entire county, we could consider that. We cannot omit the mention of climate change in each hazard section- as that is a requirement of the plan.

Comment #3 – Regarding Section 3.4.1, Jurisdictional Responses: *I realize there was no concerns as of this time with the City of Cokato. Can this be stated in the plan?*

Incorporation (Bonnie Hundrieser, HM Planner)

No changes needed. Nothing needed to be added to Section 3.4.1 for the City of Cokato, as no local vulnerabilities were identified in the city's Local Mitigation Survey form.

Comment #4 – Regarding Section 5.3, Mitigation Actions and Project Strategies: *I not finding the details of Appendix H (Mitigation Actions by Jurisdiction).*

Incorporation (Bonnie Hundrieser, HM Planner)

No changes needed. Clarification was provided that Appendix H includes the local mitigation action charts, which can be found by clicking on "Mitigation Actions" on the interactive Wright County HMP website. If any changes are submitted during the public review period we will make them prior to our submission of the plan to HSEM.

Additional response to Brad Potter via email from Seth Hansen, Wright County Emergency Management Director

Thank you for taking the time to review and comment on the plan, it is very much appreciated. I have had time to look at and review your comments. If you want Cokato specifically removed from anything pertaining to climate and referred to as rural, I guess I can work with Stacey and Bonnie on that if it is a possibility. I will not remove it from the plan for the entire county as it is a requirement. If we do not include the requirements from FEMA, we will be ineligible for funding in the event of a disaster. That would be unacceptable from my view and I would venture a guess unacceptable from the view of the majority of our residents in the county when it would come time to fix our infrastructure after a disaster. I understand and acknowledge your thoughts on climate change may not align with FEMA's. I

also believe that is why it is left as fairly generic in the plan because not everyone is in concurrence with the climate change position on either side. The comments on the rural making things sound hapless I would disagree with as well. Early in the spring of 2022 derechos and tornados went through our region out to the west and it took an extended amount of time for utilities to restore services out there. Those are the kind of things that the plan is referring to and I would encourage you to speak to the counties out west in our region if you would like to get their side of it. Stacey is absolutely correct on her statements on smaller communities relying on bigger ones, bigger ones on counties, etc. I have seen it first hand in my years doing this. It is also why we all have mutual aid agreements. I do not believe any of our communities are hapless but when something on a large scale happens each and every one will need some sort of assistance. I am happy to discuss this further if you have any other questions but when it comes to having this plan, we need to have FEMA's requirements included to be eligible for FEMA funds and reimbursement when a disaster happens. It isn't a matter of if it happens but when unfortunately.

Sincerely,

Seth Hansen

Director of Emergency Management
Wright County Sheriff's Office
3800 Braddock Ave NE, Buffalo, MN 55313
Direct Phone: 763-684-2371
Cell Phone: 763-274-8409
Email: seth.hansen@co.wright.mn.us

REVIEWER: Ryan Heine, Wright County Building Inspector

Hello, I am a Wright County resident and I am also an employee of the county (Wright County Building Inspector – Planning & Zoning Dept.). My one addition that I did not see mentioned is planning for a large-scale property damage event that would make it necessary for houses to be inspected for safety of returning residents. My question is are we prepared for this type of event and what can we do to better prepare for this type of event. Thank you.

Incorporation: No incorporation needed. Comment is outside the scope of the hazard mitigation plan. The Wright County Emergency Operations Plan includes plans and procedures for conducting damage assessments following a major event that assess the level of damage to homes or other structures and if they are safe for occupancy. This information is used in preparing post-disaster documentation to the State of MN HSEM and FEMA.

REVIEWER: Annita Smythe, City of Clearwater – City Administrator

This is a very good initial plan. I think future updates will be easier and more robust now that we understand how each city's feedback fits together with the larger county-wide plan. Our staff are also more aware of our role and how to track and mitigate these issues going forward.

Incorporation: No changes needed.

From: [Bonnie K Hundrieser](#) on behalf of hundrieserconsulting@outlook.com
To: ["sheriff@co.wright.mn.us"](mailto:sheriff@co.wright.mn.us); ["virgil.hawkins@co.wright.mn.us"](mailto:virgil.hawkins@co.wright.mn.us); ["Chad.Hausmann@co.wright.mn.us"](mailto:Chad.Hausmann@co.wright.mn.us); ["Barry.Rhineberger@co.wright.mn.us"](mailto:Barry.Rhineberger@co.wright.mn.us); ["Lee.Kelly@co.wright.mn.us"](mailto:Lee.Kelly@co.wright.mn.us); ["john.holler@co.wright.mn.us"](mailto:john.holler@co.wright.mn.us); ["Tim.Dahl@co.wright.mn.us"](mailto:Tim.Dahl@co.wright.mn.us); ["sarah.grosshuesch@co.wright.mn.us"](mailto:sarah.grosshuesch@co.wright.mn.us); ["Marc.mattice@co.wright.mn.us"](mailto:Marc.mattice@co.wright.mn.us); ["anafstad@ci.albertville.mn.us"](mailto:anafstad@ci.albertville.mn.us); ["ebullen@ci.albertville.mn.us"](mailto:ebullen@ci.albertville.mn.us); ["khinnenkamp@annandale.mn.us"](mailto:khinnenkamp@annandale.mn.us); ["petes@annandale.mn.us"](mailto:petes@annandale.mn.us); ["bhaag@whitemorefire.com"](mailto:bhaag@whitemorefire.com); ["cityoffices@ci.buffalo.mn.us"](mailto:cityoffices@ci.buffalo.mn.us); ["Pat.budke@ci.buffalo.mn.us"](mailto:Pat.budke@ci.buffalo.mn.us); ["firechief@ci.buffalo.mn.us"](mailto:firechief@ci.buffalo.mn.us); ["asmythe@clearwatercity.com"](mailto:asmythe@clearwatercity.com); ["clearwaterfirechief@gmail.com"](mailto:clearwaterfirechief@gmail.com); ["bpotter@cokato.mn.us"](mailto:bpotter@cokato.mn.us); ["ericksonhutch@gmail.com"](mailto:ericksonhutch@gmail.com); ["tgoodroad@cityofdaytonmn.com"](mailto:tgoodroad@cityofdaytonmn.com); ["jmickelson@cityofdaytonmn.com"](mailto:jmickelson@cityofdaytonmn.com); ["pkern@delano.mn.us"](mailto:pkern@delano.mn.us); ["bvanlith@delano.mn.us"](mailto:bvanlith@delano.mn.us); ["jennifern@ci.hanover.mn.us"](mailto:jennifern@ci.hanover.mn.us); ["Kastrup@cityofdaytonmn.com"](mailto:Kastrup@cityofdaytonmn.com); ["cityadmin@howard-lake.mn.us"](mailto:cityadmin@howard-lake.mn.us); ["dthompson@howard-lake.mn.us"](mailto:dthompson@howard-lake.mn.us); ["firechief@howard-lake.mn.us"](mailto:firechief@howard-lake.mn.us); ["cityadmin@ci.maple-lake.mn.us"](mailto:cityadmin@ci.maple-lake.mn.us); ["firechief@ci.maple-lake.mn.us"](mailto:firechief@ci.maple-lake.mn.us); ["BHennen@maplelakelumber.com"](mailto:BHennen@maplelakelumber.com); ["Rachel.leonard@ci.monticello.mn.us"](mailto:Rachel.leonard@ci.monticello.mn.us); ["Dan.klein@ci.monticello.mn.us"](mailto:Dan.klein@ci.monticello.mn.us); ["jbonniwell@montrose-mn.com"](mailto:jbonniwell@montrose-mn.com); ["montrosefd@gmail.com"](mailto:montrosefd@gmail.com); ["aflaherty@ci.otsego.mn.us"](mailto:aflaherty@ci.otsego.mn.us); ["klamson@ci.otsego.mn.us"](mailto:klamson@ci.otsego.mn.us); ["danm@cityofrockford.org"](mailto:danm@cityofrockford.org); ["Rfdchief1@gmail.com"](mailto:Rfdchief1@gmail.com); ["sohavenc@windstream.net"](mailto:sohavenc@windstream.net); ["l3machining@yahoo.com"](mailto:l3machining@yahoo.com); ["sbot@ci.st-michael.mn.us"](mailto:sbot@ci.st-michael.mn.us); ["shosch@ci.st-michael.mn.us"](mailto:shosch@ci.st-michael.mn.us); ["waverlymn@gmail.com"](mailto:waverlymn@gmail.com); ["Duske74@hotmail.com"](mailto:Duske74@hotmail.com); ["albiontownship@gmail.com"](mailto:albiontownship@gmail.com); ["mkh.lvh.89@gmail.com"](mailto:mkh.lvh.89@gmail.com); ["townshipclerk60@gmail.com"](mailto:townshipclerk60@gmail.com); ["clearwatertwp@frontiernet.net"](mailto:clearwatertwp@frontiernet.net); ["bmorris@centurylink.net"](mailto:bmorris@centurylink.net); ["clerk@corinnatownship.com"](mailto:clerk@corinnatownship.com); ["franklintwnshp@gmail.com"](mailto:franklintwnshp@gmail.com); ["FrenchLakeTwpClerk@outlook.com"](mailto:FrenchLakeTwpClerk@outlook.com); ["clerk.maplelaketownship@gmail.com"](mailto:clerk.maplelaketownship@gmail.com); ["marysvilletownship@gmail.com"](mailto:marysvilletownship@gmail.com); ["middlevilleclerk@gmail.com"](mailto:middlevilleclerk@gmail.com); ["monticellotownship@tds.net"](mailto:monticellotownship@tds.net); ["rockfordtownship@yahoo.com"](mailto:rockfordtownship@yahoo.com); ["silvercreektwp@tds.net"](mailto:silvercreektwp@tds.net); ["cmerrill@southsidetownship.com"](mailto:cmerrill@southsidetownship.com); ["stockholmtwp@gmail.com"](mailto:stockholmtwp@gmail.com); ["sglessing@centurylink.net"](mailto:sglessing@centurylink.net); ["woodland.township@gmail.com"](mailto:woodland.township@gmail.com); ["douglas.grindberg@usda.gov"](mailto:douglas.grindberg@usda.gov); ["Lisa.Dumont@state.mn.us"](mailto:Lisa.Dumont@state.mn.us); ["luke.johnson@mn.nacdnet.net"](mailto:luke.johnson@mn.nacdnet.net); ["daniel.nadeau@mn.nacdnet.net"](mailto:daniel.nadeau@mn.nacdnet.net); ["julie.reberg@mn.usda.gov"](mailto:julie.reberg@mn.usda.gov); ["rebecca@resilience-resources.com"](mailto:rebecca@resilience-resources.com); ["Kyle.Breffle@co.sherburne.mn.us"](mailto:Kyle.Breffle@co.sherburne.mn.us); ["terry.stoltzman@co.anoka.mn.us"](mailto:terry.stoltzman@co.anoka.mn.us); ["Eric.waage@hennepin.us"](mailto:Eric.waage@hennepin.us); ["dpaige@co.carver.mn.us"](mailto:dpaige@co.carver.mn.us); ["kevin.mathews@co.mcleod.mn.us"](mailto:kevin.mathews@co.mcleod.mn.us); ["stephanie.johnson@co.meeker.mn.us"](mailto:stephanie.johnson@co.meeker.mn.us); ["Erin.Tufte@co.stearns.mn.us"](mailto:Erin.Tufte@co.stearns.mn.us)
Cc: ["Richard P. Ward"](#); [Seth W. Hansen](#)
Subject: News Release - Public Comment Sought for Wright County Hazard Mitigation Plan
Date: Tuesday, January 24, 2023 8:14:00 AM
Attachments: [Wright County News Release Hazard Mitigation Plan Public Review \(1-24-23\).pdf](#)
Importance: High

Greetings,

Attached is a news release announcing the public review and comment period is open for the Wright County Hazard Mitigation Plan from **January 24 – February 7** prior to submission of the plan to FEMA. As a jurisdiction, related agency, or neighboring jurisdiction involved in the Wright County 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:

PLEASE POST THE NEWS RELEASE

All cities within the county are 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 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 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.
-

Please email me your documentation of your electronic or hardcopy posting of the news release within the next few days to make sure the public has had an opportunity to be notified and review the plan.

PLEASE REVIEW THE PLAN

All recipients of this notice are encouraged to review the plan and provide comment. Please also share with your local governments or agency partners to review. The county and city mitigation action charts are available in the online website to review. 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:

[Wright County HMP Website](#)

[Mitigation Action Charts](#)

[Public Comment Feedback Form](#)

Please email me 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.

As this is a 15-day review period, your timeliness to post the news release and review the plan is very important. This is our final step in completing the update of the Wright 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: [John V. Holler](#)
To: [Annandale Advocate](#); delano@heraldjournal.com; [Elk River - Star News](#); [Enterprise Dispatch](#); [Herald Journal](#); [KRWC Radio Station](#); [Messenger, Maple](#); [Crow River News \(sunpressnews@apgecm.com\)](mailto:sunpressnews@apgecm.com); [Jessica Charpentier](#); [North Wright County Today](#); [St. Michael Patch](#); [Miriam Orr](#)
Cc: [Lee Kelly](#); [Sean Deringer](#); [Seth W. Hansen](#); hundrieserconsulting@outlook.com
Subject: Hazard Mitigation Press Release
Date: Tuesday, January 24, 2023 10:20:50 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[hazard mitigation plan news release.docx](#)

Good morning,

Attached is a press release from the Wright County Sheriff's Office seeking public input on the county's updated Hazard Mitigation Plan. The hope is to reach as wide an audience as possible to get input from residents and it would be greatly appreciated if you could inform your readers about this release.

Thanks.

John



John Holler • Communications Specialist

WRIGHT COUNTY, MINNESOTA: Administration

direct: (763) 684-4532 • fax: (763) 682-6178

Government Center, 3650 Braddock Avenue NE Suite 3200, Buffalo, MN 55313

www.co.wright.mn.us

NOTICE: This E-mail (including attachments) is covered by the Electronic Communications Privacy Act, 18 U.S.C. 2510-2521. This E-mail may be confidential and may be legally privileged. If you are not the intended recipient, you are hereby notified that any retention, dissemination, distribution, or copying of this communication is strictly prohibited. Please reply back to the sender that you have received this message in error, then delete it. Thank you.



Wright County Sheriff's Office



Sheriff Sean Deringer

Matt Treichler
Chief Deputy
Shawna Athman
Office Administrator
Todd Sandin
Captain
Ryan Ferguson
Captain
Eric Kunkel
Captain
Pat O'Malley
Jail Captain

3800 Braddock Ave NE
Buffalo, MN 55313
1-800-362-3667
Fax: 763-682-7610

Administration	763-682-7622
Dispatch	763-682-7600
Records	763-682-7630
Civil	763-682-7646
Warrants	763-682-7688
Investigations	763-682-7433
Jail Administration	763-684-2381
Victim Assistance	763-684-4537

WRIGHT COUNTY NEWS RELEASE

January 24, 2023

Public Comment Sought for County's Hazard Mitigation Plan

Wright County has completed an updated draft of the of its Hazard Mitigation Plan (HMP) and is now seeking public feedback. Like all Minnesota counties, Wright 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 February 7, 2023. The public can access the plan using the following links:

[Wright County HMP Website](https://z.umn.edu/WrightHMP) (z.umn.edu/WrightHMP)

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

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

The Wright County HMP is a multi-jurisdictional plan that covers Wright County, including the cities of Albertville, Annandale, Buffalo, Clearwater, Cokato, Delano, Hanover, Howard Lake, Maple Lake, Monticello, Montrose, Otsego, Rockford, South Haven, St. Michael, and Waverly. The Wright 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 Wright 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 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 be prepared to take safe action before, during, or following a hazard event.

Hazard mitigation planning helps Wright 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 Wright 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. Wright 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 Wright County Emergency Management.

Contact

Seth Hansen


Wright County Emergency Management Director Phone: 763-684-2371

Email: seth.hansen@co.wright.mn.us

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

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

Wright County Minnesota Hazard Mitigation Planning



Welcome to the Wright 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 (FEMA 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 Wright County 2023 Hazard Mitigation Plan was made available for public review online with a website hosted by U-Spatial@UMD ([Wright 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 |

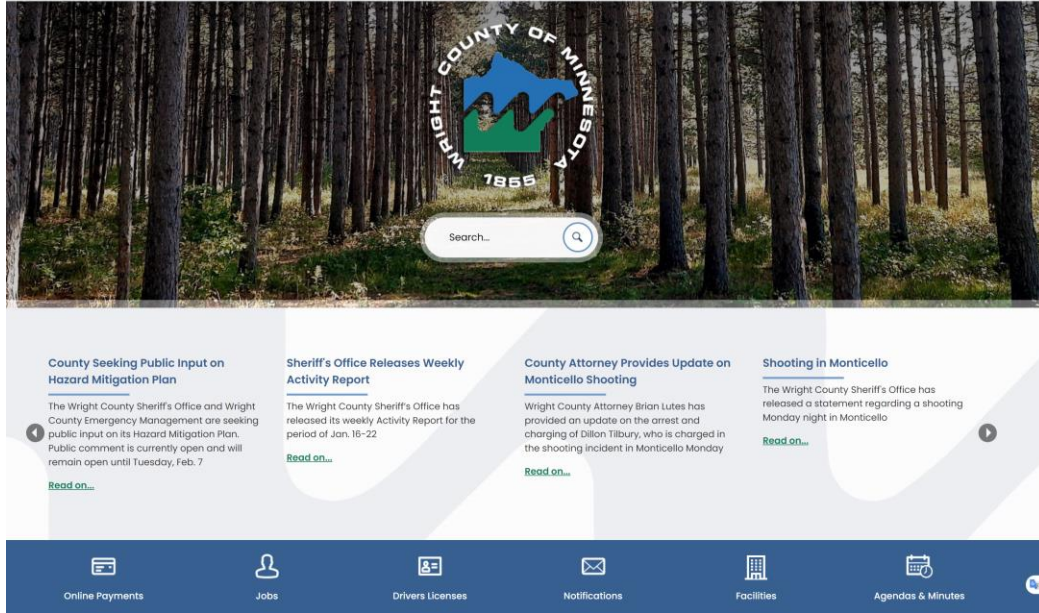
What mitigation strategy best describes this action? Select all that apply

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

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

COUNTY POSTINGS

1/24/23 Wright County Website



1/24/23 Wright County Twitter



1/24/23, Wright County Facebook

Intro
Official Facebook site for Wright County, Minnesota
All material posted is monitored per County poli

Page · Government organization
[co.wright.mn.us](https://www.co.wright.mn.us)
★ Rating · 1.8 (12 Reviews)

Photos [See all photos](#)



Wright County MN
11m ·

The Wright County Sheriff's Office is seeking public input on its updated Hazard Mitigation Plan. To learn more about the plan and for links to provide comment, click here:
<https://www.co.wright.mn.us/CivicAlerts.aspx?AID=3742>



1 share

Like Comment

Privacy · Terms · Advertising · Ad Choices · Cookies · More · Meta © 2023

1/24/23 Wright County Sheriff's Office Facebook

 **Wright County Sheriff's Office** ✓
1h ·

<https://www.co.wright.mn.us/CivicAlerts.aspx?AID=3742>



CO.WRIGHT.MN.US
County Seeking Public Input on Hazard Mitigation Plan
The Wright County Sheriff's Office and Wright County Emergency ...

Like Comment Share

LOCAL MEDIA POSTINGS

1/25/23, KRWC 1360 AM Radio for Wright County



Wright County Seeking Public Input on Hazard Mitigation Plan

By Tom Matthews

/

January 25, 2023

/

News

Wright County has completed an updated draft of its Hazard Mitigation Plan, or HMP, and is now seeking feedback from the public on the plan.

Planning for natural disasters such as tornadoes, windstorms, severe winter storms, flooding, drought, and extreme temperatures which can threaten loss of life and damage to property can help to minimize the impact of such events, and the vast economic loss and personal hardship.

All county residents, as well as other interested stakeholders such as those in neighboring counties or those working with affected agencies, are strongly encouraged to review and offer feedback on the PDF of the draft plan on the interactive website. The review and comment period is open through Tuesday, February 7, 2023.

The public can access the plan using the following links:

[Wright County HMP Website \(z.smn.edu/WrightHMP\)](https://z.smn.edu/WrightHMP)

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

[Public Comment Feedback Form \(https://z.smn.edu/WrightSurveyHMP\)](https://z.smn.edu/WrightSurveyHMP)

The Wright County HMP is a multi-jurisdictional plan that covers Wright County, including all of its cities, townships, school districts, as well as other stakeholders participating in the plan.

Anyone with questions may contact Seth Hansen, Wright County Emergency Management Director at (763) 684-2371, or via e-mail at: seth.hansen@co.wright.mn.us

(content courtesy Wright County)

Current Conditions

Recent Articles

Monticello Shooting Suspect Makes First Court Appearance

February 1, 2023

Red Cross Bloodmobile to Visit Montrose Thursday

February 1, 2023

February a Big Month for Tab Renewal on Various Vehicles and Trailers

February 1, 2023

MN Utilities Uro Conservation by

2/1/23, Hometown Source news online



Public comment sought for Wright County's Hazard Mitigation Plan

Feb 1, 2023

f t i s o

Wright County has completed an updated draft of its Hazard Mitigation Plan (HMP) and is now seeking public feedback. Like all Minnesota counties, Wright 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 through Feb. 7. The public can access the plan using the following links: Wright County HMP website at z.smn.edu/WrightHMP. Mitigation Action Charts at wright-county-hmp-ums.hub.arcgis.com



Free Sweepstakes

Press and News
Weekly print, digital, and video
Special reports Sign up today!

CITY POSTINGS

City of Albertville

1/24/23 City of Albertville Facebook

13:03

< City of Albertville - Sm...

Posts About Photos Mentions

City of Albertville - Small Town ***
Living. Big City Life.
6m ·

Wright County has completed an updated draft of the of its Hazard Mitigation Plan (HMP) and is now seeking public feedback.

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 February 7, 2023. The public can access the plan using the following links:

<https://wright-county-hmp-umn.hub.arcgis.com/>
<https://wright-county-hmp-umn.hub.arcgis.com/pages/mitigation-actions>
<https://survey123.arcgis.com/share/3d9841ae1baa42a1b4fff92fd73b5649?>

1/24/23 City of Albertville Fire Department Facebook

Albertville Fire Department (Albertville, Minnesota)
1h ·

Wright County has completed an updated draft of the of its Hazard Mitigation Plan (HMP) and is now seeking public feedback.

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 February 7, 2... [See more](#)

Wright County Sheriff's Office
Sheriff's Team Developer
Headquarters: 1000 W. 2nd St.
Rushville, MN 55053
Phone: 763-838-3333

WRIGHT COUNTY NEWS RELEASE
February 24, 2023

Public Comment Sought for County's Hazard Mitigation Plan

Wright County has completed an updated draft of its Hazard Mitigation Plan (HMP) and is now seeking public feedback. The HMP is a critical tool for reducing the risk of loss of life and property from natural hazards. Wright County is vulnerable to a variety of potential hazards, including flooding, windstorms, drought, and wildfires. The HMP identifies these hazards, assesses the risk, and develops a plan to reduce the risk of loss of life and property from natural hazards.

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 February 7, 2023. The public can access the plan using the following links:

<https://wright-county-hmp-umn.hub.arcgis.com/>
<https://wright-county-hmp-umn.hub.arcgis.com/pages/mitigation-actions>
<https://survey123.arcgis.com/share/3d9841ae1baa42a1b4fff92fd73b5649?>

The Wright County HMP is a multi-jurisdictional plan that covers Wright County, including the cities of Albertville, Brainerd, and Elk River.

Like Comment

City of Annandale

1/24/23 Posted Hardcopy

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

City of Buffalo

1/24/23, City of Buffalo Website

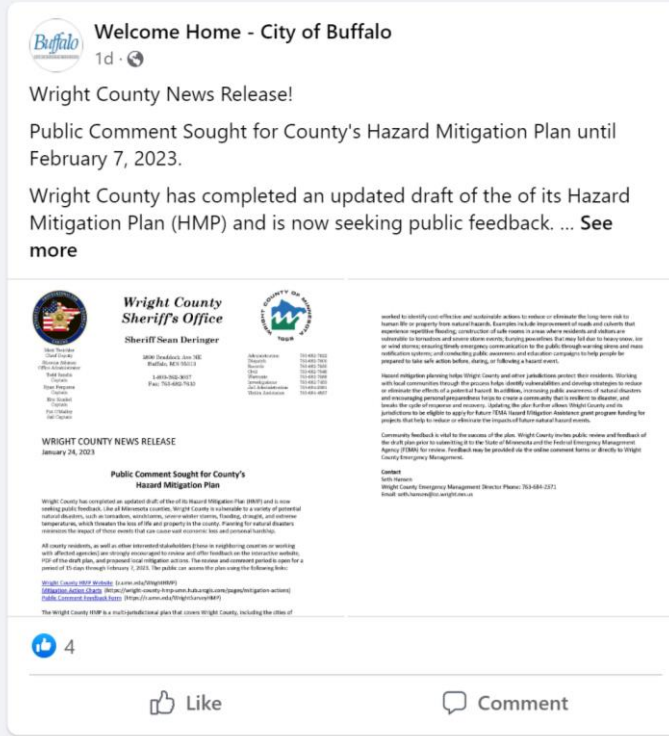
The screenshot shows the City of Buffalo website's navigation bar with links for 'COMMUNITY', 'DEPARTMENTS', 'GOVERNMENT', and 'HOW DO I...'. Below the navigation is a 'Public Notices' section with a list of items:

- City Council
 - Proposed Ordinance 2023-1 Amending Chapter 50, Article V, Division 2 of the Zoning Code (PDF)
- Planning Commission Notices
- Other
 - Wright County News Release Hazard Mitigation Plan Public Review (1-24-23)

1/24/23, City of Buffalo Twitter

The screenshot shows a tweet from the City of Buffalo (@BuffaloMN) dated Jan 25. The tweet text is: "(3) Planning for natural disasters minimizes the impact of these events that can cause vast economic loss and personal hardship. Please visit: wright-county-hmp-umn.hub.arcgis.com for more information regarding the Hazard Mitigation Plan." The tweet has 1 retweet and 1 like. Below the tweet is a large image containing a public comment form for the Hazard Mitigation Plan. The form includes contact information for Sheriff Sean Deringer, a list of community members, and a section for public comments. The form also contains a notice about the public review process and a link to the public comment form.

1/24/23, City of Buffalo Facebook



Welcome Home - City of Buffalo
1d · 🌐

Wright County News Release!
Public Comment Sought for County's Hazard Mitigation Plan until February 7, 2023.
Wright County has completed an updated draft of the of its Hazard Mitigation Plan (HMP) and is now seeking public feedback. ... See more

Wright County Sheriff's Office
Sheriff Sean Deringer

1800 Steinfeld, June 202
Buffalo, MN 56003
Phone: 763-562-3117
Fax: 763-462-7633

WRIGHT COUNTY NEWS RELEASE
January 24, 2023

Public Comment Sought for County's Hazard Mitigation Plan

Wright County has completed an updated draft of the of its Hazard Mitigation Plan (HMP) and is now seeking public feedback. The HMP is a critical component of a county's preparedness for natural disasters, such as tornadoes, wildfires, severe winter storms, flooding, drought, and customer temperature, which threaten the life of our property and safety. Planning for natural disasters reduces the impact of these events that can cause both economic loss and human suffering.

All county residents, as well as other interested stakeholders (such as neighboring counties or existing and affected agencies) are strongly encouraged to review and offer feedback on the executive summary, HMP of the draft plan, and proposed local mitigation actions. The review and comment period is open for a period of 14 days through February 7, 2023. The public can access the plan using the following links:

[Wright County HMP Website](#) (www.wrightcountymn.gov/hmp)
[Hazard Mitigation Plan](#) (www.wrightcountymn.gov/hmp)
[Public Comment Feedback Page](#) (www.wrightcountymn.gov/hmp)

The Wright County HMP is a multi-jurisdictional plan that covers Wright County, including the cities of

4

Like Comment

1/24/23 Posted Hardcopy

A printed copy of the news release was posted on the bulletin board at the City of Buffalo City Center.

City of Clearwater

2/1/23, City of Clearwater City Website
city.com



News and Events
City Hall
City Codes & Policies
Housing
Employment
Helpful Links
History
Site Map

Clearwater's Homepage

Located in the Northern tip of Wright County, MN, near the junction of the Clearwater and Mississippi Rivers, Clearwater is a great place to call home. We invite you to explore our [past](#), our [present](#) and our [future](#).



Come visit Clearwater and see for yourself why it truly is "one of the prettiest little villages in the state."

News and Events

Public Comment Sought for Wright County Hazard Mitigation Plan
Wednesday, February 1, 2023 at 8:55 AM

2/1/23, City of Clearwater Facebook



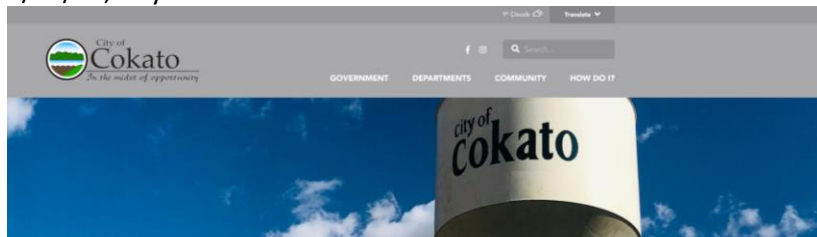
A screenshot of a Facebook post from the City of Clearwater MN. The post is dated 21 minutes ago and contains the following text: "Public Comment Sought for County's Hazard Mitigation Plan Wright County has completed an updated draft of the of its Hazard Mitigation Plan (HMP) and is now seeking public feedback. Like all Minnesota counties, Wright 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 minimi... See more". Below the text is a banner image with the text "CLEARWATERCITY.COM Public Comment Sought for Wright County Hazard Mitigation Plan Clearwater, Minnesota". At the bottom of the post are the interaction buttons: "Like", "Comment", and "Share".

2/1/23 Hardcopy Posting

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

City of Cokato

1/24/23, City of Cokato Website



HOME > WRIGHT COUNTY SEEKING PUBLIC INPUT

Wright County Seeking Public Input

The Wright 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, wildfires, 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. More information can be found in the news release link below.

[Wright County News Release \(pdf\)](#)

HOME > PUBLIC COMMENT SOUGHT FOR COUNTY'S HAZARD MITIGATION PLAN

Public Comment Sought for County's Hazard Mitigation Plan

Wright County has completed an updated draft of the of its Hazard Mitigation Plan (HMP) and is now seeking public feedback. Like all Minnesota counties, Wright 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.

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

Click here for the [Wright County Hazard Mitigation Plan News Release](#)

1/24/23, Hardcopy Posting

A printed copy of the news release was posted to the front door of the Cokato City Hall.

1/24/23, City of Cokato Facebook



City of Hanover

1/24/23 Posted Hardcopy

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

1/24/23 City of Hanover website



City of Howard Lake

1/24/23 City of Howard Lake Website



1/24/23, City of Howard Lake Facebook



1/24/23, Hardcopy Posting

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

City of Maple Lake

1/24/23, Hardcopy Posting

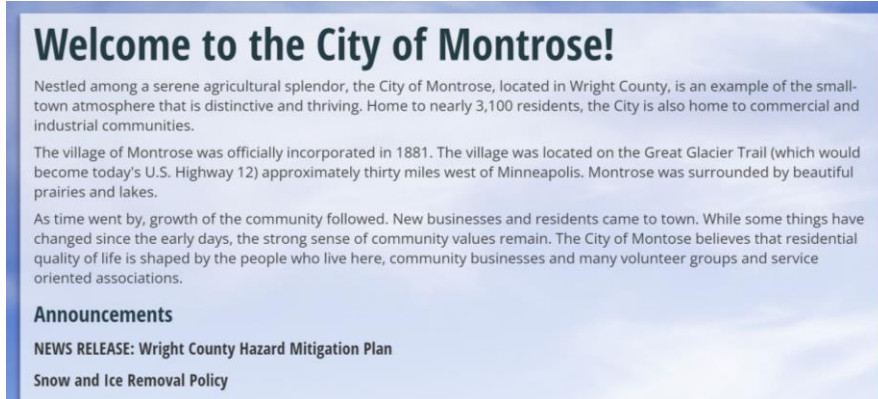
A printed copy of the news release was posted to the community bulletin board outside of the Maple Lake City Hall.

City of Montrose

1/24/23 Posted Hardcopy

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

1/24/23, City of Montrose website



City of Otsego

1/24/23, City of Otsego website



1/24/23 Posted Hardcopy

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

City of Rockford

2/1/23 Posted Hardcopy

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

City of South Haven

1/26/23, City of South Haven Website



Announcements

[Public Comment Sought for County Hazard Mitigation Plan](#)

Tuesday, January 24, 2023 at 9:10 AM

[Parking restriction now in effect to May 1](#) Tuesday, November 1, 2022 at 2:00 AM

[UB-PAY](#)

1/26/23 Hardcopy Postings

Printed copies of the news release were posted on bulletin boards at the South Haven City Hall and Post Office.

City of St. Michael

1/24/23, City of St. Michael Website



Winter Parking Regulations

Residents are reminded that from Nov. 1 through April 1, there is no parking on City streets between 2-6 a.m. These parking restrictions were instituted to allow snowplows to effectively clear snow from City streets. [Click](#) for more information.

Submit Your Feedback- Wright County Hazard Mitigation Plan

The Wright County Sheriff's Office is seeking public input on its updated Hazard Mitigation Plan. To learn more about the plan and for links to provide comment, click here: <https://wright-county-hmp-wmn.hub.atcgis.com/>. Public review and comments are being taken through February 7.

No

The site contains emergency information.

1/24/23, City of St. Michael Facebook

City of St. Michael
January 24 at 1:46 PM · 🌐

The Wright County Sheriff's Office is seeking public input on its updated Hazard Mitigation Plan. To learn more about the plan and for links to provide comment, click here: <https://wright-county-hmp-um.hub.arcgis.com/>. Public review and comments are being taken through February 7.



Wright County MN
January 24 at 10:38 AM · 🌐

The Wright County Sheriff's Office is seeking public input on its updated Hazard Mitigation Plan. To learn more about the plan and for links to provide comment... [See more](#)

1

Like Comment

City of Waverly

1/25/23, City of Waverly website

Quick Links

[Pay Online](#)
[Permits/Documents/Applications](#)
[City Code of Ordinances](#)
[City Council Agendas & Minutes](#)

Compost Hours

Thru November
Sat. 10 am - 3 pm
Waverly City Residents only.

City News

[WRIGHT COUNTY NEWS RELEASE 012423](#)
Wednesday, January 25, 2023 at 9:15 AM


[Assistant Manager Position Opening Waverly Municipal](#)
Wednesday, January 11, 2023 at 2:25 PM

[2022 - 2023 WINTER POLICY](#)
Thursday, October 27, 2022 at 5:25 PM

[Waverly Childcare Loan Program](#)
Tuesday, October 4, 2022 at 4:20 PM

[WATER QUALITY TEST RESULTS](#)
Thursday, June 9, 2022 at 2:45 PM

[Read All](#)



Welcome to Waverly!

Welcome to Waverly - the city with "A Rich Past and a Bright Tomorrow" located on Big Waverly Lake just 35 miles west of the Twin Cities area. Our community of approximately 2,000 is a good place for your family or your business with friendly and welcoming residents and a strong small-town sense of community.

January 16 Office Closed

The City Office will be closed on January 16, 2023, in recognition of the Martin Luther King Birthday Holiday.

Attention Residents:

January 3 - remember that there is NO parking on city streets from 2 - 7 am. And, there is NO parking on city streets during and immediately after a snow fall so that the streets can be cleaned. When it snows, PLEASE refrain from parking on the street until after the snow is done and the streets are cleared! Thank you!

1/25/23, City of Waverly Facebook

City of Waverly, Minnesota
1d · 🌐

Wright County News Release 01/24/23

Wright County Sheriff's Office
Sheriff Sean Deringer

3800 Broadway Ave NE
Buffalo, MN 55818
1-800-392-3007
Fax: 763-684-7319

Administration	763-684-7022
Dispatch	763-684-7000
Records	763-684-7030
Crime	763-684-7444
Forensics	763-684-7488
Investigation	763-684-7481
Jail Administration	763-684-2181
Victim Assistance	763-684-4837

WRIGHT COUNTY NEWS RELEASE
January 24, 2023

Public Comment Sought for County's Hazard Mitigation Plan

Wright County has completed an updated draft of the of its Hazard Mitigation Plan (HMP) and is now seeking public feedback. Like all Minnesota counties, Wright 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 February 7, 2023. The public can access the plan using the following links:

[Wright County HMP Website](https://www.wrightcountyhmp.com) (<https://www.wrightcountyhmp.com>)
[Mitigation Actions Charts](https://www.wrightcountyhmp.com/hub.arcgis.com/pages/mitigation-actions) (<https://www.wrightcountyhmp.com/hub.arcgis.com/pages/mitigation-actions>)
[Public Comment Feedback Form](https://www.wrightcountyhmp.com) (<https://www.wrightcountyhmp.com>)

The Wright County HMP is a multi-jurisdictional plan that covers Wright County, including the cities of

Contact:
Seth Hansen
Wright County Emergency Management Director Phone: 763-684-2371
Email: seth.hansen@co.wright.mn.us

3

1/25/23, Hardcopy Posting

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

OTHER POSTINGS

Buffalo Township

1/24/23 Posted Hardcopy

A printed copy of the news release was posted on the community bulletin board at the Buffalo Town Hall.

Stockholm Township

1/25/23 Posted Hardcopy

A printed copy of the news release was posted on the front door of the Stockholm Town Hall.

Appendix H – Mitigation Actions by Jurisdiction

CITY OF ALBERTVILLE

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 RAVE emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	There is link to the Wright County Emergency Alert Information page on our city website, under the Fire Department page. We encourage residents to sign up through our city website, city newsletter (quarterly) and both our city and Fire Dept. Facebook Pages. The city also has an Instagram page, and the Fire Department has a Twitter page we use for messaging.	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 works with Wright County to participate in the National Weather Service's annual Severe Winter/Spring Weather Awareness Week by posting severe weather awareness information on our city and Fire Department Facebook page. Our Fire Chief is a Weather Ready Nation Ambassador. Our local schools practice tornado drills on an annual basis.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Acquire a stationary back-up power generator for the Fire Department and two portable back-up generators to help power our lift stations.	Existing High 2023-2028	City Admin, City EM	The city has a capital improvement plan used to plan for and budget for infrastructure improvements, including generators. The city will purchase new generators as funding allows.	City

CITY OF ALBERTVILLE

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
4	Severe Winter & Summer Storms	Structure & Infrastructure Projects	Work with utility providers to bury overhead power lines and reduce power outages from severe winter and summer storms events.	New High 2023-2028	City Public Works Dept.	The city would like to bury powerlines in much of the older part of the city and in areas of new development. Xcel Energy and Wright-Hennepin service the city's electrical lines and have oversight over powerline conversion projects. The city will encourage the utilities to convert overhead to underground powerlines where feasible. Wright-Hennepin Coop may be eligible to apply for FEMA HMA grant funding.	City, HMA grant funding
5	Flooding	Structure & Infrastructure Projects	Improve the city's stormwater system infrastructure in areas where local flooding occurs following high rain events.	New High 2023-2028	City Public Works	The city will seek to increase our stormwater capacity during future road or infrastructure improvement projects. Portions of the "Albert Villas" and areas along 57th St NE are very prone to local flooding with heavy rain events. The city storm sewer infrastructure in these older areas is not able to keep up with these events. The city also has multiple storm water ditches that need improvement. The city will implement stormwater improvements as funding allows. The city will need assistance from our State and County construction partners to make this possible.	City, State, Federal

CITY OF ALBERTVILLE**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
6	Flooding	Local Planning & Regulations	Implement regulatory policies that mitigate against flood damages to areas of existing and new development.	Existing High 2023-2028	City Admin	The city of Albertville is participating in NFIP but has No FEMA mapped high risk areas. The city does have zoning and development regulations in place that set minimum structure elevations to prevent flooding (Ordinance No. 2011-007). All new construction is required to meet a minimum freeboard requirement above the area emergency overflow and/or adjacent high-water level.	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 ANNANDALE

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 RAVE emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	Yes, we have promoted this on the city's Facebook page and on our website.	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 website and Facebook. We provide inserts in monthly utility bills to keep residents informed.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Acquire generators for the city's water treatment facility, lift stations, Fire Hall (Command Center) and Training Center.	New High 2023-2028	City Admin City EM	The city wishes to acquire stationary and portable generators to ensure continuity of critical facilities and services. The city will purchase generators as funding allows or may apply for FEMA grant funding if eligible.	City, FEMA HMA grant funding
4	Severe Winter & Summer Storms	Structure & Infrastructure Programs	Convert overhead powerlines to underground to reduce power outages from severe winter and summer storm events.	Existing Moderate 2023-2028	City Public Works in coord with Xcel Energy	Xcel Energy is the city's energy provider and has oversight over all mitigation treatments for power lines and power poles. The city will encourage Xcel to convert OH to UG wherever feasible to reduce power outages for the city.	Xcel Energy
5	Flooding	Local Planning & Regulations / Structure & Infrastructure Programs	Ensure the city's stormwater system is capable of handling future high rain events, including the impacts of new development and increase in population.	Existing High 2023-2028	City Engineer, Public Works Dept.	The city engineer and public works director address road maintenance issues for flooding and ensure the city's stormwater system is operating properly. The city requires a sump pump inspection and sewer compliance at the time of sale to mitigate against overload of the city's I&I. The city has a Comprehensive Plan that is designed to plan for future growth of the city and appropriate land uses. The city continues to educate residents on reducing infiltration from service lines and sump pumps.	City

CITY OF ANNANDALE**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
6	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish 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 BUFFALO

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 RAVE emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city has a link and information on the city website. The county website also has information.	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 the city's website and Facebook accounts. We mail inserts or notices along with the resident's utility bill. We provide information on the cities local cable channel and during council meetings.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Acquire generators for lift stations, the Community Center and Civic Center.	New High 2023-2028	City Admin, City EM, City Public Works	The city will purchase generators as funding allows. Lift stations need backup power to continue service in the event of a power outage. Both the Community Center and Civic Center could be used as emergency shelters if many residents need to be relocated.	City
4	Severe Winter & Summer Storms	Structure & Infrastructure Projects	Add a 2nd substation for backup power to the main substation in the event of power outage.	New Moderate 2023-2028	City Utilities	The city's utilities department will work to install a 2 nd substation. Implementation will be based on available funding.	City
5	Severe Summer Storms	Structure & Infrastructure Projects	Purchase and install new outdoor warning sirens to cover areas of new development that are not well-covered by existing sirens.	New High 2023-2028	City Admin, City EM, City Public Works	The city will continue to upgrade the cities severe weather siren system as funding allows. The city will work with Wright County Emergency Management to ensure all sirens are connected to the county's remote warning system.	City
6	Severe Summer Storms	Structure & Infrastructure Projects	Work with the 2 mobile home parks within the city to construct storm shelters.	New High 2023-2028	City Admin, City EM, City Public Works	The city will seek to work with the two MHP operators to assess and address the need for a storm shelter or tornado safe room in each to protect residents from severe storm and tornadic events. If a tornado safe room is desired, FEMA HMA grant funding may be applied for.	City, MHP, FEMA HMA grant funding

CITY OF BUFFALO**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
7	Flooding	Structure & Infrastructure Projects	Implement improvements to our water and water reclamation facilities to resist storms, flooding and reduce power usage.	Existing Moderate 2023-2028	City Public Works	Public works has a maintenance program to keep the storm sewers clean of debris. They also have procedures in place to verify that all the holding ponds are functioning correctly. Public Works will continue to work to plan for and address stormwater improvements.	City
8	Flooding	Local Planning & Regulations	Incorporate flood mitigation considerations into city planning for future growth and development.	Existing Moderate 2023-2028	City Admin, City Public Works	The city is working on their 2040 Comprehensive Plan that will plan for future growth and land use. The plan will address conservation and sustainable storm water management. The city code has regulations in place to limit the amount of impervious surface area within the city.	City
9	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 CLEARWATER

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 RAVE emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city has posted a link on our Facebook page to the county's sign-up page for alerts. The city also has our own text alert system that residents can sign-up for.	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 uses text alerts, our city website, and our city Facebook page to provide information to residents on severe weather and safety information.	City
3	Severe Summer Storms	Structure & Infrastructure Projects	Purchase and install a new warning siren for the new housing development south of I-94.	New Moderate 2023-2028	City Admin, City EM	The city will work to purchase a new outdoor warning siren to cover this new housing area. Residents have asked for this but funding has been an issue. The city will work with Wright County Emergency Management to ensure a new siren is connected to the county's remote warning system.	City
4	Flooding	Natural Systems Protection	Reduce localized flooding through increased use of native plantings for slowing of high rain events.	In-Progress Moderate 2022-2023	City in coord with SWCD	The city is currently working in coordination with the Wright SWCD on a Native Plantings project that will help reduce impacts of high rain events through a natural landscape approach.	City, SWCD
5	Flooding	Local Planning & Regulations	Incorporate flood mitigation considerations into city planning for future growth and development.	Existing Moderate 2023-2028	City Admin, City Public Works	The city participates in the NFIP and reviews the ordinance requirements to ensure no new construction goes into vulnerable areas without meeting flood prevention requirements. The city also has a comprehensive plan and transportation plan in place to govern land use, including flood-prone areas.	City

CITY OF CLEARWATER**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
6	Drought	Local Planning & Regulations / Education & Awareness Programs	Enforce the city's water conservation ordinance and conduct outreach to residents to be aware of drought conditions and watering restrictions.	New Moderate 2023-2028	City Public Works	The city has ordinance provisions in place that are meant to help conserve water during drought conditions and limit burning/fires during dry or high-wind conditions. We use our city communications (website, FB, and text alerts) to convey drought awareness information to our residents.	City

CITY OF COKATO

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 RAVE emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city has not done anything with this to date. We will work to put a link to the county’s website on our city website so residents can sign up for the RAVE emergency notification system.	City
2	Severe Summer Storms	Mitigation Preparedness & Response Support	Ensure the city’s outdoor warning sirens are functional and repair or upgrade if needed.	Existing Moderate 2023-2028	City EM	The city continues to monitor and test the city sirens on a monthly basis.	City
3	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Assess and plan for flood mitigation of the Sucker Creek area.	In-Progress High 2023-2028	City Admin, City Engineer	The city of Cokato is having its consulting engineer Bolton and Menk study the Sucker Creek area and its floodway and 100-year flood areas.	City
4	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Identify and implement stormwater system improvements to handle future high rain events and reduce impact on the city’s stormwater system and sanitary sewer system.	In-Progress High 2023-2028	City Admin, City Engineer	The city is reviewing infrastructure projects that may be implemented with city or potential FEMA or other grant funding. The city would like to work on additional stormwater ponds that would help retain stormwater during large rain events. The city also plans to continue to look for ways to reline sanitary sewer lines and replace them to reduce the Inflow and Infiltration.	City, FEMA HMA grant funding, MN DNR Flood Mitigation Grant funding
5	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 has an ordinance that prohibits Sump Pumps and Drain Tiles from going into the sanitary sewer system which helps prevent backups. The city also enforces requirements of the NFIP through Chapter 153, Zoning Regulations, Section 153.036, Flood Plain Overlay in the city’s code of ordinances. This chapter regulates development in the flood hazard areas of the city.	City

CITY OF COKATO**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
6	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish 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 DELANO

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 RAVE emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city utilizes a variety of regular communication methods including its monthly and quarterly newsletters, Facebook, Twitter, Instagram, Nextdoor, website, and a community message board sign. The city encourages residents through these methods to sign up for the county's emergency notification system.	City
2	All-Hazards	Local Planning & Regulations	Incorporate mitigation planning for severe weather events and potential impacts of climate change into long-term plans for city development.	In-Progress Moderate 2023-2028	City Admin	The city's Comprehensive Plan update, currently in progress, will likely add policy guidelines and plan adaptations related to climate change.	City
3	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 uses our website and social media pages (Facebook, Twitter, Instagram, and Nextdoor), paper and electronic newsletters to help educate the community. The city also participates in Severe Weather Awareness week and conducts a public education campaign.	City
4	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Plan for mitigation projects that will reduce impacts of future high rain events, including stormwater system improvements, property acquisitions, and levee rehabilitation.	Existing High 2023-2028	City Admin, City Public Works	The city continues to assess and plan for potential future flood mitigation activities such as installing additional automated pumping stations in critical areas, rehabilitation of levee systems, and additional removal of properties within the floodplain area. In older areas of town, updates to the storm water infrastructure to provide greater capacity could help undersized areas. FEMA HMA or MN DNR Flood Hazard Mitigation grant program funding may be sought for assistance in conducting property buyouts.	City, FEMA HMA grant funding, MN DNR grant funding

CITY OF DELANO

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
5	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Implement projects and enforce city ordinances that reduce the impacts of high rain events and risk of flooding to areas of new development.	Existing High 2023-2028	City Admin, City Public Works	The city has a variety of maintenance programs and BMP's that are part of normal Public Works operations to help improve mitigation efforts. These practices include regular maintenance of storm water pumping stations, testing of the downtown removable floodwall system, cleaning of storm water catch basins and culverts, and ditch cleaning. The city also enforces requirements of the NFIP through the City of Delano Flood Plain Ordinance, Sections 1.0 – 16.0 in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city.	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 HANOVER

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 RAVE emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city uses its city website and Facebook page to direct residents to the Wright County website to sign up for the county's 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	The city posts information on our website and Facebook page during spring Severe Weather Awareness Week as well as during times of severe storms, excessive heat, drought, etc. Required stormwater permit public education pieces are also posted on the city's website.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Acquire a backup generator for the city's Fire Hall, which functions as the city's Emergency Operations Center.	Existing High 2023-2028	City Admin, City EM	City Admin and the Fire Dept. will work to purchase a generator for the Fire Hall as funding allows.	City
4	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Address stormwater infrastructure improvements to handle future high rain events and reduce flooding risks, especially for landlocked areas.	Existing High 2023-2028	City Admin, City Public Works	City Admin and Public Works are assessing and working to address the need for additional storm sewer upgrades and additional pumps to help address flooding risks, especially for the currently landlocked areas. Planning and addressing these needs will occur as the city budget allows.	City
5	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Work with willing homeowners to conduct property acquisitions and convert properties to open space.	Existing High 2023-2028	City Admin, City Public Works	Potentially purchase some properties within the floodplain to help mitigate stormwater and floodplain issues. We are working to identify property owners who may be looking to sell in floodplain so that property could become park/greenspace. The city may seek to apply for FEMA HMA grant funding for MN DNR Flood Risk Reduction Grant Program funding to support property buyouts.	City, FEMA grant funding, MN DNR grant funding

CITY OF HANOVER

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 High 2023-2028	City Admin	The city has a floodplain ordinance in place that is enforced (Hanover Code of Ordinances, Section 10.32, Floodplain Overlay District). This ordinance regulates development in the flood hazard areas of the City of Hanover. The city's Ordinances include design standards required for stormwater management and erosion and sediment control which must be met for all new development and redevelopment within the city. Maximum impervious standards are also in place within the city's zoning ordinance.	City
7	Flooding	Local Planning & Regulations	Incorporate flood and other hazard considerations into city long-term planning for future development.	Existing High 2023-2028	City Admin	The city has a Comprehensive Water Resource Management Plan (CWRMP) which identifies areas of risk for flooding as well as other water relate concerns. The CWRMP also identifies programs and projects to help address the issues identified in the Plan.	City
8	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	If required by State law, the city will follow guidelines to establish and enforce a water conservation ordinance during periods of severe drought. The city would conduct outreach to make residents aware.	City

CITY OF HOWARD LAKE

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage all city residents to sign-up for the county's RAVE emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city has not done this to date. We will plan to utilize our city website and other outreach methods to direct residents to the Wright County website 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	The city has adopted a Communications Plan that covers the methods and means we communicate with our residents. Specifically: Print on bulletin board, city's public access TV, Facebook, city website (currently being redesigned and will have a feature for "emergency alerts" we will encourage residents to subscribe to), and quarterly newsletters.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Acquire backup generators for key lift stations and key city facilities (City Hall, Fire Hall, Library).	New High 2023-2028	City Admin, City EM	The city identifies it would be beneficial to have preferably 3 lift stations set up with permanent generators. The city also wishes to have generators in place for City Hall, the fire hall, and the library. The city will purchase permanent or portable generators as funding allows.	City
4	Severe Winter & Summer Storms	Natural Systems Protection	Work with the Wright SWCD to install a snow/wind break ("living fence") on CSAH 7, near Highway 12, and Lake Howard.	New Moderate 2023-2028	City Admin, City EM in coord with SWCD	The city will seek to coordinate with the Wright SWCD on the possibility to install a living fence along key identified routes that experience high winds and snow drift, both which pose risk to motorists.	City, SWCD Cost Share Program

CITY OF HOWARD LAKE

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
5	Severe Summer Storms	Structure & Infrastructure Projects	Work with the privately-owned RV Campground to plan for and implement construction of a new facility to protect campers.	New High 2023-2028	City Admin, City EM in coord with RV Park Owner	The city desires to work with the RV park owner and encourage planning for how to better protect campers from severe high wind events. This may include construction of a new bathroom facility to serve as a storm shelter, or a more robust tornado safe room. The city will seek to help obtain funding as appropriate and may include a future application to FEMA for hazard mitigation grant funding for a tornado safe room.	City, RV Park, FEMA HMA Grant funding
6	Flooding	Local Planning & Regulations	Enforce city ordinances and develop plans 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 is participating in the NFIP but does not have FEMA mapped high risk areas. The city's code of ordinances includes Part 17. Building and Land Use Regulations, Chapter 17.01-95 FP, Floodplain Overlay District serves as the city's floodplain ordinance. The city also has a CIP that seeks to replace all infrastructure in the next 10 years as well as a sump pump ordinance – both aimed to reduce I&I.	City
7	Drought	Local Planning & Regulations / Education & Awareness Programs	Implement a water conservation ordinance and conduct outreach to residents to be aware of drought conditions and watering restrictions.	Existing Moderate 2023-2028	City Admin	The city follows Minnesota Department of Health and DNR protocols relating to water usage and conservation. During intense or prolonged heat, watering bans are established to preserve water for firefighting purposes.	City

CITY OF HOWARD LAKE

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
8	Drought	Local Planning & Regulations	Plan for long-term city infrastructure improvements to handle future prolonged periods of extreme drought.	New Moderate 2023-2028	City Admin, City Public Works	Following the severe drought conditions of 2021, the city discovered threats to our water system. The city identified a need for a new water treatment plant and water storage/tower. We are in the design/engineering phase for an estimated \$30 Million in public improvements including well, storage tank, water treatment plant as well as street reconstructions.	City, Other (TBD)
9	Transportation Accidents	Structure & Infrastructure	Address the need to improve the CSAH 6 / BNSF Railway Bridge which are frequently hit by high profile vehicles (semis and RV's).	Existing High 2023-2028	City Admin, City EM in coord with BNSF and WCEM	The city wishes to work in concert with the Burlington Northern Santa Fe (BNSF) Railway and Wright County Emergency Management to see how this bridge can be structurally increased in height to eliminate the frequent collisions that occur. The city will also seek to work with the county and BNSF to raise awareness of the bridge height restrictions via signage prior to the bridge.	City, County, BNSF, Other (TBD)

CITY OF MAPLE LAKE

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage all city residents to sign-up for the county's RAVE emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city has information on our city website under the "Residents" tab providing residents with a link to sign up for the county's emergency notifications 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 uses our website, city Facebook page, and city newsletter to provide information to residents on severe weather and other information following a storm event, such as flood clean-up and disinfection.	City
3	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 enforces requirements of the NFIP through Section 79 – Floodplain Ordinance in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city.	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 MONTICELLO

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 RAVE emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city uses its website, social media and other communication outreach methods to encourage residents to sign up for the county's emergency alerts. We've also provided the information to our City Council members so they can encourage residents too when the public contacts them with questions.	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	Monticello uses our city website and social media, including Facebook and Twitter. We do targeted campaigns during severe weather week and general reminders during the year. We also use digital monitors in our community center, DMV, and municipal liquor store, public service announcements at City Council meetings, and information in our city print and electronic newsletters to provide guidance as well as resources the public can access for more information.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Acquire portable generators to serve as backup power for the operation of the city well and lift stations as well as for and emergency sheltering of residents.	New High 2023-2028	City Admin, City EM	The city plans to purchase an additional generator for another well and to purchase a larger generator for the Monticello Community Center.	City
4	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Work with the American Red Cross to designate facilities to serve as mass care shelters in the event residents are displaced from severe storm events.	New High 2023-2028	City Admin, City EM in coord with ARC	The city is in the process of working with the American Red Cross to have at least 2 locations identified.	City, ARC

CITY OF MONTICELLO

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
5	Flooding	Local Planning & Regulations	Incorporate mitigation planning for flooding and climate changes into long-range planning for population growth and new development.	Existing Moderate 2023-2028	City Admin	Sustainability and climate resilience are a primary theme within the Monticello 2040 Comprehensive Plan. The theme is referenced in all chapters of the plan as it guides future growth and development in the city.	City
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 enforces requirements of the NFIP through Monticello Zoning Ordinance, Chapter 3, Section 7(C) - Floodplain District in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city.	City
7	Flooding	Structure & Infrastructure Projects	Address culvert replacement for an existing culvert near the campground that is impacted by beaver activity.	New High 2023-2028	City Admin, City Public Works	The city would like to replace a culvert that could be prone to being plugged by beavers which causes a risk of the roadway being washed out. This roadway provides secondary access to a campground community that is within the 100-year floodplain. Much of this roadway is also within the 100-year floodplain.	City
8	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Continue to plan for and implement stormwater system improvements to handle future high rain events.	Existing High 2023-2028	City Admin, City Public Works	The city plans to continue to install stormwater system along with future infrastructure and to complete existing deficiencies to the stormwater system as identified in the 2019 plan.	City
9	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish and enforce 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 Public Works	The City of Monticello initiated a Water Conservation Ordinance under Lawn and Gardening Regulations, which specifies a permanent odd/even watering schedule from June 1 through September 30 of each year. Information is provided on the city website to educate residents.	City

CITY OF MONTROSE

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 RAVE emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city has information about signing up for the county's emergency notification system on our website as well as in our information center at City Hall.	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 currently use the City Website, Facebook and the City Newsletter to get information to people about being prepared for severe weather. We post information at the Community Center, Post Office and Bank in order to reach more residents. The Emergency Management Director will put out information at each season in the newsletter on severe weather and emergency preparedness. We are also in the process of getting digital signs on both ends of town on US Hwy 12 to keep residents informed.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Acquire new backup generators to support the water and waste water facilities in the case of an ongoing power outage.	New High 2023-2028	City Admin, City EM, City Public Works	The city will purchase new generators as funding allows. If project is eligible the city may seek future FEMA HMA grant funding for generators.	City, FEMA HMA grant funding
4	Severe Summer Storms	Structure & Infrastructure Projects	Purchase and install a new outdoor warning siren in the northwest part of the city.	New High 2023-2028	City Admin, City EM, City Public Works	The city will work to purchase and install a new outdoor warning siren as funding allows. We will work with Wright County Emergency Management to ensure the siren is connected to the county's remote warning system.	City
5	Flooding	Local Planning & Regulations	Enroll the city of Montrose in the National Flood Insurance Program and establish a floodplain ordinance.	New Moderate 2022-2023	City Admin	The city has been put in touch with the state of MN NFIP manager to learn about the city's FEMA mapped high risk areas, receive information on how to get enrolled in the NFIP and adopt a floodplain ordinance.	City

CITY OF MONTROSE**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
6	Flooding	Local Planning & Regulations	Plan for city streets and stormwater infrastructure improvements to handle future high rain events.	Existing Moderate 2023-2028	City Admin, City Public Works	The city has a street reconstruction plan for the next 5 years that identifies high priority streets needing reconstruction and infrastructure overhaul.	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 OTSEGO

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 RAVE emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	There is a place on our website Emergency Management page with a link to the county’s emergency notification system.	City
2	All-Hazards	Local Planning & Regulations	Incorporate mitigation planning into the city’s long-term planning for population growth and new development.	In-Progress High 2022-2023	City Admin	The city’s 2012 Comprehensive Plan is currently in an update process in 2022. The Plan is designed to plan for the future of physical growth of the city and appropriate land uses to guide said development. The Plan includes major infrastructure components such as Park locations and Transportation projects. The city also maintains Master Plan documents for both Water and Sanitary Sewer utilities. These plans guide for future trunk system extensions, capacity additions and capital improvements.	City
3	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 uses our website and social media platforms to post information about severe weather awareness week.	City
4	Severe Winter & Summer Storms	Structure & Infrastructure Projects	Improve redundancy of the city’s water systems in the event of a power outage from a severe spring or winter storm event.	In-Progress High 2023-2024	City Public Works	The city is in the design phase of a project that will connect the city’s two water systems with construction anticipated for 2023-2024. This project will improve redundancy of the system in the event well pumps would lose power.	City
5	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 High 2023-2028	City Admin	The city participates in and enforces requirements of the NFIP through Code Title 11 (Zoning Regulations), Chapter 94 - Floodplain Overlay District in the city’s code of ordinances. This chapter regulates development in the flood hazard areas of the city.	City

CITY OF OTSEGO**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
6	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Continue efforts to stabilize and restore riverbanks subject to erosion as well as monitoring of flood levy infrastructure.	Existing High 2023-2028	City Public Works	This is an ongoing effort of the city in cooperation with the Wright Soil and Water Conservation District. The city will continue to work with the SWCD to address areas of levee erosion and bank stabilization in the city along the Mississippi River and Crow River. FEMA HMA grant funding may possibly be applied for to support levee rehabilitation or bank stabilization projects.	City, SWCD Cost Share grant funding, FEMA HMA grant funding
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 ROCKFORD

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 RAVE emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city can put a link on our city website to encourage and direct residents to sign up for the 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	Rockford utilizes their siren system for weather-related emergencies and utilizes the city website and Facebook pages to communicate other emergencies to the community.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Acquire emergency backup generators to run the wastewater lift stations out in the collection system.	New High 2023-2028	City Admin, City EM	The city will work to purchase generators as funding allows.	City
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 High 2023-2028	City Admin, City Public Works	The city enforces requirements of the NFIP through Ordinance 1001.22 Floodplain District in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city. The city also has a sump pump ordinance and an ordinance requiring the repair of deficient sanitary lateral services in place to mitigate against overloading the city's sanitary system with I&I.	City
5	Flooding	Mitigation Preparedness & Response Support	Continue to have an emergency flood plan in place for flooding of the Crow River.	Existing High 2023-2028	City Admin, City EM	The city has a flood preparedness plan in place for flooding of the Crow River. Whenever the city enters into the flood stage, it reviews the plan to ensure it meets the requirements of current conditions.	City
6	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish and enforce 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 has an odd/even watering ban that it has used in the past to help mitigate drought conditions. We continue to enforce restrictions and conduct outreach as per MN DNR guidelines during periods of severe drought.	City

CITY OF SOUTH HAVEN

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 RAVE emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city has not done anything formal with this to date, but we can use our city website to provide a link under "Citizen Information" to direct residents to the Wright County website to sign up.	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 posting public notices at City Hall to share information with the public.	City
3	Flooding	Structure & Infrastructure Projects	Work with our City Engineer (Bollig, Inc.) to implement a planned utility project to improve the city's stormwater outlet.	In-Progress High 2023-2028	City Admin in coord with City Engineer	The City of South Haven is working with Bollig Inc. which serves as the city engineer for South Haven. Extending the existing outlet to the North-East side of HWY 55 would allow for all of the stormwater to discharge where it would not cause a backup during heavy rain events and the annual freeze/thaw seasons. This project would include installing roughly 1,000' of 30" RCP to cross Highway 55. Our estimate for Total Project Costs including engineer and other fees is \$330,000. The city may seek to apply for supportive FEMA HMA grant funding for this project.	City, FEMA HMA Grant funding

CITY OF SOUTH HAVEN

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
4	Flooding	Structure & Infrastructure Projects	Work with our City Engineer (Bollig, Inc.) to implement a planned utility project to raise roadway as part of lift station replacement project.	In-Progress High 2023-2028	City Admin in coord with City Engineer	The City of South Haven has secured funding to replace the existing lift station to address the flooding of the structure itself. However, the access road to the lift station is still in need of being raised to prevent flooding over the roadway. This project will raise the roadway to allow the city to access the new lift station without having to drive thru standing water preventing them to do so. Our estimate for Total Project Costs including engineer and other fees is \$634,000. The city may seek to apply for supportive FEMA HMA grant funding for this project.	City, FEMA HMA Grant 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	City Administration will establish and enforce a water conservation ordinance and conduct outreach as per MN DNR guidelines during periods of severe drought. We will use our city website and posted notices to keep our residents informed.	City

CITY OF ST. MICHAEL

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 RAVE emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	We use our city website to encourage residents to sign up for the county 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 newsletter, website, Twitter, and Facebook page to share information with residents on severe weather and safety reminders.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Acquire generators for City Hall and some lift stations.	New Moderate 2023-2028	City Admin, City EM	The city will work to purchase new portable generators as funding allows.	City
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 High 2023-2028	City Admin	The city enforces requirements of the NFIP through Chapter 155: Zoning, section 155.365 Floodplain Overlay District in the city’s code of ordinances. This chapter regulates building and zoning within the flood hazard areas of the city. We also have a sump pump ordinance in place to mitigate against overload of the city’s sanitary sewer system.	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 WAVERLY

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 RAVE emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city has not done anything formal with this to date, but we can use our city website and Facebook page to provide a link to the county's webpage to sign up for it. We will seek assistance from Wright County Emergency Management to give us the information we need.	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 website, community sign, and Facebook page are used to communicate with residents during emergencies.	City
3	Severe Summer Storms	Local Planning & Regulations	Designate a new facility storm shelter location for residents on the south side of the city.	New Moderate 2023-2028	City Admin, City EM	Due to our growing population on the south side of the city, it would be beneficial to have another storm shelter in addition to the Village Hall which is located in downtown. The city will work to identify what existing structure can serve as a location to serve as a temporary shelter.	City
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	The city enforces requirements of the NFIP through Chapter 153: Shoreland Overlay District, Section 153.126 Floodplain Regulations in the city's code of ordinances. This chapter regulates building and zoning within the flood hazard areas of the city.	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