

# POLK COUNTY MINNESOTA



2023

Hazard Mitigation Plan



**U-SPATIAL**

UNIVERSITY OF MINNESOTA DULUTH

**Driven to Discover**

# POLK COUNTY MINNESOTA

## HAZARD MITIGATION PLAN

Jody Beauchane  
Emergency Management Director  
Polk County Sheriff's Office  
600 Bruce Street  
Crookston, MN 56716

218-470-8263

*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

<b>Section 1 – Introduction</b> .....	<b>4</b>
1.1 Introduction .....	4
1.1.1 Scope.....	2
1.1.2 Hazard Mitigation Definition .....	3
1.2 State Administration of Mitigation Grants .....	3
<b>Section 2 – Public Planning Process</b> .....	<b>4</b>
2.1 Planning Team Information.....	4
2.2 Review of Existing Plans, Capabilities & Vulnerabilities .....	5
2.3 Planning Process Timeline and Steps .....	6
2.3.1 Polk County Stakeholder Coordination.....	6
2.3.2 Overview of Jurisdictional Participation.....	7
<b>Section 3 – Risk Assessment and Vulnerability Analysis</b> .....	<b>9</b>
3.1 Hazard Identification and Prioritization .....	9
3.1.1 Hazard Prioritization.....	9
3.1.2 FEMA- and Minnesota-Declared Disasters and Assistance.....	10
3.2 Population Vulnerability .....	11
3.3 Climate Change .....	11
3.4 Jurisdictional Change in Risk or Vulnerability Assessment.....	12
3.4.1 Jurisdictional Responses .....	13
3.4.2 Future Development.....	19
<b>Section 4 – Hazards</b> .....	<b>21</b>
4.1 Flooding.....	21
4.1.1 Probability of Occurrence.....	21
4.1.2 Vulnerability.....	22
4.1.3 Program Gaps and Deficiencies.....	24
4.2 Wildfires.....	24
4.2.1 Probability of Occurrence .....	24
4.2.2 Vulnerability.....	24
4.2.3 Program Gaps and Deficiencies.....	26
4.3 Windstorms.....	26
4.3.1 Probability of Occurrence.....	27
4.3.2 Vulnerability.....	27
4.3.3 Program Gaps and Deficiencies.....	28
4.4 Tornadoes.....	28

4.4.1	Probability of Occurrence.....	28
4.4.2	Vulnerability.....	29
4.4.3	Program Gaps and Deficiencies.....	30
4.5	Winter Storms.....	30
4.5.2	Probability of Occurrence.....	31
4.5.3	Vulnerability.....	31
4.5.4	Program Gaps and Deficiencies.....	31
4.6	Extreme Cold.....	32
4.6.1	Probability of Occurrence.....	32
4.6.2	Vulnerability.....	32
4.6.3	Program Gaps and Deficiencies.....	33
4.7	Drought.....	34
4.7.1	Probability of Occurrence.....	34
4.7.2	Vulnerability.....	34
4.7.3	Program Gaps and Deficiencies.....	35
4.8	Landslides.....	35
4.8.1	Probability of Occurrence.....	36
4.8.2	Vulnerability.....	37
4.8.3	Program Gaps and Deficiencies.....	37
4.9	Dam & Levee Failure.....	37
4.9.1	Probability of Occurrence.....	39
4.9.2	Vulnerability.....	39
4.9.3	Program Gaps and Deficiencies.....	40
<b>Section 5 – Mitigation Strategy.....</b>		<b>41</b>
5.1	Community Capability Assessments.....	41
5.1.1	National Flood Insurance Program (NFIP).....	41
5.1.2	Plans and Ordinances.....	44
5.1.3	Plans and Programs in Place to Address Natural Hazards.....	44
5.2	Mitigation Goals.....	49
5.3	Mitigation Action and Project Strategies.....	49
<b>Section 6 – Plan Maintenance.....</b>		<b>61</b>
6.1	Monitoring, Evaluation, and Updating the Plan.....	61
6.2	Implementation.....	62
6.3	Continued Public Involvement.....	63
<b>APPENDICES</b>		
<b>Appendix A – References</b>		
<b>Appendix B – Adopting Resolutions</b>		
<b>Appendix C – Local Mitigation Survey Report</b>		
<b>Appendix D – Plans &amp; Programs in Place</b>		

**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).

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

This HMP represents the efforts of Polk 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.



*[Polk County HMP website](#)*

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

- 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 Polk County Emergency Management to facilitate an update to the 2015 Polk 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 Polk 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 Polk County, including the cities of Beltrami, Climax, Crookston, East Grand Forks, Erskine, Fertile, Fisher, Fosston, Gully, Lengby, McIntosh, Mentor, Nielsville, Trail, and Winger. The Polk 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 Polk County after final approval by FEMA (see Appendix B).

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

- Include more recent data documenting the critical infrastructure and hazards faced by Polk 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 Polk 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 Polk County HMP planning team is headed by the Polk County emergency manager, who is the primary point of contact. Members of the Polk 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 Polk 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
Jody Beauchane	Polk County Sheriff’s Office	Emergency Management Director
Jill Moreno	Polk County Sheriff’s Office	Emergency Management Program Assistant
James Tadman	Polk County Sheriff’s Office	Sheriff
Chuck Whiting	Polk County Administration	County Administrator
Sarah Reese	Polk County Public Health	PH Director
Richard Sanders	Polk County Highway Department	County Engineer
Jon Steiner	Polk County Environmental Services Department	Administrator
Jacob Snyder	Polk County Environmental Services Department	Assistant Administrator
Terri Oliver	Polk County Public Health	Public Health Emergency Preparedness Coordinator
Daniel Netland	City of Beltrami Fire Department	Fire Chief
Jacquelyn Voeller	City of Climax	Clerk/Treasurer
Brandon Carlson	City of Crookston	Public Works Director
Ryan Lindtwed	City of Crookston	Finance Director
Tim Froeber	City of Crookston Fire Department	Fire Chief
Megan Nelson	City of East Grand Forks	City Clerk
Jeff Boushee	City of East Grand Forks Fire Department	Fire Chief/Emergency Manager
Angie Shimpa	City of Erskine	City Clerk/Treasurer
Cassie Heide	City of Fosston	City Administrator
Barbara Sellers	City of Gully	City Clerk
Melissa Finseth	City of McIntosh	City Clerk/Treasurer
Lisa Schaumburg	City of Mentor	City Clerk/Treasurer
Jan Anderson	City of Mentor Volunteer Fire and Rescue	Fire Chief

Name	Agency/Organization	Participant Title
David Vraa	City of Nielsville	Mayor
Stephanie Abentroth	City of Nielsville	City Clerk
Lisa Schaumburg	City of Winger	City Clerk/Treasurer
Eugene Dufault	Polk County Township Officer's Association	Chair
Dan Dalchow	Climax Shelly ISD#592	Superintendent
Todd Selk	Fosston Public Schools	Superintendent
Heather Winkleblack	MN Department of Homeland Security and Emergency Management	HSEM Region 3 Regional Program Coordinator
Luther Newton	USDA Natural Resource Conservation Service	District Conservationist – Team Lead
Nicole Bernd	West Polk Soil & Water Conservation District	Local Water Planner
David Danforth	University of MN Crookston	Director of Facilities and Operations
Karen Olson	PKM Electric Cooperative	Chief Financial Officer
Tara Jensen	Wild Rice Watershed District	Administrator
April Swenby	Sand Hill Watershed District	Administrator
Nate Koland	Red Lake Watershed District	Field Technician
Nick Olson	Red Lake Watershed District	Engineering Specialist
Mori Maher	Middle-Snake-Tamarac Rivers Watershed District	Administrator

## 2.2 Review of Existing Plans, Capabilities & Vulnerabilities

Polk 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 Polk County HMP, U-Spatial consultants reviewed and incorporated a variety of planning documents that direct community development and influence land use decisions for the county and its jurisdictions. In addition, U-Spatial consultants worked closely with the Polk 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 at the county and 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 Polk County on current plans and programs in place (e.g., 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 Polk County to support mitigation.

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

## 2.3 Planning Process Timeline and Steps

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

### 2.3.1 POLK COUNTY STAKEHOLDER COORDINATION

Two planning team meetings took place via Zoom video conference hosted by U-Spatial. Meeting participants included representatives from Polk 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*

In order to provide opportunity for public input, Polk County issued two news releases announcing the plan update and inviting public review and feedback on the draft plan. The news release provided information on where to view the plan and submit comments. The County HMP website hosted by U-Spatial and the feedback and mitigation action ideas surveys will remain available through the five-year planning period to foster public engagement. The public feedback period for the draft plan was

open from 1/12/23 to 1/26/23, for a period of 15 days.

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

*Table 2. Polk County Hazard Mitigation Update meetings and public outreach*

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

Event	Date	Appendix
Planning Team Meeting #1	2/2/22	Appendix F, Planning Team Meetings
Planning Team Meeting #2	11/14/22	Appendix F, Planning Team Meetings
News Release #2	1/12/23	Appendix G, Public Outreach & Engagement Documentation

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

U-Spatial and Polk 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 Polk 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 Polk 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 Polk 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. Polk 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 Polk 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 Chart	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
Polk County (30,982)	X	X	X	X	X	X
City of Climax (258)	X	X	X	X		X
City of Crookston (7415)	X	X	X	X	X	X
City of East Grand Forks (9091)	X	X	X	X	X	X
City of Erskine (438)	X	X	X	X	X	X
City of Fertile (786)	X	X				X
City of Fisher (411)	X		X			X
City of Fosston (1473)	X		X			X
City of Gully (53)	X	X	X	X	X	X
City of Lengby (90)	X	X	X	X	X	X
City of McIntosh (609)	X				X	X
City of Mentor (116)	X	X	X	X	X	X
City of Nielsville (24)	X	X	X	X	X	X
City of Trail (36)	X	X	X	X	X	X
City of Winger (136)	X		X	X		X
<b>Neighboring Jurisdictions:</b>						
Pennington County						
Red Lake County						
Clearwater County						
Mahnomen County						
Norman 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 Polk 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 were discussed 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 Polk County HMP update (Table 4) was based upon group review and discussion of the natural hazards that pose risk to the county during the HMP Planning Team Meeting #1. In the review of each hazard, the group was asked to consider if the risk to severe natural hazards had increased or decreased since the last plan, and if this affected their priority level to mitigate against that hazard. Appendix F provides the discussion notes from the meeting.

*Table 4. Prioritization of hazards for 2023 Polk County HMP update*

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

### 3.1.2 FEMA- AND MINNESOTA-DECLARED DISASTERS AND ASSISTANCE

Another historical perspective is derived from FEMA-declared disasters. Twenty-six major disasters and five emergency declarations have been made between 1957 and December 2022, for a total of 31. These events can be [viewed on a map](#) on the Polk 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). Polk County was included in one State Disaster Declaration.

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

*Table 5. Historical hazard mitigation funding awarded in Polk County*

Project Identifier	Sub-Grantee	Project Type	Federal Share (%75)
DR-1175-0046-R	West Polk Soil and Water Conservation District	Vegetation Management - Wind	\$37,980
DR-1175-0001-R	East Grand Forks	Acquisition of Private Real Property (Structures and Land) - Riverine	\$14,942,000
DR-4069-0011-P	Polk (County)	Local Multihazard Mitigation Plan	\$30,000
DR-1175-0009-R	Polk (County)	Acquisition of Private Real Property (Structures and Land) - Riverine	\$1,218,582
DR-0824-0004-R	East Grand Forks	Acquisition of Private Real Property (Structures and Land) - Riverine	\$140,000
DR-1175-0069-R	PKM Electric Cooperative, Inc.	Utility Protective Measures (Electric, Gas, etc.)	\$107,954
DR-1288-0002-R	P.K.M. Electric Coop., Inc.	Utility Protective Measures (Electric, Gas, etc.)	\$135,000

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 Polk 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 Polk 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 (see Section 3.4.2).

### 3.4.1 JURISDICTIONAL RESPONSES

As part of the Local Mitigation Survey form, Polk 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.

#### **Polk County**

*Flooding:* County, cities and township infrastructure have incurred a large amount of damage over the past five years in Polk County. Heavy snow melting and rainfall events have caused flooding, road closures or otherwise impassable road conditions which create temporary loss of access to transportation and creating adverse effects to public safety systems. Spring snowmelt has led to wet/soft road base soils, potentially creating washouts and eroded transportation systems. The flooding has encroached upon and often overtops the county and township roads, wearing away the roadbed, damaging culverts and creating significant erosion.

Numerous legal ditch systems are present in Polk County and provide drainage in rural areas. Flooding along these ditch systems often results in damage and poses a risk to agricultural property, public infrastructure, and structures. One example highlighting risk is the Sand Hill Ditch that was constructed to straighten and channelize a poorly defined reach of the Sand Hill River. The project serves as the primary outlet for the Sand Hill River Watershed and is managed by the Sand Hill River Watershed District as a legal drainage system. High flows have resulted in significant channel erosion and bank failures. This has encroached on adjacent private agricultural land and public infrastructure.

*Windstorms, Tornadoes:* Polk County owns and maintains two campgrounds, one of them needs a warning siren and a storm shelter to house people during severe storm events. The other campground needs a warning siren.

The county has gaps in its outdoor warning siren coverage. Sirens are owned and maintained by the municipalities. Not all cities are able to fund new or updated sirens. This puts residents and visitors in those areas in higher risk of injury or death.

Polk County has a few municipalities with RV camping sites and licensed mobile home parks with extremely limited shelter options. All mobile home parks were licensed prior to the requirement to have an onsite shelter. Their plans involve residents running or driving to a nearby shelter putting them in a higher risk of injury or death situation.

*Wildfire:* Polk County has had seen an uptick in the amount of grassland fires over the past five years. These fires have impacted infrastructure and increased threats to developed properties and nearby communities.

*Landslides:* An increase in extremely heavy rains, overland flooding and saturated soils have created landslides and slope failures on our rivers and creek shorelands and to our legal drainage systems backslopes.

### **City of Beltrami**

*Flooding:* The City of Beltrami is within the FEMA regulatory 100-year floodplain along the Sand Hill Ditch, primarily located east of Minnesota Highway 9. This results in increased flood insurance costs for structures located within the floodplain. Additional hydraulic analysis completed by the Sand Hill River Watershed District has validated flood risk for the community.

*Tornadoes, Windstorms:* There are several residents in town who do not have basements or storm shelters and so would be at risk in the event of a tornado or windstorm. The city does not have a local community storm shelter that would provide a place for these residents.

*Blizzards, Winter Storms, Thunderstorms:* Power outages can and do occur during weather events such as those listed. The city's water supply comes from two municipal wells that are operated by electric pumps. In the event of a power outage that lasts a couple of days to a week, the city could utilize the small generator from the firehall to keep the water pumps operational. If a power outage were to last for several weeks, the city would need to look for resources to keep the water pumps operational.

### **City of Climax**

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

*Windstorms, Tornadoes:* We have mobile homes within the city that do not have on-site storm shelters and residents are vulnerable to high wind and tornado events. Many homes in new developments are built on slab with no basement. These residents are at greater risk during severe wind events. The school has been designated as a shelter for these residents to go in the event of severe windstorm events.

### **City of Crookston**

*Flooding:* One or more of our sanitary sewer lift stations is subject to flooding during high rain events. City and fire department personnel have sandbagged the area in the past to prevent flooding into the lift station.

We have a few homes along the Red River that have experienced repetitive flooding. The city would like to work with the property owners to buy out these homes.

In 2022 we had to place clay dikes to protect our Library and Fire Hall.

*Ice Storms, Blizzards:* The city has overhead power lines and electrical poles, and 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.

*Extreme Cold:* Residents are susceptible to dangers from extreme cold, especially if the power goes down during winter storm events. We have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold.

## **City of East Grand Forks**

*Tornadoes, Windstorms:* We have 1 state campground within the city that operates during the summer and fall months with RV's and campers. We are currently using the fire station as a temporary storm shelter.

We also have a trailer home park in the city limits. We do provide a storm shelter for this area although this shelter does not have a generator. We utilize the City Civic Center across the street as the storm shelter, however, it is not up to today's standards for storm shelter minimums.

We have an area of homes that do not have basements which are vulnerable to tornadoes and high winds. We do provide a storm shelter for this area. This shelter is marginal and does not have a generator.

*Winter Storms:* Much of the city's municipal electrical service is provided by outside sources via overhead power lines which are vulnerable to ice storms.

*Flooding:* The frequency of flooding has increased over the last 20 years; however, the flood protection system has mitigated the risk. The flooding causes more "inconvenience" type problems rather than catastrophic damage. Examples include the fact that the ramps leading up the bridges crossing between Grand Forks and East Grand Forks are outside of the protection system and can flood, causing us to go down to one crossing between the cities. Flooding can also damage the Greenway trail system as well as our pedestrian paths and bridges.

*Wildfire:* Our community has an extensive greenway system which is vulnerable to wildfire which could affect residential homes and city businesses.

## **City of Fertile**

*Flooding:* Summit Ave. West is the most vulnerable to flood damage from the Sand Hill River. Our sewer force main which runs under the river is also susceptible to damage since this occurred in 2009 during a spring flood event.

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

*Windstorms, Tornadoes:* Our RV campground is active during summer and fall months with RVs and campers and does not have a storm shelter. In addition, many homes in the older parts of

town do not have basements or only have crawl spaces. These residents are at greater risk during severe wind events.

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

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

## **City of Fisher**

*Flooding:* One of our sanitary sewer lift stations is prone to flooding during high rain events. City personnel had to do an emergency bypass into the Red Lake so that our lift station could keep up.

We have one house along the Red Lake River that has experienced flooding. This was the first that we are aware of - our river did set a new record this year (2022).

A portion of the lower part of the city is protected by a certified levy believed to be constructed in 1997/98. Any sanitary and wastewater infrastructure that are located in the 100-year floodplain are susceptible to flooding as well as any structures in the same areas.

*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:* Some of our residents do not have a basement in case of a tornado.

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

*Brush Fires:* Our local volunteer fire dept had been out to multiple brush fire calls in the past 2-3 years. Many are started by farmers doing a controlled burn that gets away from them. Another issue has been due to local railroad running in the area – creates a spark and catches the dry grass on fire.

## **City of Fosston**

*Winter Storms:* We have a high population of seniors and also low-income residents who are more vulnerable during these events. In recent years we have seen an increase in the amount of snow these storms may bring which has caused trouble for emergency vehicles throughout our city streets.

*Extreme Cold:* Residents are susceptible to dangers from extreme cold. During these extreme cold events we have experienced frozen water services, burst pipes inside homes, and have had to replace frozen regulators on our natural gas meters which is the home/apartments source of heat.

This has also caused our streets and alleys damage from frost. Because of the extreme cold we have been experiencing we have had a large number of water main breaks which could be contributed to the frost levels we are reaching.

*Windstorms, Tornadoes:* We have 1 mobile home park within the city that does not have a storm shelter and residents are vulnerable to high wind and tornado events. These mobile homes are also located a long distance from our emergency siren.

We have a new housing development located on the North side of town many of these homes are slab-on-grade which creates a higher risk in these situations. These homes are also located a long distance from our emergency siren.

*Flooding:* In the past we have seen major rain events that have caused our city streets and residential basements to flood throughout the city. These events have also caused our sanitary sewer system to back up which has caused our sanitary system to become completely backed up.

### **City of Gully**

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

### **City of McIntosh**

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

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

*Flooding:* One of our sanitary sewer lift stations is prone to flooding during high rain events. The city's park is also prone to flooding due to low terrain and a poor drainage system.

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

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

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

## **City of Mentor**

*Flooding:* The Community Center floods every year, and it causes damage to the documents that are kept here in storage as well as old maps and the original townsite plat.

The culverts on Harrison, Garfield, Stephans, and 2<sup>nd</sup> Street all washout in the Spring when we have too much water.

*Wildfire:* We are surrounded by wildfire preserves and grasslands so when there's a drought, we are at risk of wildfires.

*Windstorms, Tornadoes:* Many residents don't have basements and there are hundreds of campers in our region due to being in lakes area. For the city campground campers can go to the old school. For privately owned campgrounds, it's unknown if any have adequate storm shelters. Our electric poles are aging and might snap in a high wind event.

*Blizzards:* Winter storms have caused unpassable roads and low to no visibility. Ice on power lines has caused power outages.

## **City of Nielsville**

*Flooding:* Sand Hill River Watershed District Project No. 24 is a legal ditch system that flows through the City of Nielsville. Flows higher than the design event along this ditch system create flood risk for the community. Impacts include risk to structures and infrastructure. These impacts were not studied in sufficient detail in the Flood Insurance Study to reflect the actual risk to the community.

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

In the past we have experienced frozen water services. The city has also experienced damage to roads from spring frost heaves and frozen culverts that cause localized flooding.

*Windstorms, Tornadoes:* We have four mobile homes located within the city limits. We don't have a storm shelter and residents are vulnerable to high winds and tornado events.

We have a few homes that are built with only crawl spaces, no basements. These residents are at a greater risk during severe weather.

*Ice Storms, Blizzards:* Much of the city's municipal electrical consists of overhead power lines and electrical poles. These 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 on lines and poles.

## **City of Trail**

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

## **City of Winger**

*Extreme Cold:* We have experienced a frozen water tower during periods of extended extreme cold temperatures.

### **3.4.2 FUTURE DEVELOPMENT**

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

#### **Polk County**

Polk County’s campgrounds have grown in popularity over recent years. These populations that enjoy the campgrounds are vulnerable to severe weather as there are no storm shelters close by or outdoor warning sirens.

#### **City of East Grand Forks**

With the growth of vegetation in our greenway and the increased recreational use of our greenway we have an increased potential for wildfire.

#### **City of Fosston**

We have a new development on the south side of Fosston which would increase the cost of damage due to tornado, wind, or hail. This new development is a long distance from our current emergency warning siren.

We have a large number of senior living centers in our community which creates a large number of senior residents in one location if there were to be an emergency situation.

#### **City of Trail**

Aging community has made residents more vulnerable.



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 Polk 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 Polk County will address the maintenance of this plan, including monitoring, evaluation, and update of the plan, as well as implementation and continued public involvement.

# Section 4 – Hazards

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

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

Hazards that were deemed by Polk 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

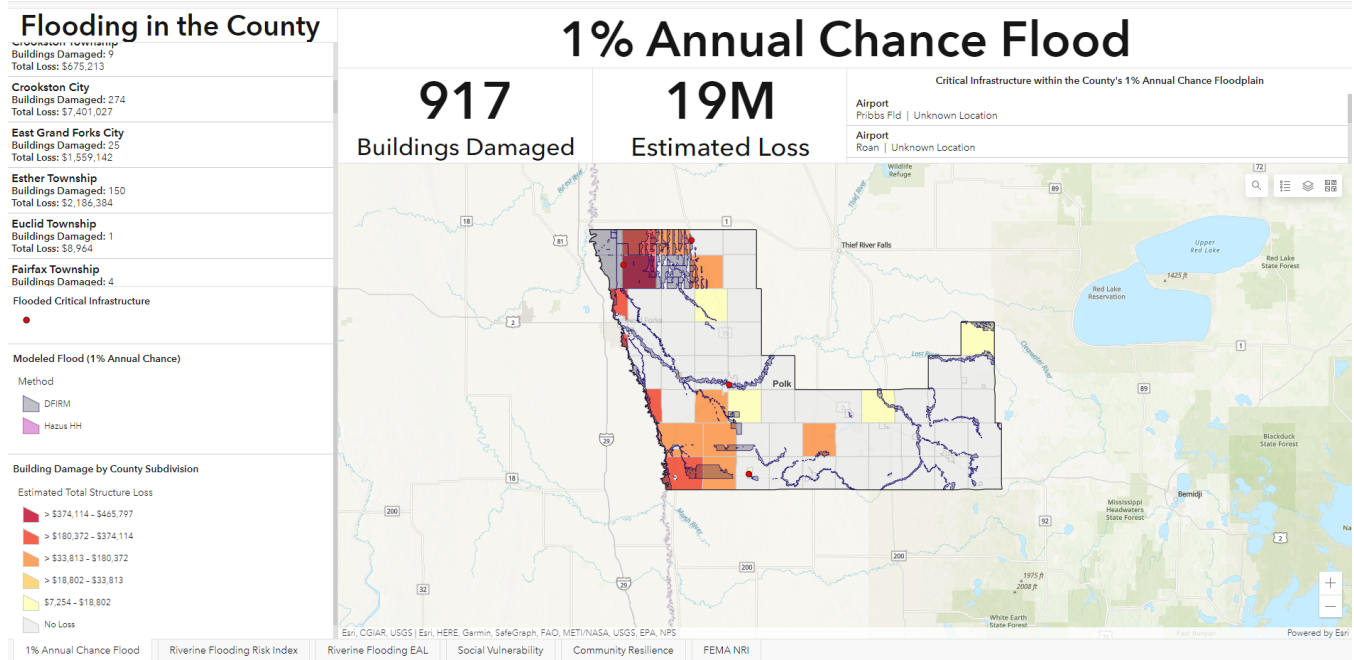
Flooding is the most significant and costly natural hazard in Minnesota. Only four of the 31 federal disaster declarations in Polk County did not include flooding.

### 4.1.1 PROBABILITY OF OCCURRENCE

Minnesota HSEM has encouraged a potential risk and economic loss analysis for a 1% annual chance flood using the FEMA tool, Hazus for ArcGIS. A Digital Flood Insurance Rate Map (DFIRM) defined the 1% annual chance flood boundary. 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 Douglas County HMP website (Figure 1), where it is available in an interactive form.

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

Figure 1. 1% Annual chance flood in Polk County



### 4.1.2 VULNERABILITY

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

[\*View at-risk populations in Polk County\*](#)

Hazus reports the percent damage of each building in the floodplain, defined by the centroid of each building footprint. After formatting the tax and spatial data, 24,980 points were input to Hazus to represent buildings with a total estimated building plus contents value of \$4.3 billion. Approximately 92% of the buildings (and 71% of the building value) are associated with residential housing.

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

*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	22,972	\$3,047,969,284	1568	\$147,626,400	881	\$17,405,783
Commercial	1,501	\$550,136,680	31	\$2,549,800	25	\$606,131
Other	507	\$702,380,264	12	\$8,656,050	11	\$981,187
Totals	24,980	\$4,300,486,228	1,611	\$158,832,250	917	\$18,993,101

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 1<sup>st</sup>-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 Polk 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. The Beltrami Fire Station in Beltrami was shown to fall within 1% annual chance floodplain. It should be noted here that no mitigation measures are necessary for the fire hall, as it is built up higher than the flood zone. Additionally, the city of Beltrami has a dike in place that covers the southeast corner of the city, and it is built up high enough to protect the city from flooding.

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. The Pribbs Field and Roan airports were found to be at risk in the 1% annual chance flood plain. The Trinity Lutheran Church in Crookston serves as a shelter and was also found to be in the 1% annual chance flood plain and is mapped in the [Polk County HMP website](#). No other information is available.

### *Community Vulnerability*

Potential economic losses were estimated by Census Minor Civil Division. The City of Crookston would suffer significant estimated losses in the 1% annual chance flood. Ester and Huntsville Townships also have significant estimated losses. East Grand Forks is the city with the second highest potential loss. All

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

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

## 4.2 Wildfires

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

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

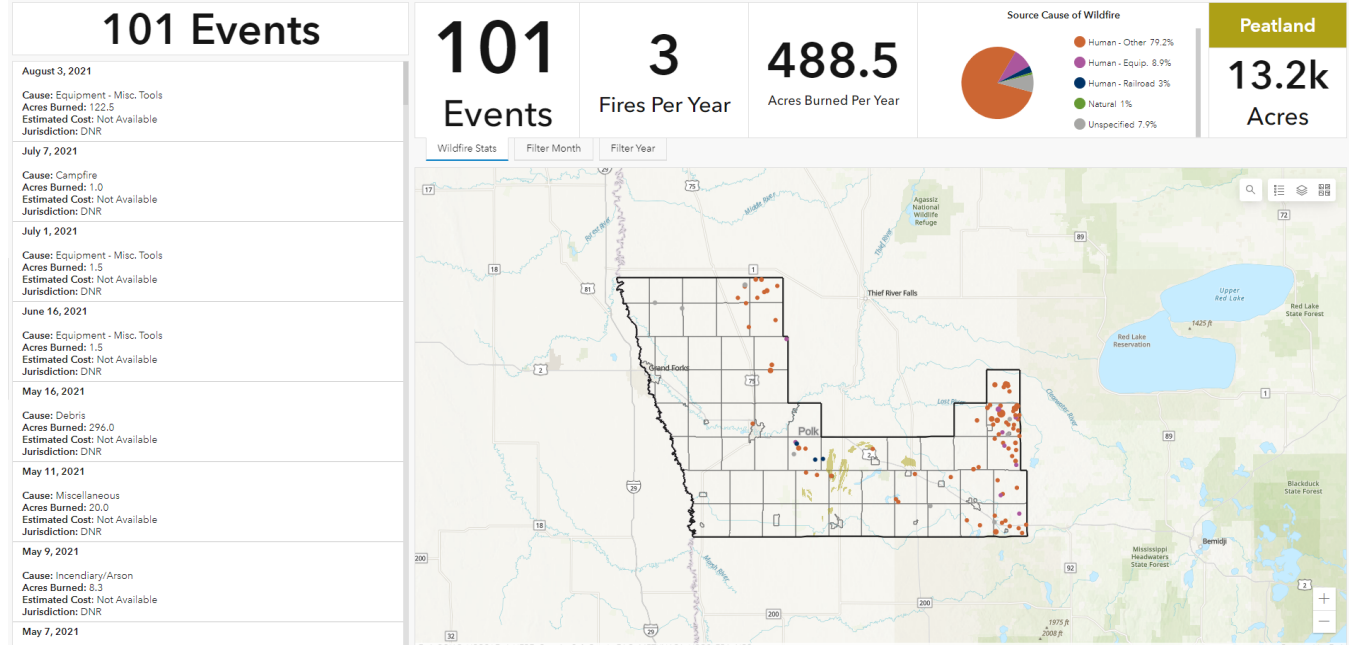
### 4.2.1 PROBABILITY OF OCCURRENCE

To determine the probability of future wildfires Polk County, records of previous wildfire events in were summed and divided by the dataset's period of record, resulting in the annual relative frequency of wildfires during the period of record. Based on Minnesota DNR records, from January 1985 to June 10, 2021, the relative frequency of wildfire events in the county is 3 per year (MN DNR, 2021c). This relative frequency can be used to infer the probability of these events occurring in the future.

### 4.2.2 VULNERABILITY

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

Figure 2. History of wildfire in Polk County



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

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

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

	Total WUI 1990	Total WUI 2000	Total WUI 2010	% Change (1990–2010)
Land Area	1.9	2.5	2.7	+42.1%
Housing	11.0	13.1	11.4	+3.6%
Population	7.1	7.5	6.2	-12.6%

SOURCE: (RADELOFF ET AL., 2019)

Communities within the county with more significant total areas classified as WUI include Lengby City, McIntosh City, Mentor City, Erskine City, Gully City, Fertile City, Climax City, and Woodside Township. These communities along with others in WUI areas are more vulnerable to wildfires.

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

### 4.2.3 PROGRAM GAPS AND DEFICIENCIES

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

*Community Wildfire Protection Plan:* Polk County does not have a Community Wildfire Protection Plan (CWPP) in place. Polk County should consider the opportunity to work with the MN DNR Firewise Program and local fire departments to conduct a coordinated, comprehensive risk assessment for wildfire risk and identify High-Risk Wildfire Areas and targeted wildfire mitigation activities. Having a CWPP in place will also allow the county and communities to be eligible to apply for MN DNR Firewise grant funding for eligible wildfire mitigation activities.

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

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

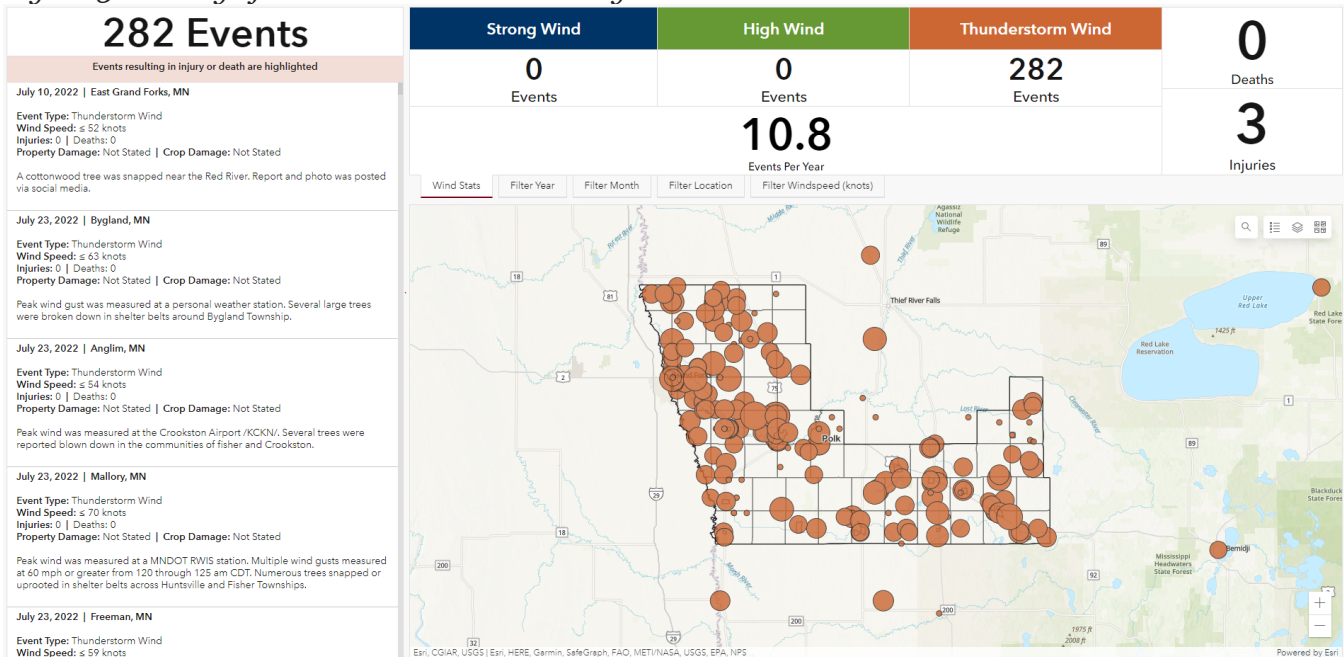
*Firewise Assessments:* Level-1 Firewise assessments should be encouraged for homeowners living in rural, woodland high-risk wildfire areas.

## 4.3 Windstorms

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

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

Figure 3. History of windstorms in Polk County



### 4.3.1 PROBABILITY OF OCCURRENCE

To determine the probability of future wind-related events in Polk County, records of previous wind-related events (strong wind, high wind, and thunderstorm wind) in the county were examined for the period of record. The relative frequency of all wind-related events since January of 1996 is 10.8 per year. These relative frequencies can be used to infer the probability of these events occurring in the future.

### 4.3.2 VULNERABILITY

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

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



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

### 4.3.3 PROGRAM GAPS AND DEFICIENCIES

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

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

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

*Storm Shelters and Tornado Safe Rooms:* There are areas throughout the county without viable storm shelters or tornado safe rooms where there are populations vulnerable to high wind and storm events, such as campgrounds, resorts, mobile home parks, schools, and other seasonal gathering locations such as the county fairgrounds and county parks that offer camping. A coordinated approach is needed to identify where storm shelters or tornado safe rooms are needed and to evaluate whether new construction or a retrofit of facilities is appropriate.

## 4.4 Tornadoes

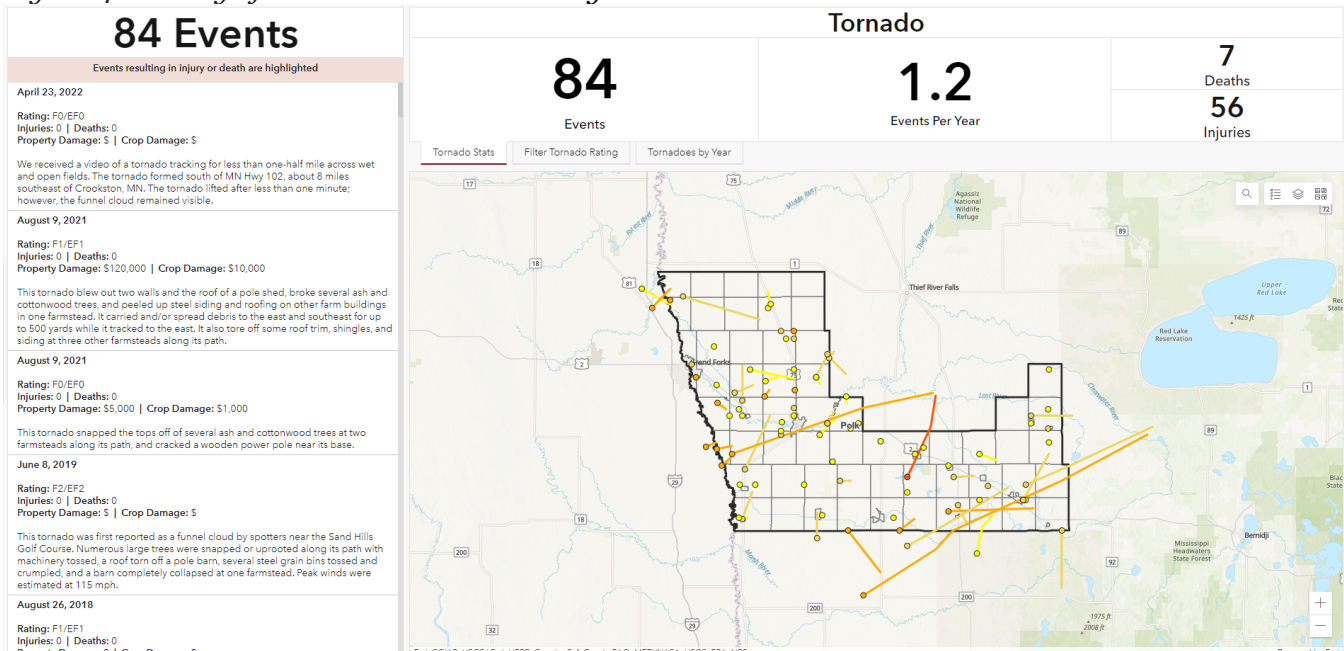
With wind speeds reaching up to 300 mph, tornadoes are one of nature’s most violent storms (Hogeback, 2020). The history of tornadoes in Polk County is shown in Figure 4; an interactive version of this map can be found on the Polk County HMP website.

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

### 4.4.1 PROBABILITY OF OCCURRENCE

Estimating the probability of future tornadoes in Polk County was done using two methods. The first method summed the total number of tornadoes which either touched down in or traveled through the county. This sum was divided by the number of years tornado data was recorded, resulting in the annual relative frequency of tornado occurrences in the county. Based on records in the NCEI Storm Events Database through September 2022 the relative frequency of tornados in the Polk County is 1.2 per year. (These 84 tornadic events occurred in 70 years on record.)

Figure 4. History of tornadoes in Polk County



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

For any location in Polk County, there was an annual frequency of 1–4 tornadoes within a 50-mile radius, the south-central part of the county experiencing more. The historical frequency was only slightly higher in the southeast than the northwest. These relative frequencies can be used to infer the probability of these events occurring in the future.

#### 4.4.2 VULNERABILITY

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

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).

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

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

### 4.4.3 PROGRAM GAPS AND DEFICIENCIES

Polk 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 Polk 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.

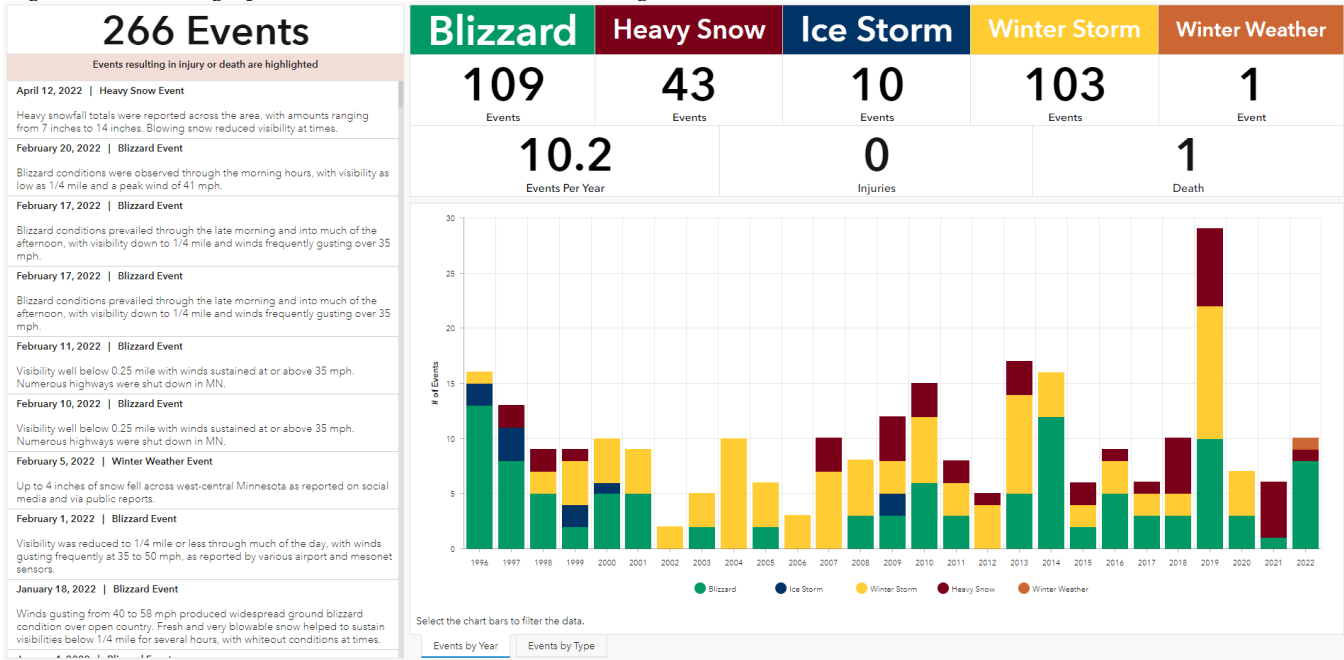
*Storm Shelters and Tornado Safe Rooms:* There are areas throughout the county without viable storm shelters or tornado safe rooms where there are populations vulnerable to high wind and storm events, such as campgrounds, resorts, mobile home parks, schools, and other seasonal gathering locations such 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 Polk County is shown in Figure 5; an interactive version of this map can be found on the Polk County HMP website.

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

Figure 5. History of winter storms in Polk County



#### 4.5.2 PROBABILITY OF OCCURRENCE

To determine the probability of future winter-related storm events in Polk 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 Polk County is 10.2 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 the county. These events do not vary geographically within the county; all jurisdictions are equally vulnerable. While it is highly likely these events will continue occurring annually, the amount of snow and ice and number of winter-related storm events to occur each year are unpredictable. Citizens living in climates such as these must always be prepared for situations that put their lives or property at risk. It is important that extra consideration be given to the vulnerable populations and energy infrastructure discussed in Section 3.2, and Section 3.4 provides jurisdictional responses of localized vulnerabilities to specific hazards.

#### 4.5.4 PROGRAM GAPS AND DEFICIENCIES

Polk 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 Polk 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 Polk County can be especially dangerous when low temperatures and wind create arctic-like wind chills. The history of extreme cold in Polk County is shown in Figure 6; an interactive version of this dashboard can be found on the Polk County HMP website.

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

### 4.6.1 PROBABILITY OF OCCURRENCE

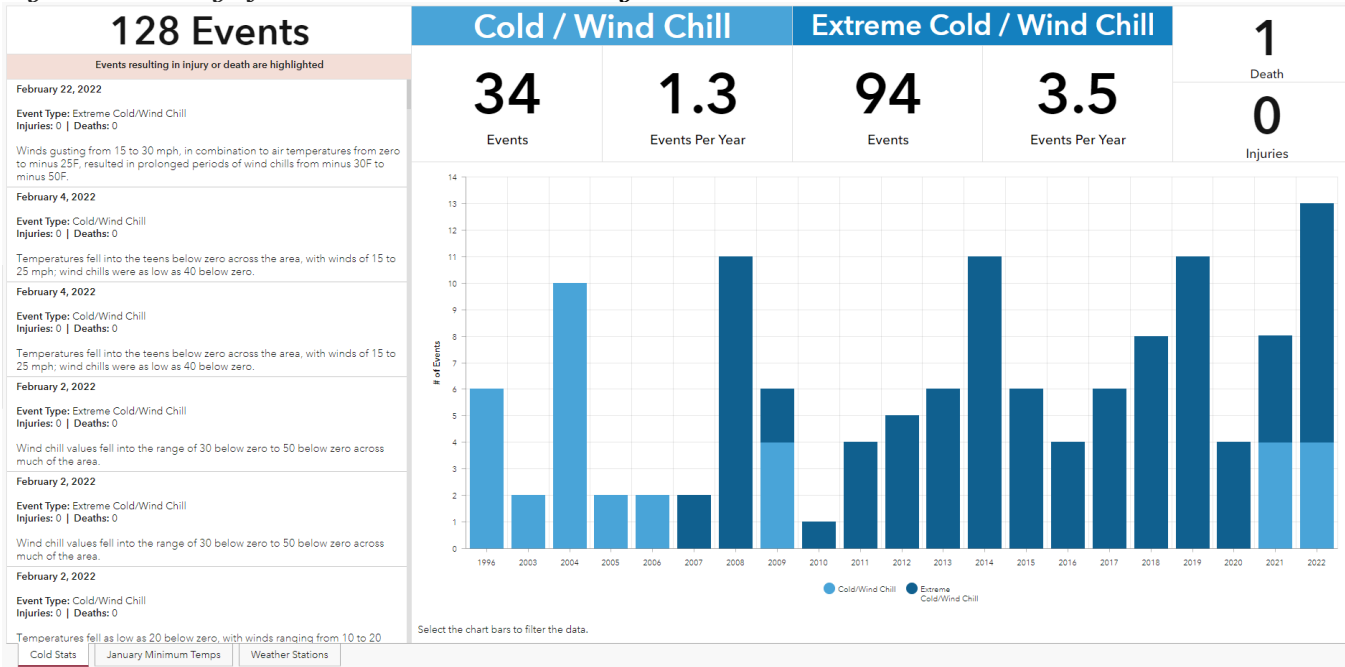
To determine the probability of future cold-related events in Polk County, records of previous cold/wind chill and extreme cold/wind chill events were summed and divided by the dataset’s period of record, resulting in the annual relative frequency. Based on records in the NCEI Storm Events Database through January 2020, the relative frequency of extreme cold-related events in Polk County is 3.5 per year. (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 the county. Citizens living in climates such as these must always be prepared for situations that put their lives or property at risk. The youngest and more elderly citizens, homeless persons, individuals with chronic medical conditions, and those who are working or recreating outdoors are most at risk for frostbite and hypothermia (MDH, 2021)

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

Figure 6. History of extreme cold in Polk County



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

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

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

### 4.6.3 PROGRAM GAPS AND DEFICIENCIES

Polk 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.

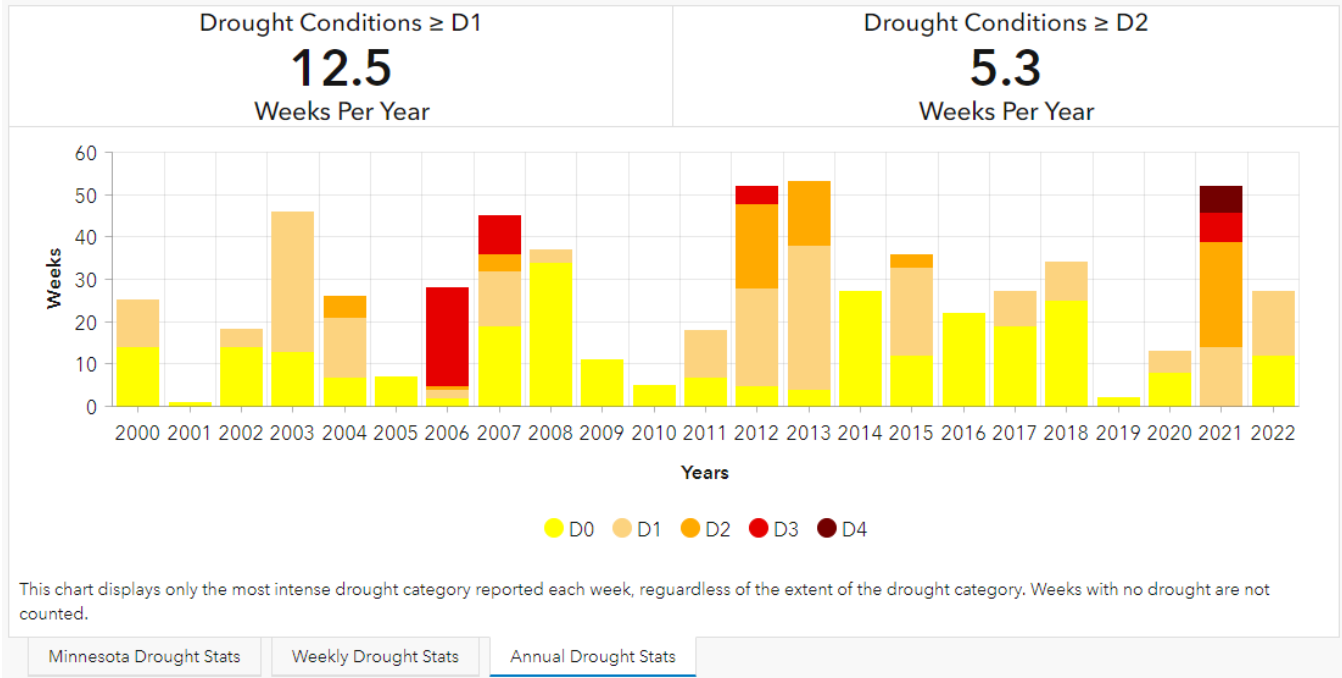
**Public Education:** Ongoing public education is needed to encourage residents to be prepared for extreme weather, including power outages during periods of extreme cold.

## 4.7 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 7; an interactive version of this dashboard can be found on the Polk County HMP website.

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

Figure 7. Annual drought statistics in Polk County since 2000



### 4.7.1 PROBABILITY OF OCCURRENCE

To determine the probability of future droughts in Polk 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, 2022 for any occurrence of drought  $\geq$  D1 in Polk County, regardless of the duration of the drought. According to the weekly reported data, the relative frequency of the county experiencing drought conditions  $\geq$  D1 is 12.5 weeks per year, and the relative frequency of drought conditions  $\geq$  D2 is 5.3 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.

### 4.7.2 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 31 drought incidents impacting seven sectors in Polk County between 2000 and 2022. Since droughts are regional in nature, jurisdictions within Polk County do not vary in their vulnerability to drought; however, the impact from droughts are not equal. Agriculture and Relief, Response, and Restrictions were the two most frequent impacts.

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

According to the DIR, Polk County’s agriculture sector has been impacted by drought more than once, and with 77% of Polk County’s land devoted to cultivated crops (USGS, 2016), the county’s agriculture community is also vulnerable to the economic impact a drought may have on crops. From 1989–2018, Polk County received \$26,728,625 (2018 ADJ) in crop indemnity payments due to drought, placing it as the 24<sup>th</sup>-highest-paid county in Minnesota (CEMHS, 2019). Section 3.4 provides jurisdictional responses of localized vulnerabilities to specific hazards.

### 4.7.3 PROGRAM GAPS AND DEFICIENCIES

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

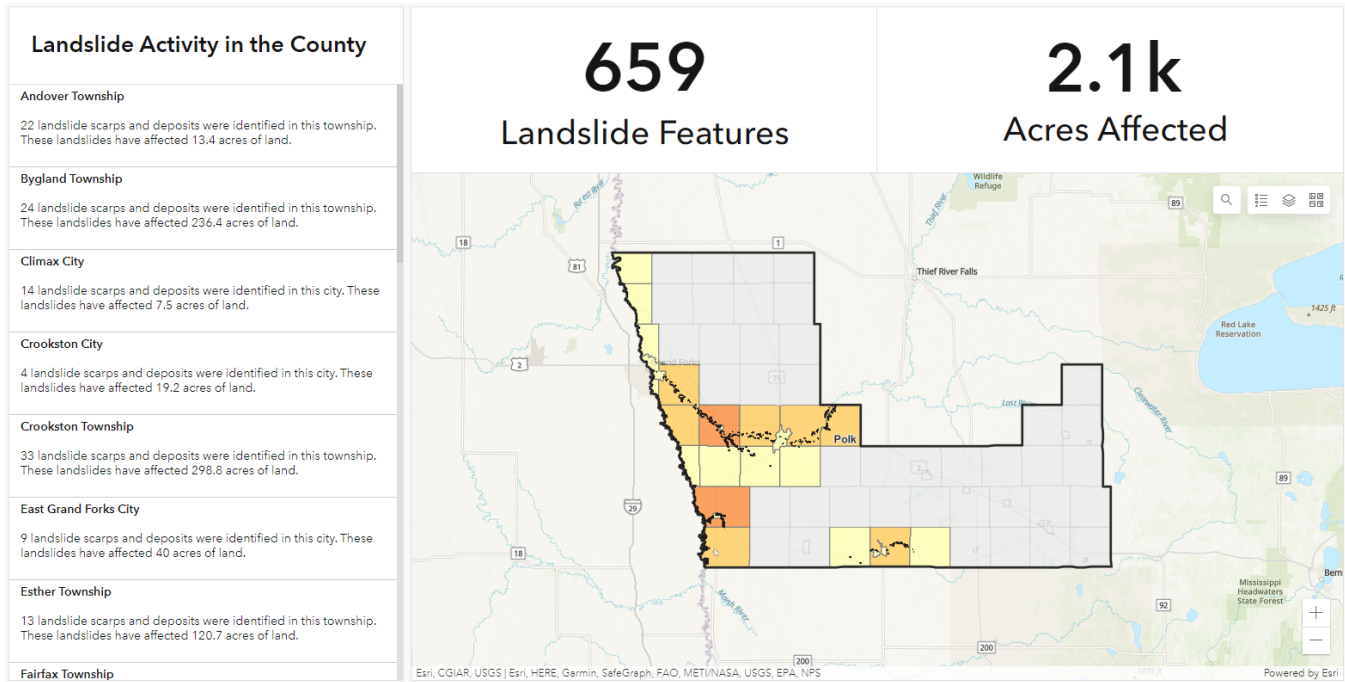
## 4.8 Landslides

The movement of a mass of rock, debris, or earth down a slope by the force of gravity is considered a landslide. They occur when the slope or soil stability changes from stable to unstable, which may be caused by earthquakes, storms, erosion, fire, or may be the result of severe thunderstorms; however, landslides also take place over time and often take place when no natural disaster is evident. The history of landslides in Polk County is shown in Figure 8; an interactive version of this map can be found on the Polk County HMP website.

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



Figure 8. History of landslides in Polk County



A recent multi-agency and multi-institutional effort by the U.S. Geological Survey, the Freshwater Society, and several academic institutions resulted in an inventory of landslides in many of the most landslide-prone parts of Minnesota (DeLong, S.B. et al., 2021). Landslides in Polk County were mapped using lidar derivatives and have not all been evaluated in the field by geologists or engineers. In Polk County, 659 features were mapped, totaling over 2100 acres.

Slope failures have affected Polk County roads, farm fields, and structures. Although these events are not recorded in an event database as with other natural hazards, they are known to be relatively common in the Red River Valley due to soils that have high shrink–swell properties. Smectitic soils include a group of clay minerals that expand when they absorb large quantities of water. Where the sediments are unconfined, their high plasticity leads to slope instability; the valley and channel walls of the Red River and its tributaries are particularly prone to slope failure. Schwert provides many examples of structures constructed in areas of risk (Schwert, 2003).

Polk County has a history of land subsidence (vertical sinking of land) that results in effects similar to landslides for the purposes of this plan. According to the 2007 Polk County Hazard Mitigation Plan, on September 4, 2003, sections of land under seven homes and a motel collapsed in Crookston. Damage was done to the housing units and to the foundations of the homes—eventually the homes and motel had to be demolished. Subsidence also occurred in Crookston in 1933 and 1949. Highway 2 remains in danger of future subsidence risk.

#### 4.8.1 PROBABILITY OF OCCURRENCE

To determine the frequency of landslides in Polk County, we require records of previous landslides and the period in which they occurred. Comprehensive data for historical landslide events are not available. Statewide and national maps suggest that landslide risk in Polk County is relatively low,

however, local information indicates high risk along river bluffs. The likelihood of increased heavy rains also makes landslide prone areas more likely to slide, and increased drought may contribute to subsidence. There is a documented increase in frequency of the heaviest 1% of extreme precipitation events (Climate Adaptation Partnerships, 2022). These extreme rain events are the most likely to cause landslides. Although the risk to infrastructure and property in Polk County is low, landslides remain a moderate concern to Polk County Emergency Management.

#### 4.8.2 VULNERABILITY

Once an extensive glacial lake, the Red River valley in northwestern Minnesota is full of fine sand, silt, and clay were deposits. The Red River and its tributaries cut in the flat lake plain, leaving steep slopes forming steep slopes that are prone to landslides (DeLong, S.B., C. Jennings, K. B. Gran, 2022). The historical landslide and landslide prone areas all were mapped in the valleys of the Red River of the North, the Red Lake River, and tributaries to these rivers such as the Clearwater River, Burnham Creek, Sand Hill River, and some unnamed tributaries. Fisher, Tynsid, Huntsville, Fisher, Crookston, Bygland, and Vineland Townships each have more than 150 acres of land affected. In Fisher Township, several rivers come together, all landslide prone. Human life and safety, structures, and infrastructure are all vulnerable to landslides in these areas.

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

#### 4.8.3 PROGRAM GAPS AND DEFICIENCIES

Polk County Emergency Management identified that there are existing program gaps and deficiencies that make its residents more vulnerable to landslides that should be addressed with new mitigation efforts to reduce vulnerability. These include:

*County Road Erosion Risk Concerns:* Overall the risk for landslides across the county is considered low. However, there is a county road along the Red River of the North that may have some risk concerns.

### 4.9 Dam & Levee 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).

Similar to dams, levees in Minnesota are regulated by various federal, state, and local entities that own the levee. While the USACE has designed and built many of the levees in the U.S., the USACE is only responsible for the maintenance of federally owned levees in the USACE system.

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

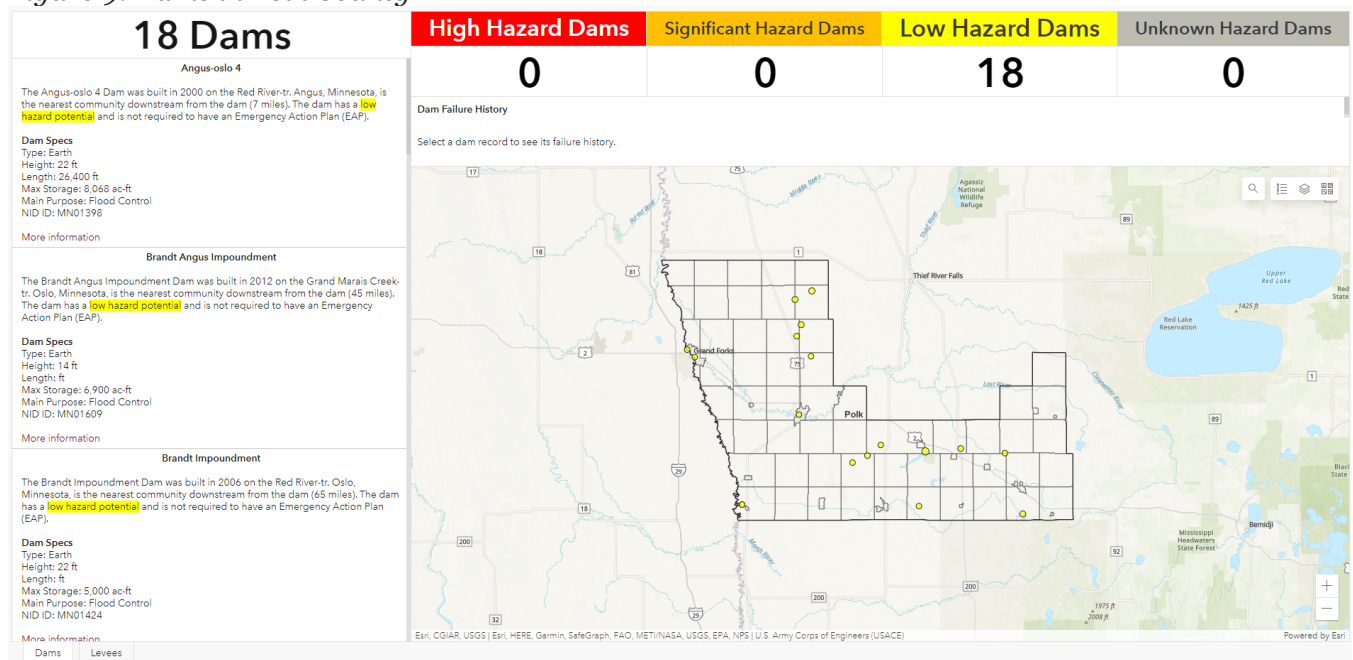
## Dam & Levee Inventory

There are 18 dams in Polk County, all of which are low hazard potential dams. Dams are mapped in Figure 9; an interactive version of this map is available on the Polk County HMP website.

There are eight levees (25 miles) in Polk County. The City of Crookston Levee Ash Street Road Raise on the Red Lake River in Crookston shown on the [interactive map](#), is not listed as a separate levee in Polk County. The East Grand Forks Levee system includes two moderate risk levees. According to the National Levee Database, USACE conducted a risk assessment on the levee system in 2016 and found there is a low potential for the levee and floodwalls to breach due to performance issues. The moderate system risk was driven by the consequences (life loss, economic damages) associated with the leveed area.

Crookston’s low risk levee system is certified to protect water levels up to 31 feet, a height that was threatened in the Spring of 2022 when the Red River reached 27 feet for the first time since 1997.

Figure 9. Dams in Polk County



### 4.9.1 PROBABILITY OF OCCURRENCE

In the spring of 1983, the earthen emergency spillway of the Odney Flaat Wildlife Impoundment washed out during flooding following a heavy rainstorm. This was a newly constructed dam and an erosion resistant vegetative cover had not been established on the emergency spillway. The dam has recently been repaired and the emergency spillway relocated.

Extreme precipitation is only one factor contributing to dam and levee failure, and the possibility of failure is dam specific, relating to both environmental and structural conditions. There are few incidents of dam failure in Minnesota and the likelihood of a dam failure in Polk County is very low. Dam failures are extremely unlikely if the dam is maintained in compliance with Minnesota’s Dam Safety Program. The levees in Polk County present a more moderate risk, due to the proximity of surrounding structures, however levee failure is also extremely rare, and the likelihood of failure in Polk County is also very low.

### 4.9.2 VULNERABILITY

Although dam regulatory authorities differ between various federal and state agencies, all authorities attempt to classify dams according to the potential impacts from a dam failure or mis-operation. In response to the numerous classification systems, FEMA’s Interagency Committee on Dam Safety created a downstream hazard potential classification system that is adaptable to any agency’s current system. Table 8 provides an overview of the main criteria agencies consider when determining a dam’s downstream hazard potential. This classification system does not imply that the dam is unsafe, but rather categorizes dams based on the probable loss of human life and the impacts on economic, environmental, and lifeline interests (FEMA, 2004). 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 the dams in Polk County are a Class III (low hazard potential), and Emergency Action Plans (EAP) are available for these dams.

*Table 8. Downstream hazard potential classification criteria*

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

SOURCE: (USACE, 2008)

Similar to dams, levees have a Levee Safety Action Classification (LSAC) “...designed to take into account the probability of the levees being loaded, existing condition of the levee, the current and future maintenance of the levee, and the consequences if a levee were to fail or be overwhelmed (USACE, 2020a).

The levees in Polk County are used to regulate water levels and protect communities from flooding. A breached levee can have serious consequences to the community relying on the levee to hold water back. Table 9 provides a summary of the county’s levees and community assets protected by the respective levee. Section 3.4 provides jurisdictional responses of localized vulnerabilities to specific hazards.

*Table 9. Assets in leveed areas*

Levee Name	Location	LSAC Rating	Property Value	Structures at Risk	Population at Risk
Aitkin Unincorporated Levee	Aitkin Township, Aitkin City	Not Screened	\$17,348,953	70	135
Mississippi River Diversion near Aitkin	Second Assessment Unorg Terr, Aitkin Township	Not Screened	\$2,528,833	10	10

SOURCE: (USACE, 2020B)

### 4.9.3 PROGRAM GAPS AND DEFICIENCIES

Polk County Emergency Management did not identify any program gaps or deficiencies that make its residents 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 Polk County as related to hazard mitigation.
- Appendix C: As part of the Polk County HMP update, the county and city governments were asked to participate in filling out a “Local Mitigation Survey” (LMS) form to report on their current mitigation capabilities and program gaps. Appendix C provides the LMS reports gathered for Polk County.

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

### 5.1.1 NATIONAL FLOOD INSURANCE PROGRAM (NFIP)

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

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

*Table 10. NFIP participation in Polk County*

Community Name	Participation in the NFIP	FEMA Map	Description of Participation
Polk County	Participating	FEMA-mapped high-risk areas	Polk County’s Planning & Zoning Department maintains the floodplain management ordinance and floodplain maps for the county. Section 17 – Floodplain Overlay District of the Polk County Zoning Ordinance establishes regulations for permitted uses and regulations for new development. 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 Polk County. The Planning and Zoning Office can assist county residents in determining whether their property is affected by an officially mapped flood area.
Beltrami	Participating	FEMA-mapped high-risk areas	The city noted that they were unaware of the NFIP program or that the city was participating in the NFIP. The city was put in touch with the state NFIP coordinator to learn about their official mapped floodplain and how to get enrolled in the NFIP.
Climax	Participating	FEMA-mapped high-risk areas	The city enforces requirements of the NFIP through Ordinance #1997-1 Floodplain Management in the city’s code of ordinances. This chapter regulates development in the flood hazard areas of the city.
Crookston	Participating	FEMA-mapped high-risk areas	The city enforces requirements of the NFIP through Chapter 33: Special Service Districts, Subchapter Flood Control District, sections 33.01 – 33.03 in the city’s code of ordinances. This chapter regulates development in the flood hazard areas of the city.
East Grand Forks	Participating	FEMA-mapped high-risk areas	The city is working with the MN DNR to develop an updated floodplain ordinance. The entirety of the city is in the flood protection system constructed in 2000 by the Army Corps of Engineers flood risk reduction project, but there are FEMA mapped floodplain areas outside of this area.
Erskine	Not Participating	No FEMA-mapped high-risk areas	The city does not have a FEMA map and is not participating.

Community Name	Participation in the NFIP	FEMA Map	Description of Participation
Fertile	Not Participating	FEMA-mapped high-risk areas (annexed & mapped on preliminary maps)	The city noted they do not participate in the NFIP because “The city is located mostly outside of the floodplain and the only vulnerable assets are city owned on the far western edge of the city.” The city was put in touch with the state NFIP coordinator to learn about their official mapped floodplain and how to get enrolled in the NFIP.
Fisher	Participating	FEMA-mapped high-risk areas	The city noted that they were not aware that they were participating in the NFIP and did not know why they were listed as participating. The city was put in touch with the state NFIP coordinator to learn about their official mapped floodplain and how to get enrolled in the NFIP.
Fosston	Not Participating	FEMA-mapped high-risk areas (annexed & mapped on preliminary maps)	The city noted that they were not aware of the NFIP and not sure why the city was not participating. The city was put in touch with the state NFIP coordinator to learn about their official mapped floodplain and how to get enrolled in the NFIP.
Gully	Not Participating	No FEMA-mapped high-risk areas	The city does not have a FEMA map and is not participating.
Lengby	Not Participating	No FEMA-mapped high-risk areas	The city does not have a FEMA map and is not participating.
McIntosh	Participating	FEMA-mapped high-risk areas	The city noted that they were unaware that the city has FEMA mapped high risk areas or that the city was participating in the NFIP. The city was put in touch with the state NFIP coordinator to learn about their official mapped floodplain and how to get enrolled in the NFIP.
Mentor	Participating	FEMA-mapped high-risk areas	The city enforces requirements of the NFIP through “Floodplain Management Ordinance” adopted October 17, 2002 in the city’s code of ordinances. This chapter regulates development in the flood hazard areas of the city.
Nielsville	Participating	FEMA-mapped high-risk areas	The city has a floodplain ordinance in place that was adopted May 19, 2000. The City Council oversees compliance with the ordinance.
Trail	Not Participating	No FEMA-mapped high-risk areas	The city does not have a FEMA map and is not participating.
Winger	Not Participating	FEMA-mapped high-risk areas	The city noted that they are not in a floodplain and do not participate in the NFIP. The city was put in touch with the state NFIP coordinator to learn about their official mapped floodplain and how to get enrolled in the NFIP.



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.

Polk County has 12 RL properties and three SRL properties (two of which were NFIP-designated SRL properties). Of the 15 total properties, 14 are single-family homes, and one is classified as “Other Non-Residential.”

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

## 5.1.2 PLANS AND ORDINANCES

Polk 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

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

### **All Hazards**

*All Hazards Emergency Operations Plan:* Polk 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:* Polk County maintains the Everbridge Emergency Notification System which allows residents and visitors to sign up (“opt-in”) to receive severe weather alerts

targeted to their location, along with other local emergency alerts. A link to sign up for the system is located on the Polk County website.

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

*Preparedness Outreach & Public Education:* Polk County utilizes the Polk County website, Polk County Sheriff's Office/Emergency Management Facebook page and local news media to communicate with residents and visitors on emergency preparedness.

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

*NOAA Weather Radios:* Polk 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:* Polk County/Polk County Emergency Management 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 Polk County Sheriff's Office and the Northwest Regional Corrections Center.

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

*Public Education:* Polk 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 Polk County Public Works 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 Polk County Public Works 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, Everbridge Emergency Notification System, cell phone apps, and the outdoor warning siren system. Polk County redistributes all outlook, watch, advisory, and warning statements issued by the NWS.

*Outdoor Warning Sirens:* There are 27 outdoor warning sirens located in Polk County which are tested on a monthly basis by the Polk 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 municipality where they are located. Most of the sirens can be remotely activated by the Polk County Sheriff's Office.

*Skywarn Program:* Polk 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:* Polk 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:* Polk County Public Works Department and local utility providers regularly maintain and clear their right of ways of trees, vegetation, and debris to prevent the creation of additional hazards or blocking road/site access resulting from severe spring and summer storm events.

*Manufactured Home Parks Shelters & Evacuation Plans:* Shelter and evacuation plans are developed with the assistance and approval of the municipality where the park is located as per the requirements of MN Statute 327.20.

## **Wildfire**

*Emergency Notifications:* The National Weather Service helps to put out information on wildfire conditions via NOAA weather radios. In events of wildfire, Polk County Emergency Management works with local law enforcement, local fire departments, and partner agencies (MN DNR, U.S.

Fish and Wildlife Service) to get the word out on wildfire conditions and safety measures via their public information centers, websites, and social media.

*Local Fire Departments/Mutual Aid:* Local fire departments throughout the county are responsible for wildfires within their department boundaries and work together through mutual aid agreements on larger fires, including wildland fires.

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

## **Extreme Cold**

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

*Extreme Cold Safety Awareness:* Polk County Emergency Management and Polk County Sheriff's Office promote public awareness of personal safety measures to take during periods of extreme cold, such as minimizing exposure and being prepared with survival kits in vehicles during winter.

## **Drought**

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

*East Polk / West Polk County Soil and Water Conservation Districts:* The East Polk and West Polk County Soil & Water Conservation Districts provide 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.

*Polk County Water Plan:* The Polk County Water Plan (2017) is written and overseen by the East Polk Soil & Water Conservation District and the West Polk Soil & Water Conservation District and is updated every 5 years. In relationship to drought, the plan includes a primary concern area of Groundwater and identifies actions to work with local units of government to limit land uses that threaten groundwater and to encourage water conservation through use of low-pressure irrigation systems to conserve groundwater.

## **Landslides**

*East Polk / West Polk Soil and Water Conservation Districts:* The East Polk and West Polk Soil and Water Conservation Districts provide access to natural resource management and conservation services and provides technical, financial, and educational assistance to landowners to address natural resource concerns. The SWCDs manage a Cost Share Program to fund practices

for erosion control, sedimentation control, or water quality improvements designed to protect and improve soil and water resources.

## **Flooding**

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

*Floodplain Ordinance and Mapping:* Polk County's Planning & Zoning Department maintains the floodplain management ordinance and floodplain maps for the county. Section 17 – Floodplain Overlay District of the Polk County Zoning Ordinance establishes regulations for permitted uses and regulations for new development. 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 Polk 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:* Polk County Zoning Ordinance Section 18 – Shoreland Overlay District establishes regulations for development near shorelands including stormwater management.

*Transportation Improvement Plan:* Polk County Public Works Department maintains a 5-year Transportation Improvement Plan that identifies and schedules road improvement projects that include measures for flood mitigation. The current TIP is for 2019-2023.

*Buffer Law:* Polk 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.

*Polk County Water Plan:* The Polk County Water Plan (2017) is written and overseen by the East Polk Soil & Water Conservation District and the West Polk Soil & Water Conservation District and is updated every 5 years. The plan identifies the primary water planning concerns, which include goals, objectives, and identified actions for Flood Damage Reduction/Water Quality in the county.

*One Watershed One Plan:* East Polk Soil & Water Conservation District and the West Polk Soil Conservation District oversee and manage One Watershed One Plans in the Watersheds of Polk County such as: Red Lake River, Middle-Snake-Tamarac Rivers, Wild Rice-Marsh, Sand Hill River and the Clearwater River Watersheds; These plans identify primary water planning concerns which includes goals, objectives and implementation of practices for Flood Damage Reduction/Water in the county.

*Watershed District Partnerships:* Polk County works in partnership with four watershed districts within the county: Sand Hill Watershed District, Red Lake Watershed District, Middle-Snake-Tamarac River Watershed District, and Wild Rice Watershed District. Each of these bodies has involvement in regional planning and projects to reduce the impact of high rain events and resulting localized flooding and erosion.

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

*Table 11. Mitigation strategies and action types*

Mitigation Strategy	Description	Example Mitigation Actions
Local Plans and Regulations	These actions include government authorities, policies, or codes, that influence the way land and buildings are developed and built.	<ul style="list-style-type: none"> <li>• Comprehensive plans</li> <li>• Land use ordinances</li> <li>• Planning and zoning</li> <li>• Building codes and enforcement</li> <li>• Floodplain ordinances</li> <li>• NFIP Community Rating System</li> <li>• Capital improvement programs</li> <li>• Open space preservation</li> <li>• Shoreline codes</li> <li>• Stormwater management regulations and master plans</li> </ul>
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"> <li>• Acquisitions and elevations of structures in flood prone areas</li> <li>• Utility undergrounding</li> <li>• Structural retrofits</li> <li>• Floodwalls and retaining walls</li> <li>• Detention and retention structures</li> <li>• Culverts</li> <li>• Safe rooms</li> </ul>
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"> <li>• Sediment and erosion control</li> <li>• Stream corridor restoration</li> <li>• Forest management</li> <li>• Conservation easements</li> <li>• Wetland restoration and preservation</li> </ul>

Mitigation Strategy	Description	Example Mitigation Actions
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"> <li>• Radio or television spots</li> <li>• Websites with maps and information</li> <li>• Real estate disclosure</li> <li>• Presentations to school groups or neighborhood organizations</li> <li>• Mailings to residents in hazard-prone areas.</li> <li>• StormReady Certification</li> <li>• Firewise Communities</li> </ul>
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"> <li>• Emergency operations plan</li> <li>• Flood fight plans and preparedness</li> <li>• Dam emergency action plans</li> <li>• Warning</li> <li>• Backup power</li> <li>• Emergency capabilities</li> </ul>

Local leaders work together with the Polk County emergency management director to assure that the hazards and mitigation actions included in this plan are accurate and addressed in their jurisdictions. Development of mitigation actions for the county and each city was informed by a community’s hazard and risk assessment; identification of local vulnerabilities, and review of capabilities in place to address mitigation. Planning team members, local elected officials and staff from Polk 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 Polk 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 Beltrami, Climax, Crookston, East Grand Forks, Erskine, Fertile, Fisher, Fosston, Gully, Lengby, McIntosh, Mentor, Nielsville, Trail, and Winger.

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 11 for a description of each mitigation strategy and related types of actions.

## Mitigation Action

Each mitigation action provides a concise, action-oriented description of the action or project to be undertaken. If a mitigation 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 Polk 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 of mitigation actions by priority for implementation. Table 12 provides criteria that were taken into consideration in the process.

*Table 12. Criteria for Mitigation Action Priority Ranking*

Ranking	Criteria
High Priority	<ul style="list-style-type: none"><li>• Methods for reducing risk from the hazard are technically reliable.</li><li>• The County has experience in implementing mitigation measures.</li><li>• Mitigation measures are eligible under federal grant programs.</li><li>• There are multiple mitigation measures for the hazard.</li><li>• The mitigation measure(s) are known to be cost effective.</li><li>• The mitigation measures protect lives and property for a long period of time, or are permanent risk reduction solutions.</li></ul>

Ranking	Criteria
Moderate Priority	<ul style="list-style-type: none"> <li>• Mitigation methods are established.</li> <li>• The County has limited experience with the kinds of measures that may be appropriate to mitigate the hazard.</li> <li>• Some mitigation measures are eligible for federal grants.</li> <li>• There is a limited range of effective mitigation measures for the hazard.</li> <li>• Mitigation measures are cost-effective only in limited circumstances.</li> <li>• Mitigation measures are effective for a reasonable period of time.</li> </ul>
Low Priority	<ul style="list-style-type: none"> <li>• Methods for reducing risk from the hazard are not well-established, are not proven reliable, or are experimental.</li> <li>• The State or Counties have little or no experience in implementing mitigation measures, and/or no technical knowledge of them.</li> <li>• Mitigation measures are ineligible under federal grant programs.</li> <li>• There is a very limited range of mitigation measures for the hazard, usually only one feasible alternative.</li> <li>• The mitigation measure(s) have not been proven cost effective and are likely to be very expensive compared to the magnitude of the hazard.</li> <li>• The long-term effectiveness of the measure is not known or is known to be relatively poor.</li> </ul>

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

*Table 13. Polk 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 Everbridge emergency notification alert system.	Existing High 2023-2028	Polk County Emergency Management (PCEM)	A link for Everbridge Mass Notification System is located on the Polk County website under the Sheriff’s Office/Emergency Management page. The public is also reminded and encouraged to sign up during the NWS Severe Weather Awareness Week.	County
2	All-Hazards	Mitigation Preparedness & Response Support	Ensure the Polk 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	PCEM	PCEM maintains an all-hazards EOP which lays out concepts and operating guidelines for all incident management and support functions that may be needed to ensure life safety, incident stabilization, and property preservation during an incident and the transition to recovery.	County
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	Polk County Social Services	In partnership with the American Red Cross, Polk County Social Services 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. Polk County Social Services maintains a list of shelters within the county and has trained staff prepared for shelter operations.	County

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
4	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and periods of extreme cold. Coordinate with local jurisdictions to share information locally.	Existing High 2023-2028	PCEM in coord with Local Gov't	PCEM participates in and promotes the NWS Severe Weather Awareness Weeks in spring and fall each year. We also promote residents to be prepared for emergencies, to have NOAA weather radios, and to sign up for the county's Everbridge system and Sheriff's Office/Emergency Management Facebook page to receive emergency notifications and other information. PCEM shares information with local governments and encourages them to use their communication platforms to keep residents informed.	County
5	Severe Winter & Summer Storms	Structure & Infrastructure Systems	Work with municipalities / rural electric coops to encourage them to address burying powerlines or strengthening power poles to avoid power outages from high wind events and storms.	Existing High 2023-2028	PCEM in coord with Local Gov't and Rural & Municipal Utility Coops	Otter Tail Power, Red Lake Electric Co-Op, PKM Electric Co-Op, Wild Rice Electric Co-Op, Clearwater-Polk Electric Co-Op continue to address where power lines can be strengthened or buried underground. PCEM will assist as needed with future applications to FEMA for eligible projects to reduce risk of power outages by these coops.	Electric Coops, FEMA HMA grant
6	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	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	PCEM in coord with Local Gov't	PCEM 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
7	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	Polk County Public Works in coord with local utility providers	Polk County Public Works Department and local utility providers regularly maintain and clear their right of ways of trees, vegetation, and debris to prevent the creation of additional hazards or blocking road/site access resulting from severe spring and summer storm events.	County
8	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	PCEM, in coord with Schools & Other Facilities	This is an ongoing element of PCEM's emergency management program. PCEM encourages such facilities and the jurisdictions in which they are located to work on plans for emergency evacuations and power outages.	County, Local Facilities
9	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	PCEM in coord with NWS & Local Gov't	PCEM works with the National Weather Service 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
10	Severe Summer Storms	Structure & Infrastructure Projects	Address the need for storm shelters and outdoor warning sirens at Cross Lake-Tillberg Park and Polk County Park.	New High 2023-2028	PCEM in coord with PC Public Works	Polk County owns and maintains two campgrounds, one of them needs a warning siren and a storm shelter (Cross Lake-Tillberg Park in Fosston). The other campground (Polk County Park in Mentor) needs a warning siren. PCEM will work with Polk County Public Works, which oversees Parks & Recreation on planning for and addressing these projects. Outside grant funding may be applied for if eligible from USDA / FEMA HMA for warning sirens or tornado safe room projects.	County, FEMA HMA grant funding, USDA CF Grant Program

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
11	Severe Summer Storms	Local Planning & Regulations / Structure & Infrastructure Projects	Provide assistance to local jurisdictions that require purchase & installation of new outdoor warning sirens and ensure they are connected to the county's remote activation system.	Existing High 2023-2028	PCEM in coord with Local Gov't	The county has gaps in its outdoor warning siren coverage. Sirens are owned and maintained by the municipalities. Not all cities are able to fund new or updated sirens. PCEM will assist these 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
12	Severe Summer Storms	Structure & Infrastructure Projects	Provide assistance to communities in addressing the need for the construction of storm shelters or tornado safe rooms in areas where people are vulnerable to high wind or tornadic events.	Existing Moderate 2023-2028	PCEM in coord with Local Gov't	PCEM will provide assistance to help assess need, possible construction options, and assist in applying for possible FEMA grant funding as needed to cities or townships that request assistance to address tornado safe rooms in the community.	County, FEMA HMA, Other (TBD)
13	Drought	Education & Awareness Programs	Conduct public outreach during periods of drought to raise awareness of the dangers of wildland fire.	Existing High 2023-2028	PCEM	In the event of dry periods or official drought conditions, Polk 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. Burn permits for vegetation are available from the Minnesota Department of Natural Resources. In times of high fire danger, burning restrictions are put in place and enforced.	PCEM, Local funding
14	Drought	Local Planning & Regulations	Encourage communities to develop and enforce ordinances for water use restrictions during periods of severe drought.	Existing Moderate 2023-2028	PCEM, MC Planning & Zoning	Polk County will encourage communities to be in compliance with MN DNR watering restrictions when such guidelines are established.	County

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
15	Wildfire	Local Planning & Regulations	Work with the MN DNR Firewise Program to develop a County Community Wildfire Protection Plan (CWPP) for Polk County.	New Moderate 2023-2028	PCEM in coord with MN DNR Firewise	PCEM will seek to work with the MN DNR Firewise Program and local fire departments to conduct a coordinated, comprehensive risk assessment for wildfire risk and targeted wildfire mitigation activities. Funding for development of the CWPP may be sought from the Community Wildfire Defense Grant (CWDG). PCEM and local fire departments encourage residents in high-risk wildfire areas to go through a Level-1 Firewise Assessment for assessing the need for defensible space and to implement mitigation measures to reduce risk. MN DNR Firewise grant funding may be available to assist fire departments in implementing recommended measures to increase defensible space.	County, CWDG
16	Wildfire	Education & Awareness Programs	Encourage private landowners in high-risk wildfire areas of the county to assess and manage their wooded areas to reduce the risk of wildfire.	Existing Moderate 2023-2028	PCEM in coord with local FD's	PCEM and local fire departments encourage residents in high-risk wildfire areas to go through a Level-1 Firewise Assessment for assessing the need for defensible space and to implement mitigation measures to reduce risk. MN DNR Firewise grant funding may be available to assist fire departments in implementing recommended measures to increase defensible space.	County, MN DNR Firewise community grant funding
17	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	PC Planning & Zoning Dept.	Polk County's Planning & Zoning Department maintains the floodplain management ordinance and floodplain maps for the county. Section 17 – Floodplain Overlay District of the Polk County Zoning Ordinance establishes regulations for permitted uses and regulations for new development. Polk County further enforces Zoning Ordinance Section 18 – Shoreland Overlay District, which establishes regulations for development near shorelands including stormwater management.	County

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
18	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	PC Public Works Dept.	Polk County Public Works Department maintains a 5-year Transportation Improvement Plan that identifies and schedules road improvement projects that include measures for flood mitigation. The current TIP is for 2019-2023. Polk County PW Dept. works in coordination with townships on necessary flood and erosion mitigation measures to improve township roads and culverts damaged by high rain events.	County, State, Federal
19	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Work in partnership with the East Polk SWCD and the West Polk SWCD to plan for and address mitigation projects that address erosion and localized flooding.	Existing Moderate 2023-2028	PC Envir. Services Dept. in coord with SWCDs	East Polk SWCD and the West Polk SWCD oversee and manage One Watershed One Plans in the Watersheds of Polk County such as: Red Lake River, Middle-Snake-Tamarac Rivers, Wild Rice-Marsh, Sand Hill River and the Clearwater River Watersheds; These plans identify primary water planning concerns which includes goals, objectives and implementation of practices for flood damage reduction in the county.	County, Local Gov't, SWCD Cost Share Grant Funding
20	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	PCEM in coord with Local Gov'ts	The city of Crookston has expressed an interest to work with willing property owners to buy out 2 homes that are prone to flooding along the Red River. PCEM will assist the city of Crookston and any other communities as needed with potential property acquisition projects and application to FEMA or MN DNR for grant funding to conduct buyouts.	County, MN DNR, FEMA HMA, Local Gov't



#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
21	Flooding / Erosion	Structure & Infrastructure Projects	Work with the Sand Hill River Watershed District to address slope stabilization to the Sand Hill Ditch and potential property acquisition of adjacent public township road that is at risk on the south side of the channel	In-Progress High 2023-2028	Sand Hill Watershed District in coord with PCEM	This is a current priority project of the Sand Hill Watershed District (SHWD). Addressing slope stabilization and drainage improvements of the ditch, as well as moving the road and acquiring the land is a costly endeavor. The SHWD is researching funding to help address the necessary projects, including submission of a Notice of Interest for possible FEMA HMA grant funding. Polk County will provide assistance to SHWD as appropriate as per the role of the county to be involved in planning or project efforts.	SHWD, FEMA HMA grant funding
22	Landslides	Structure & Infrastructure Projects	Work with the West Polk Soil & Water Conservation District, private landowners, and other agencies to address areas of river bank failure/sluff along areas of the Red River of the North.	In-Progress High 2023-2028	West Polk SWCD in coord with Polk County, landowners and other agencies	The West Polk SWCD is currently working with landowners and other agencies such as MN DNR, BWSR, and USACE to address areas of riverbank failure/sluffing/sink along areas of the Red River of the North. Work is underway to assess mitigation strategies to stabilize these areas. FEMA HMA grant funding for slope stabilization may be considered for possible funding for potential bank stabilization measures.	West Polk SWCD Cost-Share Funding, MN DNR, USACE, SWSR, FEMA HMA Grant funding

# Section 6 – Plan Maintenance

## 6.1 Monitoring, Evaluation, and Updating the Plan

The Polk 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 Polk County HMP.

The Polk 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 Polk 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 Beltrami, Climax, Crookston, East Grand Forks, Erskine, Fertile, Fisher, Fosston, Gully, Lengby, McIntosh, Mentor, Nielsville, Trail, and Winger as well as other city elected officials or staff as needed. The Polk 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 Polk County EMD will convene the group to meet on a more regular basis to monitor plan implementation progress and reassess needs and opportunities. This could be done in response to funding cycles of programs that provide resources for hazard mitigation activities. If there is a need for a special meeting due to new developments or a declared disaster occurring in the county, the group will meet to update pertinent mitigation strategies. Depending on Polk 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 Polk 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, Polk 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

Polk 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 Polk County and its jurisdictions (see Appendix H and Section 5.3). The cities of Beltrami, Climax, Crookston, East Grand Forks, Erskine, Fertile, Fisher, Fosston, Gully, Lengby, McIntosh, Mentor, Nielsville, Trail, and Winger 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 Polk 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 Polk 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 Polk 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, Polk County will take the following measures:

- The plan will be posted on the Polk County Emergency Management website for the public to read and provide feedback. Collected feedback will be reviewed and the plan will be amended as necessary.
- Following any major storms or natural disasters, Polk 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 Polk 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 Polk County HMP website provides opportunities for continued public involvement and feedback*

# APPENDICES

**Appendix A – References**

**Appendix B – Adopting Resolutions**

**Appendix C – Local Mitigation Survey Report**

**Appendix E – Past Mitigation Action Review Status Report**

**Appendix F – Planning Team Meetings**

**Appendix G – Public Outreach & Engagement Documentation**

**Appendix H – Mitigation Actions by Jurisdiction**

## **Appendix A – References**

# References

- AirNow. (2021). *Fires and Your Health*. AirNow; AirNow.gov, U.S. EPA. <https://www.airnow.gov/air-quality-and-health/fires-and-your-health>
- AMS. (2004, October 8). *Mobile Homes and Severe Windstorms*. American Meteorological Society. <https://www.ametsoc.org/index.cfm/ams/about-ams/ams-statements/archive-statements-of-the-ams/mobile-homes-and-severe-windstorms/>
- ATSDR. (2020, September 15). *CDC Social Vulnerability Index (SVI)*. ATSDR. [https://www.atsdr.cdc.gov/placeandhealth/svi/at-a-glance\\_svi.html](https://www.atsdr.cdc.gov/placeandhealth/svi/at-a-glance_svi.html)
- CDC. (2021). *Extreme Cold: A Prevention Guide to Promote Your Personal Health and Safety*. <https://www.cdc.gov/disasters/winter/pdf/extreme-cold-guide.pdf>
- CEMHS. (2019). *Spatial Hazard Events and Losses Database for the United States*. Center for Emergency Management and Homeland Security, Arizona State University. <https://cemhs.asu.edu/sheldus>
- Climate Adaptation Partnerships. (2022). *CHaMP Tool*. <https://champ.rcc-acis.org/>
- DeLong, S.B., C. Jennings, K. B. Gran. (2022). *Landslides in Minnesota*. USGS. <https://doi.org/10.3133/fs20223007>
- DeLong, S.B. et al. (2021). *Inventory of landslides in the northwestern, northeastern, southern, and southeastern parts of Minnesota*. USGS. <https://doi.org/10.5066/P94KF6OM>
- Eaton, J. (2014, January 31). Propane Shortages Leave Many U.S. Homeowners in the Cold. *National Geographic*. <https://www.nationalgeographic.com/science/article/140129-us-propane-shortages-leave-homeowners-in-the-cold>
- FEMA. (2004). *Federal Guidelines for Dam Safety: Hazard Potential Classification System for Dams*. <https://www.ferc.gov/sites/default/files/2020-04/fema-333.pdf>
- FEMA. (2015). *National Preparedness Goal*. [https://www.fema.gov/media-library-data/1443799615171-2aae9obe55041740f97e8532fc680d40/National\\_Preparedness\\_Goal\\_2nd\\_Edition.pdf](https://www.fema.gov/media-library-data/1443799615171-2aae9obe55041740f97e8532fc680d40/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. (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#](https://data.web.health.state.mn.us/web/mndata/cold_related_illness#)
- MN DNR. (2020). *Dams and Dam Safety*. MN Department of Natural Resources.  
[https://www.dnr.state.mn.us/waters/surfacewater\\_section/damsafety/index.html](https://www.dnr.state.mn.us/waters/surfacewater_section/damsafety/index.html)
- MN DNR. (2021a). *Drought in Minnesota*. Drought in Minnesota.  
<https://www.dnr.state.mn.us/climate/drought/index.html>
- MN DNR. (2021b). *Wildfires Tracked by Minnesota DNR*. Minnesota Department of Natural Resources. <https://gisdata.mn.gov/dataset/env-wildfires-tracked-by-mndnr>
- MN DNR. (2021c). *Wildfires Tracked by Minnesota DNR*. Minnesota DNR - Division of Forestry.  
<https://gisdata.mn.gov/dataset/env-wildfires-tracked-by-mndnr>
- MN HSEM. (2019). *Minnesota State Hazard Mitigation Plan: Including Recommended Actions for Climate Change Adaptation*. <https://dps.mn.gov/divisions/hsem/hazard-mitigation/>
- MN HSEM. (2022). *Minnesota grant proposals and approved funding for FEMA mitigation funds*. MN Homeland Security and Emergency Management. [by personal communication]
- MPCA. (2018, December 21). *Effects of climate change in Minnesota*. Minnesota Pollution Control Agency. <https://www.pca.state.mn.us/air/effects-climate-change-minnesota>
- Multi-Hazard Mitigation Council. (2019). *Natural Hazard Mitigation Saves: 2019 Report* (p. 658). National Institute of Building Sciences.  
[https://www.nibs.org/files/pdfs/NIBS\\_MMC\\_MitigationSaves\\_2019.pdf](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>



- Pielke, R. (2012, February 2). *Windstorm*. Encyclopedia Britannica.  
<https://www.britannica.com/science/windstorm>
- Pryor, S. C., Barthelmie, R. J., Young, D. T., Takle, E. S., Arritt, R. W., Flory, D., Gutowski, W. J., Nunes, A., & Roads, J. (2009). Wind speed trends over the contiguous United States. *Journal of Geophysical Research*, 114(D14), D14105. <https://doi.org/10.1029/2008JD011416>
- Radeloff, V. C., Helmers, D. P., Kramer, H. A., Mockrin, M. H., Alexandre, P. M., Bar-Massada, A., Butsic, V., Hawbaker, T. J., Martinuzzi, S., Syphard, A. D., & Stewart, S. I. (2018). Rapid growth of the US wildland-urban interface raises wildfire risk. *Proceedings of the National Academy of Sciences*, 115(13), 3314–3319.
- Radeloff, V. C., Mockrin, M. H., & Helmers, D. (2019). *Mapping Change in the Wildland Urban Interface (WUI), 1990-2010, County Summary Statistics*.  
<http://silvis.forest.wisc.edu/data/wui-change/>
- Schwert, D. P. (2003). *A Geologist's Perspective on the Red River of the North: History, Geography, and Planning/Management Issues*. 16.
- Sepic, M. (2017). *In storm season, mobile home park tenants seek better shelter*.  
<https://www.mprnews.org/story/2017/06/14/in-storm-season-mobile-home-park-tenants-seek-better-shelter>
- Smith, A. B. (2022). *2021 U.S. billion-dollar weather and climate disasters in historical context | NOAA Climate.gov*. <http://www.climate.gov/news-features/blogs/beyond-data/2021-us-billion-dollar-weather-and-climate-disasters-historical>
- USACE. (2008). *National Inventory of Dams Methodology: State and Federal Agency Manual*. U.S. Army Corps of Engineers.  
<https://files.nc.gov/ncdeq/Public%20Records%202/DEMLR/NIDmanual2008.pdf>
- USACE. (2020a). *Levee Safety Action Classification (LSAC) Table*. U.S. Army Corps of Engineers.  
<https://www.mvn.usace.army.mil/Portals/56/docs/PAO/LSACs/LSAC%20Table.pdf>
- USACE. (2020b). *National Levee Database*. U.S. Army Corps of Engineers.  
<https://levees.sec.usace.army.mil/#/>
- 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>
- USGS. (2016). *NLCD 2016 Land Cover, Minnesota—Minnesota Geospatial Commons*.  
<https://gisdata.mn.gov/dataset/biota-landcover-nlcd-mn-2016>

## **Appendix B – Adopting Resolutions**

# **Appendix C – Local Mitigation Survey Report**

# Polk County

## Local Mitigation Survey Report

---

### Overview

As part of Polk 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

Polk County	Page 2
City of Beltrami	Page 10
City of Climax	Page 13
City of Crookston	Page 16
City of East Grand Forks	Page 20
City of Erskine <b>(no LMS)</b>	-
City of Fertile	Page 24
City of Fisher	Page 27
City of Fosston	Page 31
City of Gully	Page 35
City of Lengby <b>(no LMS)</b>	-
City of McIntosh	Page 37
City of Mentor	Page 41
City of Nielsville	Page 45
City of Trail	Page 48
City of Winger	Page 51

**POLK COUNTY**

**PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS**

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

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

On June 29, 2018 - (FEMA Disaster 4390) A large-scale squall with tornadic tendencies crossed the Southeast portions of Polk County. Damage began approximately 2 miles WNW of Winger, and then continued eastward and crossed State Highway 2 just ESE of the city of Fosston. The storm event damaged 11 continuous miles of Minnkota’s high voltage power steel towers rated to withstand 115 mph winds. Approximately 79 steel towers were destroyed, and two sub stations were damaged. There were also several spots where wooden power poles were snapped and broken between the cities of Winger and Fosston. Many rural sheds, barns, and houses had chunks of roofing material torn off and had many downed trees. The cities of Winger, Fosston, McIntosh, Erskine, Fertile and many rural homes lost power. The tornado was rated as an EF2 and tracked for approximately 13 miles.

On August 26, 2018 - A tornado touched down near a farmstead southwest of Winger. Numerous barns, sheds, and outbuildings were damaged, along with a portion of the roof from the farmhouse. The tornado continued causing periodic damage to trees before encountering another farmstead 3.5 miles to the northeast that also caused roof damage to a farmhouse. Numerous trees were snapped at that location, along with destroying another outbuilding. Nearby grain bins were rolled off their foundations and tossed 100-200 yards. Additional tree damage occurred before the tornado reached the city of Winger. Numerous houses within the city had roof and siding damage, several grain bins were

destroyed at the local grain elevator, and dozens of trees were uprooted and/or had their trunks snapped. The tornado then tracked several more miles to the northeast before lifting 5 miles west-northwest of Fosston. The tornado was approximately 100 yards wide, rated as an EF-1, peak winds at approximately 110 mph and tracked for approximately 12 miles.

On August 26, 2018 - A second tornado touched down north-northeast of Fosston tracking northeast along County Road 3. Throughout its northeasterly track the tornado touched down intermittently, badly damaging cropland and uprooting and/or snapping over 200 trees. The tornado was approximately 200 yards wide, rated as an EF-1 with an estimated 100 mph peak winds and tracked for approximately 12 miles.

On June 8, 2019 - A tornado touched down just north of the Polk/Norman County line. It tracked northeast breaking large branches off trees and hit a farmstead where it ripped their grain bins off the foundations and wrapped them around nearby farm equipment. Their barn lost parts of its roof and the walls were damaged. The tornado was approximately 160 yards wide, rated as an EF-2 with an estimated 115 mph peak winds and tracked for approximately 3.6 miles.

On September 5, 2019 - A high wind event impacted the cities of Erskine and McIntosh. Numerous buildings within the city of Erskine had roof and siding damage. Many trees were uprooted in the city of McIntosh. An older barn was destroyed along with damage to a nearby seed storage bin west of Erskine. Several wooden power poles were snapped north of the cities of Erskine and McIntosh along county road 35.

On April 5th, 2019 - (FEMA Disaster 4442) Heavy snowfall, strong winds and rapid snowmelt created extensive damage to public infrastructure and private property throughout Polk County. Four cities, 24 townships and 2 county departments incurred over \$580,000.00 in damages due to overland flooding. Polk County was included in the Federal Disaster Declaration DR-4442 for the severe storms, straight-line winds and flooding that took place from March 12, 2019, through April 28, 2019.

Starting March 9th through May 7th, 2020 - (State Disaster 043) Polk County was impacted by overland flooding that created extensive damage to public infrastructure. One city, 23 townships and 2 county departments incurred over \$871,353.00 in damages due to overland flooding.

On March 29, 2021 - (Oxcart Fire) A large grass fire started due to dry conditions and strong winds in Tilden Township. Approximately 15,000 acres of grassland, one outbuilding, some farming equipment and hay bales were consumed by the fire. US Highway 2, Highway 32, and County Road 45 were shut down for most of the afternoon and into the evening due to poor visibility and the rapid spread of the fire moving towards the city of Mentor.

On April 22, 2022 - Polk County was impacted by overland flooding and high river levels that impacted the cities of Crookston, Fisher and East Grand Forks created extensive damage to public infrastructure. Six cities, 31 townships, 2 county departments, 4 watershed districts and 1 public utility have reported in with over \$2,271,200.00 in preliminary damages. This event is currently in recovery phase as of 6/1/22 and is predicted to become a state declaration and could possibly qualify as a FEMA declaration.

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.
<b>Flooding</b>	County, Cities and Township infrastructure have incurred a large amount of damage over the past five years in Polk County. Heavy snow melting and rainfall events have caused flooding, road closures or otherwise impassable road conditions which create temporary loss of access to transportation and creating adverse effects to public safety systems. Spring snowmelt has led to wet/soft road base soils, potentially creating washouts and eroded transportation systems. The flooding has encroached upon and often overtops the county and township roads, wearing away the roadbed, damaging culverts and creating significant erosion.
<b>Windstorms and Tornadoes</b>	<p>Polk County owns and maintains two campgrounds, one of them needs a warning siren and a storm shelter (Cross Lake-Tillberg Park in Fosston). The other campground (Polk County Park in Mentor) needs a warning siren.</p> <p>The county has gaps in its outdoor warning siren coverage. Sirens are owned and maintained by the municipalities. Not all cities are able to fund new or updated sirens. This puts residents and visitors in those areas in higher risk of injury or death.</p> <p>Polk County has a few municipalities with RV camping sites and licensed mobile home parks with extremely limited shelter options. All mobile home parks were licensed prior to the requirement to have an onsite shelter. Their plans involve residents running or driving to a nearby shelter putting them in a higher risk of injury or death situation.</p>
<b>Wildfire</b>	Polk County has had seen an uptick in the amount of grassland fires over the past five years. These fires have impacted infrastructure and increased threats to developed properties and nearby communities.
<b>Landslides</b>	An increase in extremely heavy rains, overland flooding and saturated soils have created landslides and slope failures on our rivers and creek shorelands and to our legal drainage systems backslopes.

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.**

Polk County has implemented the emergency notification and emergency response system Everbridge, and actively promotes this system to residents, visitors, and businesses to receive weather and community emergency alerts. The county has also created an Emergency Management & Sheriff's Office Facebook page to communicate with residents on emergency preparedness.

In recent years, throughout the county many culverts and bridges under public roads have been replaced with properly sized engineered culverts to better meter the flow of water to reduce public road washouts and erosion.

Polk County SWCD monitors for compliance with the MN Buffer Law and Polk County Planning and Zoning office enforces violations of the buffer law.

- 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.**

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

## **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.**

Polk County utilizes the Polk County website, Polk County Sheriff’s Office/Emergency Management Facebook page and local news media to communicate with residents and visitors on emergency preparedness. Polk County maintains the Everbridge Emergency Notification System which allows residents and visitors to sign up (“opt-in”) to receive severe weather alerts targeted to their location, along with other local emergency alerts.

Polk County Emergency Management, in conjunction with the local Fire Departments and the National Weather Service host a training program called SKYWARN Training (also referred to as Storm Spotter) every year in the cities of Fosston, Fertile and Crookston.

- 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?**

A link to sign up for the Everbridge emergency notification system is located on the Polk County website. Polk County also actively promotes the use of NOAA weather radios by local residents, businesses, schools, long term care facilities, government buildings and visitors to receive information from the National Weather Service.

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

Yes. Polk County has FEMA Mapped High Risk Areas and participates in the NFIP. Polk County’s Planning & Zoning Department maintains the floodplain management ordinance and floodplain maps for the county. Section 17 – Floodplain Overlay District of the Polk County Zoning Ordinance establishes regulations for permitted uses and regulations for new development. 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 Polk



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

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

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

The Polk County Public Works Department completes its snow removal process in accordance with the Polk County Public Works Department Snow Removal Policy. MNDOT removes snow from State Highways as well as disperses salt/sand as needed.

Polk County Public Works Department maintains a 5-year Transportation Improvement Plan that identifies and schedules road improvement projects that include measures for flood mitigation. The current TIP is for 2019-2023.

The Polk County Water Plan (2017) is written and overseen by the East Polk Soil & Water Conservation District and the West Polk Soil & Water Conservation District and is updated every 5 years.

Polk County participates in the NFIP and enforces the county's floodplain ordinance that regulates development in mapped flood areas.

Polk County Zoning Ordinance Section 18 – Shoreland Overlay District establishes regulations for development near shorelands including stormwater management.

Polk 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.

East Polk Soil & Water Conservation District and the West Polk Soil Conservation District oversee and manage One Watershed One Plans in the Watersheds of Polk County such as: Red Lake River, Middle-Snake-Tamarac Rivers, Wild Rice-Marsh, Sand Hill River and the Clearwater River Watersheds; These plans identify primary water planning concerns which includes goals, objectives and implementation of practices for Flood Damage Reduction/Water in the county.

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

Polk County staff related to mitigation efforts include the Emergency Management Director and Emergency Management support staff; Public Works Director/County Engineer; Environmental Services Director; and Public Health Director.

Polk County has a strong relationship with the National Weather Service – Grand Forks Office, having access to all live and on-demand briefings, announcements, and educational

opportunities, and contact information for direct collaboration as needed. The county also receives all products/statements issued by the NWS, and in turn shares or incorporates these into its community outreach and public education.

Polk County works closely with the city of East Grand Forks on flood mitigation efforts along the Red River.

Polk County has additionally worked extensively with the Army Corps of Engineers over the years on flood mitigation measures along the Red River.

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

Polk County Emergency Management participates in the annual Winter Hazard Awareness Week and Severe Weather Awareness Week campaigns sponsored by the National Weather Service and Minnesota Department of Homeland Security and Emergency Management. Throughout each week, the county shares information on severe weather that can occur, education on alerts and warning and resources for emergency preparedness.

Polk County maintains the Everbridge Mass Notification System which allows residents and visitors to sign up (“opt-in”) to receive weather alerts targeted to their location, along with local emergency alerts and general situational awareness. The system is capable of sending the alerts by telephone, text message, email or mobile app. The system can also be used to alert everyone in or passing through a community to any qualifying event through the Integrated Public Alert & Warning System (IPAWS). A link for Everbridge Mass Notification System is located on the Polk County website under the Sheriff’s Office/Emergency Management page.

Polk County utilizes its outdoor warning sirens and local media partners for emergency notification and tests the outdoor warning sirens on the first Wednesday of each month.

Polk County Emergency Management utilizes the Polk County Sheriff’s Office Facebook page and local news media to communicate with residents and visitors on emergency preparedness.

Polk County actively promotes the use of NOAA weather radios by local residents, businesses, schools, long term care facilities, government buildings and visitors to receive information from the National Weather Service.

Polk County Emergency Management participates in regional emergency management exercises for HSEM Region 3.

When extreme heat or cold temperature warnings are issued by the National Weather service (NWS), Polk County Emergency Management helps share the information of personal safety and preparedness to stay safe with residents using communication using the county website, Facebook and local news media.

Polk County assesses damages due to erosion and flood damage following a significant rain/flood event to repair/replace or otherwise conduct mitigation measures for areas experiencing repetitive losses (resurfacing, culvert replacement, and bank stabilization).

In the event of drought conditions, Polk 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.

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

In partnership with the American Red Cross, Polk County Social Services 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. Polk County Social Services maintains a list of shelters within the county and has trained staff prepared for shelter operations.

Polk County works in partnership with four watershed districts within the county: Sand Hill Watershed District, Red Lake Watershed District, Middle-Snake-Tamarac River Watershed District, and Wild Rice Watershed District. Each of these bodies has involvement in regional planning and projects to reduce the impact of high rain events and resulting localized flooding and erosion.

**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)**

Otter Tail Power, Red Lake Electric Co-Op, PKM Electric Co-Op, Wild Rice Electric Co-Op, Clearwater-Polk Electric Co-Op

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

Polk County Highway Department, Local Fire Departments and additional county facilities may need emergency backup generators.

**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.**

Identify where generator back-up power is needed for Polk County critical facilities and shelter facilities and acquire generators.

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

Not all Polk County residents are signed up for our Everbridge Emergency Notification System, have NOAA weather radios, or use social media to follow our EM Facebook page to receive

important messages. Ongoing continued public education needs to be done to encourage people to utilize these resources.

Work with local municipalities to address gaps in outdoor warning siren coverage.

Polk County owns and maintains two campgrounds, one of them needs a warning siren and a storm shelter to house people during severe storm events. The other campground needs a warning siren.

Encourage municipal and public utilities to put power lines underground where feasible and as part of new development to reduce power outages.

Provide support to communities to identify where storm shelters or tornado safe rooms are needed, and assist in applying for grant funding if applicable. 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.

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

Some roads, bridges, and culverts within Polk 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. Flood mitigation for county and township roads (i.e., culvert replacements, road repair) is an ongoing need. The county and many of our townships have limited funding for road infrastructure.

Work with the MN DNR Fire Community Wildfire Protection Plan (CWPP) in place. Polk County should consider the opportunity to work with the MN DNR Firewise Program and local fire departments to conduct a coordinated, comprehensive risk assessment for wildfire risk and identify High-Risk Wildfire Areas and targeted wildfire mitigation activities. Having a CWPP in place will also allow the county and communities to be eligible to apply for MN DNR Firewise grant funding for eligible wildfire mitigation activities.

Encourage homeowners living in rural, woodland, high-risk wildfire areas to conduct a Level-1 Firewise assessments with local fire department personnel.

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

Not all our residents are signed up for the county's emergency notification system.

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

Continued efforts are needed to stabilize vulnerable shoreline along our two creeks and rivers that are eroding due to sluffing from saturated soils, high rain events and dry periods.

**PART D: SURVEY PARTICIPANTS**

Jody Beauchane, Emergency Management Director

**CITY OF BELTRAMI**

**PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS**

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

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

On September 19, 2017 there was a tornado that touched down on the north end of town, destroying a shed and spreading the debris all across a field that borders the town.

- 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 & Windstorms	There are several residents in town who do not have basements or storm shelters and so would be at risk in the event of a tornado or windstorm. The

	city does not have a local community storm shelter that would provide a place for these residents.
<b>Blizzards, Winter storms, Thunderstorms</b>	Power outages can and do occur during weather events such as those listed. The city's water supply comes from two municipal wells that are operated by electric pumps. In the event of a power outage that lasts a couple of days to a week, the city could utilize the small generator from the firehall to keep the water pumps operational. If a power outage were to last for several weeks, the city would need to look for resources to keep the water pumps operational.

**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.**

There is currently a small dike in place around the portion of the city that could be the most vulnerable to flooding.

**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.**

Our vulnerability level has not changed.

**PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT**

The purpose of the questions in Part B is to identify what local-level capabilities (strengths or gaps) exist for implementing mitigation in the community.

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

Announcements for the residents of the city are posted at the Post Office. If it is vital information for the residents, we will send out a mailing. The city is part of a Civil Defense Siren program.

**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 do this currently.

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

Response: "No; The council had not heard of this program until the meeting at which we were filling this form out together." / Note – the MN DNR NFIP data for Polk County shows that the city is participating and has FEMA-mapped high-risk areas. The MN DNR Floodplain Manager is following up with the city to provide assistance.

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

The city currently has a contingency plan in place through Minnesota Rural Water and the wellhead protection program. The purpose of this plan is to protect the city's water supply in the event of a natural disaster that could impact it.

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

Our Fire Chief and the volunteer fire department are prepared to assist the community in the event of an emergency.

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

The city participates in a mutual aid program with the surrounding small cities and townships. We help each other in the event of community emergencies.

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

MN Rural Water partners with us by offering guidance and assistance on how best to protect our water system.

**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)**

Ottertail Power Company

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

Yes; the water system and the firehall.

**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 currently owns one small generator that could be used to power the water system. In the event of a large-scale natural disaster, the city would benefit from owning at least two more portable generators to power the Firehall and be used as a back-up to the small generator we own.

The development of an official disaster plan and the ability to educate and inform our residents of that plan is a need that the city has.

Building a designated community storm shelter could be beneficial to the town.

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

We are a small city with limited financial and staff resources. Our city council and staff are all practically volunteers with other jobs and busy lives. Due to this, issues such as local mitigation often get pushed to the back burner. We should develop a long-range plan for dealing with disaster events.

**PART D: SURVEY PARTICIPANTS**

Stephanie Melby, City Clerk/Treasurer  
 Dale Schoenborn, Mayor  
 Angie Whitcomb, Councilmember  
 Mark Langved, Council member  
 Bruce Mosher, Council member  
 Dan Netland, Fire Chief

**CITY OF CLIMAX**

**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	X	Low	No Change
Windstorms	X	Low	No Change
Lightning			
Hail			
Flooding			
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**

We have had no major storm event occur in the past five years.

**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.**

<b>Natural Hazard (please list)</b>	<b>Vulnerability Assessment Describe <u>specific community assets</u> are susceptible to damage or loss from hazard events.</b>
Ice Storms, Blizzards	Much of the city’s municipal electrical service consists of overhead power lines and electrical poles. Those overhead lines and power poles are prone to failure in ice storms and blizzards with heavy snowfall and high winds that may bring down trees and branches.
Windstorms and Tornadoes	We have mobile homes within the city that do not have on-site storm shelters and residents are vulnerable to high wind and tornado events. Many homes in new developments are built on slab with no basement. These residents are at greater risk during severe wind events. The school has been designated as a shelter for these residents to go in the event of severe wind storm events.

**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 2014 the Sand Hill Watershed District worked to buy out 4 flood prone homes for a Community Flood Control Levee.

In 2016 the city rebuilt and moved both sanitary sewer lift stations that were prone to flooding.

In 2017 the city completed a street reconstruction project with MnDOT which included adding more storm sewer and catch basins.

In 2018 a Sewer Improvement Project was done.

We have encouraged business 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 Facebook page to communicate with residents on emergency preparedness.

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

We have not noticed any changes over the past five years that would increase the community’s vulnerability.

## **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 Facebook page. We also post information on bulletin boards at the Post Office, Credit Union and City Hall.

- 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 placed a link to the county's sign-up page in a recent newsletter. The city has no Civil Alert service at this time.

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

Yes, the city has a floodplain ordinance in place (#1997-1) that is enforced.

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

Mobile home residents have been informed that the Climax School is the storm shelter. We have a sump pump ordinance in place to mitigate against overload of the city's I&I system.

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

Our Mayor and Fire Chief are the city's designated Emergency Managers. The city would like to work with the county emergency manager to address upgrade of our warning siren.

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

Our local school practices tornado drills on an annual basis. Each spring and winter we do outreach to encourage residents to maintain their sump pumps to reduce the chances of basement flooding.

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

In 2014 the Sand Hill Watershed District worked to buy out 4 flood prone homes for a Community Flood Control Levee.

In the past, the city has also worked with the SWCD to address erosion issues.

- 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)**

Otter Tail Power Company

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

No.

**PART C: LOCAL MITIGATION PROJECTS**

The purpose of the questions in Part C is to identify specific mitigation activities to reduce risk from future natural hazard events for your jurisdiction, as well any gaps or deficiencies that may be a barrier to mitigation. Mitigation actions should address those hazards identified moderate to high priority to the community. The information will be used to help develop your jurisdiction’s 5-year local Mitigation Action Chart.

**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 upgrade the city’s warning siren radio.

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

**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.

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**

Jacquelyn Voeller, Clerk  
Pamela Berg, Mayor/Emergency Management  
Ronnie Baatz, Councilor  
Brian Evenson, Councilor

**CITY OF CROOKSTON**

**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			
Windstorms	X	Moderate	No change
Lightning			
Hail			
Flooding	X	High	No change
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.**

We had a flood in 2019 and just recently had another flood event.

**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>One or more of our sanitary sewer lift stations is subject to flooding during high rain events. City and fire department personnel have sandbagged the area in the past to prevent flooding into the lift station.</p> <p>We have a few homes along the Red River that have experienced repetitive flooding. The city would like to work with the property owners to buy out these homes.</p> <p>In 2022 we had to place clay dikes to protect our Library and Fire Hall.</p>
Ice Storms, Blizzards	The city has overhead power lines and electrical poles, and 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.
Extreme Cold	Residents are susceptible to dangers from extreme cold, especially if the power goes down during winter storm events. We have experienced frozen water

	services and some residential homes experienced burst pipes from extended extreme cold.
--	---

**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.**

Our Public Works Director is currently working with Engineers to help reduce the risks of high water events.

We also upgraded the city’s outdoor warning siren.

**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 general, we have noticed an increase in more frequent high-rain events in the last 5 years.

**PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT**

The purpose of the questions in Part B is to identify what local-level capabilities (strengths or gaps) exist for implementing mitigation in the community.

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

We use our city website, Facebook, and the local Radio Station.

**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?**

With our current cell phones, they notify us to many different types of alerts. Our city web page and our Facebook page also allows for notifications.

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

Yes, the city participates in the NFIP and has FEMA mapped high-risk areas. We try our best to notify any potential buyers of the flood plain or any other prone areas affected by severe weather.

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

Our Mayor, Department Heads and City Administrator are working on a 20-year plan for our city.

**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, and holds regular Public Safety Committee meetings. We have a city engineer firm and a Public Works Director that address road maintenance issues for flooding (culverts, repetitive flooding). Our Fire Chief has worked with the county emergency manager to address upgrade of our warning siren and local flood issues.

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

Our Fire Chief works with the county to participate in the National Weather Service's annual Severe Winter/Spring Weather Awareness Week by posting severe weather awareness information out on our city Facebook page and web page and our local news media outlets.

**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 and other necessary items to protect and maintain our city. We have also worked closely with the county highway engineer on local flood mitigation projects for roads and the county zoning department.

**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)**

Ottertail and Red Lake Power Cooperative

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

None needed. Our Police, Fire, Arena and City Hall have backup generators.

**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 are currently getting estimates for a new bath house for our campground. (This can also serve as a storm shelter).

The city would also like to buy out 2 homes that are prone to flooding. The city would like to work with the property owners to buy out these homes.

Public education is a standing need and homeowners would benefit from more information on how to be prepared for bad storms and extended power outages.

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

Our city does have its own website and Facebook page, but not all citizens subscribe to these services.

Not all of our residents are signed up for the county’s emergency notification system.

The city needs funding assistance to buy out residential properties that have experienced repetitive loss from flooding.

We need to update our city’s long-range Comprehensive Plan to address considerations for future hazard events such as flooding.

We are small city with limited financial and staff resources to address local mitigation projects.

**PART D: SURVEY PARTICIPANTS**

Ryan Lindtwed, Finance Director

**CITY OF EAST GRAND FORKS**

**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	Increased
Lightning		Moderate	No Change
Hail		Moderate	No Change
Flooding	X	High	Increased
Extreme Cold	X	High	No Change
Extreme Heat		Low	No Change
Drought		Moderate	No Change
Wildfire		Moderate	Increased

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.**

- 2022 Spring Flood
- 2020 Spring Flood
- 2020 Pandemic
- 2019 Spring Flooding
- 2018 Windstorm

**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.
<b>Tornadoes / Windstorms</b>	<p>We have 1 state campground within the city that operates during the summer and fall months with RV's and campers. We are currently using the Fire station as a temporary storm shelter.</p> <p>We also have a trailer home park in the city limits. We do provide a storm shelter for this area although this shelter does not have a generator. We utilize the City Civic Center across the street as the storm shelter, however, it is not up to today's standards for storm shelter minimums.</p> <p>We have an area of homes that do not have basements which are vulnerable to tornadoes and high winds. We do provide a storm shelter for this area. This shelter is marginal and does not have a generator.</p>
<b>Winter storms</b>	Much of the city's municipal electrical service is provided by outside sources via overhead power lines which are vulnerable to ice storms.
<b>Flooding</b>	The frequency of flooding has increased over the last 20 years; however, the flood protection system has mitigated the risk. The flooding causes more "inconvenience" type problems rather than catastrophic damage. Examples include the fact that the ramps leading up the bridges crossing between Grand Forks and East Grand Forks are outside of the protection system and can flood, causing us to go down to one crossing between the cities. Flooding can also damage the Greenway trail system as well as our pedestrian paths and bridges.
<b>Wildfire</b>	Our community has an extensive greenway system which is vulnerable to wildfire which could affect residential homes and city businesses.



- 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.**

Tornadoes / Windstorms – The city has 4 early warning sirens that are used when necessary to alert citizens of dangerous weather. We provide 3 makeshift storm shelters to our vulnerable areas. Our city provides educational information through programs, lecture opportunities and social media.

Flooding - The City is protected from river flooding by an extensive levee system and lift station system, which was built in 2000.

- 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.**

Wildfire – With the growth of vegetation in our greenway and the increased recreational use of our greenway we have an increased potential for wildfire.

## **PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT**

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

We use our city website and Facebook page. We have 4 early warning sirens throughout the city to alert citizens who are outside. We encourage citizens to sign up for the EverBridge alerting system which is a cellular based warning system provided by Polk County.

- 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 website has a link to sign up for the Polk County alerting system.

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

Yes. The city participates in the NFIP but is working with the MN DNR to develop an updated floodplain ordinance. The entirety of the city is in the flood protection system constructed in 2000 by the Army Corps of Engineers flood risk reduction project, but there are FEMA mapped floodplain areas outside of this area.

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

We have completed plans to completely redo our Civic Center which serves as a storm shelter for the mobile home park. This project was in the tax bill to allow East Grand Forks to collect a local sales tax to fund the project, however no tax bills were approved prior to the end of the legislative session. This project is in limbo until such time as the legislature either reconvenes in special session or next legislative session.

**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 municipal utility that is responsible for mitigating against power outages.

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

Our city participates in the National Weather Service's annual Severe Weather Awareness Week by posting severe weather awareness information out on our city Website and Facebook page. Our city also participates in the annual statewide tornado drill. Our local school practices tornado drills on an annual basis.

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

Our Fire and Police Services have mutual aid agreements with other agencies throughout the region. Should our community be overwhelmed by a weather event/natural disaster we would request assistance from regional agencies that may not have been affected to the degree that East Grand Forks was affected.

**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)**

Municipal that purchases power off the grid

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

Yes – Our storm shelters do not have back-up generators. One of our storm shelters (VFW Arena) is a designated alternate care site should area hospitals be overwhelmed. This site does not have a backup generator.

**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 upgrade the city's warning sirens.

We need a storm shelter or tornado safe room constructed at the local campground and trailer park within the city.

We would also like to add backup generators to shelters that need them.

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

Our biggest gap is with sheltering facilities. Shelters that meet today’s standards for both short-term sheltering and mass sheltering in our areas that are vulnerable to tornadoes and wind storms.

**PART D: SURVEY PARTICIPANTS**

Jeff Boushee, Fire Chief / Emergency Manager  
 David Murphy, City Administrator  
 Jason Stordahl, Public Works Superintendent  
 Michael Hedlund, Police Chief  
 Karla Anderson, Finance Director  
 Keith Mykleseth, Water & Light Director

**CITY OF FERTILE**

**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	Moderate	No change
Tornadoes	X	Low	No change
Windstorms			
Lightning	X	Moderate	No change
Hail			
Flooding			
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 2009 we had severe road damage due to spring flooding. Our Nature Center building had to be sandbagged when the water reached the back door of the building. Our sewer force main which crosses under the Sand Hill River also sustained damage and needed to be repaired. In 2019 we sustained damage to one of our outlying city streets (Summit Avenue) due to spring flooding.

**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.
<b>Flooding</b>	Summit Ave. West is the most vulnerable to flood damage from the Sand Hill River. Our sewer force main which runs under the river is also susceptible to damage since this occurred in 2009 during a spring flood event.
<b>Ice Storms, Blizzards</b>	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.
<b>Windstorms and Tornadoes</b>	Our RV campground is active during summer and fall months with RVs and campers and does not have a storm shelter. In addition, many homes in the older parts of town do not have basements or only have crawl spaces. These residents are at greater risk during severe wind events.
<b>Extreme Cold</b>	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.

**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.**

After the flood damage to Summit Avenue in 2009 and again in 2019 the city received mitigation funding through FEMA to apply riprap along the Sand Hill River bank areas that were most susceptible to overflow to avoid further damage to the road by undercutting of the river bank.

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

None

## **PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT**

The purpose of the questions in Part B is to identify what local-level capabilities (strengths or gaps) exist for implementing mitigation in the community.

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

Nothing except to put out notice to residents during periods of extreme cold that we are experiencing increases in frozen water lines and ask that residents trickle their water to keep their service lines open.

- 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?**

Not that I'm aware of.

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

Response: "No. The city is located mostly outside of the floodplain and the only vulnerable assets are city owned on the far western edge of the city." / Note – MN DNR NFIP data for Polk County shows that the city is not participating but has FEMA mapped high-risk areas (annexed & mapped on preliminary maps). The MN DNR Floodplain Manager is following up with the city about the current state of flood mapping for the city and if they should be participating in the NFIP.

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

None

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

The city has an Emergency Management Team which is appointed annually. The team consists of the Fire Chief, Assistant Chief, the Mayor and one Council member as well as the head of Polk County EMS.

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

None

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

The city uses its own budgeted funds for minor damage due to flooding and/or storms.

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)

Otter Tail Power

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

Our nursing home has a backup generator but we should have one that would serve our Community Center (where our city offices are located) and the Fire Hall next door. Our Community Center would also serve as a shelter if needed in an emergency so back up power would be important for that as well.

**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 should make it more well-known where the storm shelters are located in town and also make sure that emergency personnel are in place to open those buildings if they are locked.

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

Our city does not have the means to reach out to all residents in the event of an emergency since we don't have a Facebook page and not all residents (senior citizens primarily) don't have Facebook either.

**PART D: SURVEY PARTICIPANTS**

Lisa Liden, City Administrator  
Kevin Nephew, Public Works Director

**CITY OF FISHER**

**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	Indicate your priority level of each hazard to your community as <u>Low</u> , <u>Moderate</u> , or <u>High</u> . Consider past	Note if you feel the risk has increased, decreased, or had no
----------------	---	--	---

	feel pose risk to your jurisdiction.	events, likelihood of future events, and impacts to community assets.	change over the last 5 years.
Winter Storms (Blizzards, Ice Storms)	X	High	Increased
Tornadoes			
Windstorms	X	Low	No Change
Lightning			
Hail			
Flooding	X	Moderate	Increased
Extreme Cold	X	High	No Change
Extreme Heat			
Drought			
Wildfire	X	Moderate	Slight increase
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.**

April 2022 – We had multiple days of severe rain storms that caused street flooding, basement flooding, and river flooding. Damages to multiple basements in the community as well as to some gravel drives and driveways.

March 2022 – High winds caused many street signs and trees to blow down.

Summer of 2021 – We experienced a high number of brush fires in the area due to the high heat and drought.

**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>One of our sanitary sewer lift stations is prone to flooding during high rain events. City personnel had to do an emergency bypass into the Red Lake so that our lift station could keep up.</p> <p>We have one house along the Red Lake River that has experienced flooding. This was the first that we are aware of – our river did set a new record this year (2022).</p> <p>A portion of the lower part of the city is protected by a certified levy believed to be constructed in 1997/98. Any sanitary and wastewater infrastructure that are located in the 100-year floodplain are susceptible to flooding as well as any structures in the same areas.</p>

<b>Ice Storms, Blizzards</b>	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.
<b>Windstorms and Tornadoes</b>	Some of our residents do not have a basement in case of a tornado.
<b>Extreme Cold</b>	In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold.
<b>Brush Fires</b>	Our local volunteer fire dept had been out to multiple brush fire calls in the past 2-3 years. Many are started by farmers doing a controlled burn that gets away from them. Another issue has been due to local railroad running in the area – creates a spark and catches the dry grass on fire.

**4. Reduction in Vulnerability - Describe any actions your community has taken to reduce vulnerability against future severe weather or disaster events. This can include examples of any work that has been completed or is underway that reduces future risk.**

We currently have 3 generators for our critical facilities. Lift station, church for emergency shelter, and extra backup.

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

None

**PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT**

The purpose of the questions in Part B is to identify what local-level capabilities (strengths or gaps) exist for implementing mitigation in the community.

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

We use our city website and Facebook page. We also post information on bulletin boards at the gas station and at the Post Office.

**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 do this currently.

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

Response: The city does not participate in the National Flood Insurance Program that we are aware of and do not know why we do not participate. / Note - The Polk County NFIP Status sheet shows that the city is participating in the NFIP and has FEMA-mapped high-risk areas. The



city is working with the MN DNR Floodplain Manager to review their participation in the program, current flood risk maps and development of an updated ordinance if needed.

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

We have a sump pump ordinance in place to mitigate against overload of our cities lift station.

We have an emergency safety/fallout shelter at a Church located in Fisher.

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

Our Mayor and Fire Chief oversee the emergency preparedness plans including working with the county to make sure our emergency siren is tested monthly. We have a city engineer and Public Works Director that address road maintenance issues to mitigate flooding issues.

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

Our city works with Ottetail Electric – they oversee the electricity to the city and handle all cutting of overhanging vegetation to power lines. Our city does an active outreach to the residents all year long through Facebook to remind residents of the following: spring flooding, yard waste and clutter, spring and fall cleanup, clearing of chimneys, sewer, and other house exhaust systems, etc.

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

Following memberships: League of Minnesota Cities, Minnesota Rural Water Association, and MPCA, and MDH.

**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)**

Ottertail

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

None needed.

**PART C: LOCAL MITIGATION PROJECTS**

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

We are looking into updating our culvert covers along the levy. This will hopefully aid in reduction in spring flooding and man hours on Levy/dike watch.

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

None.

**PART D: SURVEY PARTICIPANTS**

Charles Getsman, Public Works Director  
Kara Bowen, Clerk

**CITY OF FOSSTON**

**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	Moderate	Increased
Tornadoes	X	High	Increased
Windstorms	X	Moderate	Increased
Lightning			
Hail			
Flooding	X	Moderate	Increased
Extreme Cold	X	Moderate	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.**

In July, 2019 we experienced a major rain event that caused street flooding, basement flooding, storm sewer damage, and overloaded our sanitary sewer system causing the entire system to

back up. We have also seen an increase in high wind events causing tree, utility infrastructure, and property damage.

- 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.
<b>Winter Storms</b>	We have a high population of senior citizens and also low-income residents who are more vulnerable during these events. In recent years we have seen an increase in the amount of snow these storms may bring which has caused trouble for emergency vehicles throughout our city streets.
<b>Extreme Cold</b>	Residents are susceptible to dangers from extreme cold. During these extreme cold events we have experienced frozen water services, burst pipes inside homes, and have had to replace frozen regulators on our natural gas meters which is the home/apartments source of heat.  This has also caused our streets and alleys damage from frost. Because of the extreme cold we have been experiencing we have had a large number of water main breaks which could be contributed to the frost levels we are reaching.
<b>Windstorms and Tornadoes</b>	We have 1 mobile home park within the city that does not have a storm shelter and residents are vulnerable to high wind and tornado events. These mobile homes are also located a long distance from our emergency siren.  We have a new housing development located on the North side of town many of these homes are slab-on-grade which creates a higher risk in these situations. These homes are also located a long distance from our emergency siren.
<b>Flooding</b>	In the past we have seen major rain events that have caused our city streets and residential basements to flood throughout the city. These events have also caused our sanitary sewer system to back up which has caused our sanitary system to become completely backed up.

- 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.**

Over the past five years we have made upgrades to our storm water system in the areas that have given us trouble.

We are also working on a major wastewater improvement plan which would allow us the storage necessary to handle the large volumes of snow and rain.

The city has increased the use of our Facebook page to keep the community informed to the best of our abilities.

- 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 have a new development on the south side of Fosston which would increase the cost of damage due to tornado, wind, or hail. This new development is a long distance from our current emergency warning siren. We have noticed an increase in storms in our area in both the summer and winter seasons. We have a large number of senior living centers in our community which creates a large number of senior residents in one location if there were to be an emergency situation.

## **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 have upgraded our emergency warning system by putting a new siren in service with the hope of putting our old siren to use in another location in town. We make announcements during severe weather season using our Facebook and city 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?**

No – but we can do so through the use of our city newsletter. We need the information from Polk County Emergency Management.

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

Response: “No. Not sure why the city does not participate. Willing to look at this again.” / Note: The NFIP data for Polk County shows that the city of Fosston is not participating but does have FEMA mapped high-risk areas. The city has been put into contact with the MN DNR Floodplain Management Program to learn about

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

We have a 20-year comprehensive plan that was updated in 2020. We did a street improvement survey and have identified the areas in the city that need to be improved and graded each street. The city owns the mobile home park and developed an evacuation plan that didn’t otherwise exist. We have a sump pump ordinance that disallows sump pumps to go directly into the city’s storm water system.

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

Our public works director is our designated emergency manager. Our city council includes a public safety committee. Our city engineer and director of public works address road maintenance issues. We have worked with county officials on emergency management in the

past. We have recently re-established our local police department and plan to involve them on emergency management plan updating.

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

Our schools work to educate children on weather awareness. Our fire department also works with the community. Newsletters include information on severe weather awareness.

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

The city works with the county in areas where the county roads are in city limits.

**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)**

Municipal

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

Yes, we need backup generators for our firehall and our civic center. Both facilities are labeled as storm shelter facilities and do not currently have backup generators in place.

**PART C: LOCAL MITIGATION PROJECTS**

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

A storm shelter at our mobile home park would be a huge benefit as it is on the west end of the city. Our designated storm shelters are in the middle of the city. In the event of a quick storm, residents of the mobile home park would have a difficult time traveling to our storm shelters. Additionally, our designated storm shelters are in need of backup generators.

The city would also like to address the need for an outdoor warning siren(s) to cover the mobile home park and new development on the north side of town that are both located a long distance from the existing siren.

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

Financial costs for backup generators are barriers as well as the financial cost for a storm shelter at the mobile home park.

**PART D: SURVEY PARTICIPANTS**

Cassie Heide, City Administrator  
 Steven Lyseng – Assistant Director of Public Works

**CITY OF GULLY**

**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	Low	No change
Windstorms	X	Low	No change
Lightning	X	Low	No change
Hail	X	Low	No change
Flooding			
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.

None

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

Natural Hazard (please list)	Vulnerability Assessment Describe <u>specific</u> community assets are susceptible to damage or loss from hazard events.
Ice storms, Blizzards	All of the city's municipal electrical service consists of overhead power lines and electrical poles. Those overhead lines and power poles are prone to failure

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

- 4. Reduction in Vulnerability - Describe any actions your community has taken to reduce vulnerability against future severe weather or disaster events. This can include examples of any work that has been completed or is underway that reduces future risk.**

We have encouraged businesses and residents to enroll in the county’s emergency notification system so they will be aware of dangerous storm 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.**

None

**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 post information on bulletin boards at the Community Center and the Post Office.

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

No

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

No, the city does not participate in the NFIP and does not have FEMA mapped high-risk areas.

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

The city works with our mobile home park to inform them on where to evacuate to in times of severe weather.

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

Our City Council includes a Public Safety Committee.

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

None

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

None

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)

Otter Tail Power Company

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

No

**PART C: LOCAL MITIGATION PROJECTS**

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

None.

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

None

**PART D: SURVEY PARTICIPANTS**

Barbara Sellers, City Clerk

**CITY OF MCINTOSH**

**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			
Flooding	X	Low	No Change
Extreme Cold	X	Low	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.**

In June 2019, McIntosh suffered from a strong windstorm that caused a lot of damage to trees, powerlines and roofs.

**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	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	We have 1 mobile home park within the city that does not have a storm shelter and residents are vulnerable to high wind and tornado events.  Our municipal campground is active during summer and fall months with RVs and campers and does not have a storm shelter.
Flooding	One of our sanitary sewer lift stations is prone to flooding during high rain events.  The city's park is prone to flooding due to low terrain and a poor drainage system.
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.
--	---

**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.**

No immediate plans for improvements to streets, sanitary lift stations, or overhead powerlines are in the works. Our city’s Public Works Department is diligent in monitoring and repairing what needs fixing, as well as keeping our culverts and ditches clear.

**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 increase in vulnerability to report.

**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 Facebook page. We also post information on bulletin boards at the Community Center and at the Post Office. We also make announcements on our local radio station during severe weather season.

**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, the city does not do this currently.

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

Response: “No. Due to its low vulnerability, McIntosh does not participate in the National Flood Insurance Program.” / Note – The Polk County NFIP Status sheet shows that the city is participating and has FEMA-mapped high-risk areas. The city is working with the MN DNR Floodplain Manager to learn about their participation in the program, current flood mapping for the city, and updating a city floodplain ordinance if needed.

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

We are constantly looking for ways to reduce the risk of natural hazards in McIntosh. Whether it’s removing trees around powerlines and boulevards or encouraging businesses and residents to limit storm sewer overload during severe weather events.

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

Our City Council, Fire Department and Public Works Department work together to address issues as they arise.

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

In the past, our city works with the county to participate in the National Weather Service's annual Severe Winter/Spring Weather Awareness Week by posting severe weather awareness information through our city's newspaper and through radio ads.

**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.**

Not at this time

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

Other

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

Not 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.**

We have no specific mitigation activities planned at this time.

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

We are a small city with limited financial and staff resources to address local mitigation projects.

**PART D: SURVEY PARTICIPANTS**

Melissa Finseth, City Clerk  
Peter Tranby, Public Works Supervisor

**CITY OF MENTOR**

**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	INCREASED
Tornadoes	X	MODERATE	INCREASED
Windstorms	X	MODERATE	INCREASED
Lightning		LOW	NO CHANGE
Hail		LOW	NO CHANGE
Flooding	X	HIGH	INCREASED
Extreme Cold		MODERATE	INCREASED
Extreme Heat		LOW	NO CHANGE
Drought		MODERATE	INCREASED
Wildfire	X	HIGH	INCREASED
Landslides		LOW	NO CHANGE
Dam Failure		LOW	NO CHANGE

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

IN MARCH 2021 WE HAD A LARGE WILDFIRE THAT CONSUMED ALMOST 13,000 ACRES. IT WAS DRIVEN BY HIGH WINDS AND EXTREME DROUGHT.

SPRING 2022 WE ARE DEALING WITH ROAD WASHOUTS, CULVERT COLLAPSE AND OUR BUILDINGS FLOODING DUE TO EXTREME SNOW AND RAIN EVENTS OVER THE LAST FEW MONTHS.

ALSO THIS SPRING 2022 WE HAD A POWER SURGE DUE TO ICE AND WIND AFFECTING THE POWER LINES THAT CAUSED DAMAGE TO ELECTRONICS AT OUR MUNICIPAL LIQUOR STORE, LOCAL BUSINESSES. AND IN RESIDENTS' HOMES

A FEW YEARS AGO, A TORNADO WENT THROUGH THAT DESTROYED A BUSINESS AND CAUSED A MAN HIS LIFE. DURING THAT STORM MANY PLACES WERE DAMAGED.

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.
<b>FLOODING</b>	<p>THE COMMUNITY CENTER FLOODS EVERY YEAR AND IT CAUSES DAMAGE TO THE DOCUMENTS THAT ARE KEPT HERE IN STORAGE AS WELL AS OLD MAPS AND THE ORIGINAL TOWNSITE PLAT.</p> <p>THE CULVERTS ON HARRISON, GARFIELD, STEPHENS AND 2ND STREET ALL WASHOUT IN THE SPRING WHEN WE HAVE TOO MUCH WATER.</p>
<b>WILDFIRES</b>	WE ARE SURROUNDED BY WILDLIFE PRESERVES AND GRASSLANDS SO WHEN THERE'S A DROUGHT, WE ARE AT RISK OF WILDFIRES
<b>WIND STORMS TORNADOES</b>	MANY RESIDENTS DON'T HAVE BASEMENTS AND THERE ARE HUNDREDS OF CAMPERS IN OUR REGION DUE TO BEING IN LAKES AREA. FOR THE CITY CAMPGROUND CAMPERS CAN GO TO THE OLD SCHOOL. FOR PRIVATELY OWNED CAMPGROUNDS IT'S UNKNOWN IF THEY HAVE ADEQUATE STORM SHELTERS. OUR ELECTRIC POLES ARE AGING AND MIGHT SNAP IN A HIGH WIND EVENT.
<b>BLIZZARDS</b>	WINTER STORMS HAVE CAUSED UNPASSABLE ROADS AND LOW TO NO VISIBILITY. ICE ON POWER LINES HAS CAUSED POWER OUTAGES.

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.**

LARGER CULVERTS ARE BEING PLACED ON HARRISON AND GARFIELD TO MITIGATE FLOODING/WASHOUTS. WE ARE CURRENTLY DISCUSSING WORK TO ADDRESS STEPHENS STREET AND 2ND ST. WITH OUR CITY COUNCIL AND HAVE BEEN IN TOUCH WITH THE POLK COUNTY ENGINEER TO TRY TO PIGGY BACK ON ANY PROJECTS THEY HAVE PLANNED IN MENTOR SINCE HALF OUR ROADS ARE COUNTY ROADS.

OUR FIRE DEPARTMENT HOLDS A YEARLY FIRE PREVENTION OPEN HOUSE TRYING TO INFORM PEOPLE OF FIRE RISKS AND HOW TO AVOID THEM. THEY ALSO DO CONTROLLED BURNS WHERE THEY CAN.

WE HAVE A STORM SHELTER AT THE FIREHALL WHICH IS A BRICK BUILDING BUT NO GENERATOR IF THE POWER GOES OUT.

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 HAVE MORE CAMPER SITES POPPING UP ON A SUMMERLY BASIS AND NO SHELTERS ON SOME OF THEM.

EXTREMES IN WEATHER SEEM TO BE INCREASING.

**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.**

MOSTLY CELL PHONE NOTIFICATIONS OR DOOR TO DOOR NEIGHBORS CHECKING IN ON PEOPLE IN A WEATHER EMERGENCY. WE ALSO POST WHEN WE CAN REMINDING PEOPLE OF THE STORM SHELTER AT THE OLD SCHOOL.

- 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 A WEBSITE.

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

YES. THE CITY OF MENTOR PARTICIPATES IN THE NFIP AND HAS FEMA MAPPED HIGH RISK AREAS. THE CITY ADOPTED A FLOODPLAIN MANAGEMENT ORDINANCE ON OCTOBER 17, 2002. THIS ORDINANCE IS ENTITLED "FLOODPLAIN MANAGEMENT ORDINANCE – GENERAL FLOODPLAIN ORDINANCE."

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

WE ARE WORKING WITH THE COUNTY TO GET BETTER CULVERTS INSTALLED TO HELP MITIGATE FLOODING.

WE HAVE YEARLY FIRE PREVENTION WEEKS.

OUR FIRE DEPARTMENT MAKES PLANS FOR WEATHER AND WILDFIRES AS WELL AS HOLDING REGULAR TRAININGS ON EVERY TYPE OF EMERGENCY.

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

WE ARE PART OF A COUNTY-WIDE MUTUAL AID AGREEMENT, WORK WITH MN DNR ON PRESCRIBED BURNS AND ARE TRYING TO GET STORM WARNING SIRENS FOR OUR CITY.

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

WE PRESENT WHAT WE CAN TO OUR POPULOUS DURING OUR OPEN HOUSE AND VIA POSTED NOTICES.

- 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)**

CITY SERVICE IS BY OTTERTAIL POWER COMPANY. RURAL AREAS ARE SERVED BY WILD RICE ELECTRIC AND RED LAKE ELECTRIC.

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

YES – COMMUNITY CENTER, AND THE FIRE HALL/OLD SCHOOL STORM SHELTER

### **PART C: LOCAL MITIGATION PROJECTS**

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

WE NEED GENERATORS FOR THE FIRE HALL AND THE COMMUNITY CENTER.

WE NEED STORM SIRENS, WE HAVEN'T HAD ONE FOR OVER 15 YEARS

TO ADDRESS FLOODING AT THE COMMUNITY CENTER, WE HAVE TRIED PUTTING A SUMP PUMP IN THE DUCT WORK AND THAT WORKS FOR A TEMPORARY FIX BUT IN THE LONG RUN THE WHOLE HEATING SYSTEM SHOULD BE UPDATED THE FOUNDATION AND DIRT WORK SHOULD ALL BE RAISED TO GET THE WATER TO SHED AWAY FROM THE BUILDINGS. AND THEY HAVE DONE SOME OF THAT WORK AT THE OLD SCHOOL/FIRE HALL/STORM SHELTER.

UNFORTUNATELY, THE WAY THEY BUILT THE COMMUNITY CENTER I'M NOT SURE HOW WE COULD CHANGE THINGS TO MAKE IT BETTER. WE ARE DISCUSSING PUTTING IN A DRAIN FIELD AND MOUND SYSTEM TO TRY TO MITIGATE THE PROBLEM.

WE ARE DISCUSSING WORK FOR STEPHENS STREET AND 2ND ST. WITH OUR CITY COUNCIL AND HAVE BEEN IN TOUCH WITH RICH SANDERS, POLK COUNTY ENGINEER TO TRY TO PIGGY BACK ON ANY PROJECTS THEY HAVE PLANNED IN MENTOR SINCE HALF OUR ROADS ARE COUNTY ROADS.

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

LACK OF FUNDS, LACK OF KNOWLEDGE ON HOW TO GET THE FUNDS/GRANTS. WE ARE SMALL CITY WITH LIMITED FINANCIAL AND STAFF RESOURCES TO ADDRESS LOCAL MITIGATION PROJECTS.

**PART D: SURVEY PARTICIPANTS**

LISA SCHAUMBURG, CITY CLERK/TREASURER  
 JAY ANDERSON, FIRE CHIEF  
 BRIAN GAGNER, MAINTENANCE MANAGER

**CITY OF NIELSVILLE**

**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	Low	No change
Tornadoes	X	Low	No change
Windstorms	X	Low	No change
Lightning			
Hail			
Flooding			
Extreme Cold	X	Low	No change
Extreme Heat			
Drought			
Wildfire			
Landslides			
Dam Failure			

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

Nothing to report in the last five 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.



<b>Natural Hazard (please list)</b>	<b>Vulnerability Assessment</b> Describe <u>specific</u> community assets are susceptible to damage or loss from hazard events.
<b>Extreme Cold</b>	Residents are susceptible to dangers from extreme cold, especially if the power goes down during winter storms. We have a high population of low-income residents who are more vulnerable during these events.  In the past we have experienced frozen water services. The city has also experienced damage to roads from spring frost heaves and frozen culverts that cause localized flooding.
<b>Windstorms and Tornadoes</b>	We have four mobile homes located within the city limits. We don't have a storm shelter and residents are vulnerable to high winds and tornado events.  We have a few homes that are built with only crawl spaces, no basements. These residents are at a greater risk during severe weather.
<b>Ice Storms, Blizzards</b>	Much of the city's municipal electrical consists of overhead power lines and electrical poles. These 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 on lines and poles.

**4. Reduction in Vulnerability - Describe any actions your community has taken to reduce vulnerability against future severe weather or disaster events. This can include examples of any work that has been completed or is underway that reduces future risk.**

In 2017 the city completed a street reconstruction on Hwy. 75 with MnDOT which included replacement of storm sewers and catch basins. The city has also done several culvert improvements. We plan to encourage business, and residents to enroll in the county's emergency notification system so they will be aware of dangerous storm 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.**

We have not noticed any changes.

**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 post information on bulletin boards at the Fire Hall and at the Post Office. Polk County dispatch warns us of severe weather. We also have SkyWarn Spotters.

**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 will send out the information in our monthly newsletter and post the information on the bulletin board at the Fire Hall and Post Office.

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

Yes, the city participates in the NFIP and has a floodplain ordinance in place that was adopted May 19, 2000. The City Council oversees compliance with the ordinance.

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

We have a sump pump ordinance in place to mitigate against overload of the city's I & I system. The Council will check to make sure residents are in compliance.

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

Our Mayor is the city's designated Emergency Manager. Our City Council is our Public Safety Committee. We have our own municipal utility that is responsible for mitigating against power outages. We have worked with the County Emergency manager to address an upgrade to our warning siren and local flood issues.

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

Our city works with Polk County to participate in the National Weather Service's annual Winter/Spring weather awareness week.

Each fall and spring we do clear the debris from roadside gutters to prevent clogging and over the road flooding in these areas.

Each spring and winter we do encourage residents to maintain their sump pumps to reduce the chances of their basements flooding.

The city has a program to manage vegetation near powerlines to reduce the risk of power outages during bad weather.

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

The city primarily uses its own budget to address mitigation projects, such as replacement of culverts. We have also worked closely with the Polk County engineers. We also use our own budget to maintain power to our residents during storms or in the aftermath of a storm.

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

No

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

City of Nielsville municipal utility

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

We have backup generators at the Fire Hall, Sewer Lift, and Water tower

**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 update our city warning siren and increase public education for more information on how to be prepared for bad storms and extended power outages

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

Our city does not have its own website or Facebook page to do better outreach to our residents. But if there is a problem within the city we call or go to each residence and inform them of the problem. We are a small city with limited funds.

**PART D: SURVEY PARTICIPANTS**

Stephanie Abentroth City Clerk  
 Scott Abentroth, Water Operator  
 David Vraa, Mayor  
 Jeremy Pierce, City Councilor  
 Donald Blasey, City Councilor

**CITY OF TRAIL**

**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	Moderate	No Change
Tornadoes	X	Moderate	No Change
Windstorms	X	Moderate	No Change
Lightning			
Hail	X	Moderate	No Change

Flooding			
Extreme Cold	X	Moderate	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.

None.

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.
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.

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.

None

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

Aging community has made residents more vulnerable.

**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 rely on Polk County and local news to provide. We do not have a city 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?**

No.

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

The city does not participate in the NFIP and does not have FEMA mapped high risk areas.

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

None

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

None

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

None

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

The city relies on its own resources. However, if there was a large disaster, we would need assistance from Polk County.

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

None

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

Ottertail

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

No

**PART C: LOCAL MITIGATION PROJECTS**

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

None

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

None

**PART D: SURVEY PARTICIPANTS**

Lori Wollman, City Clerk

**CITY OF WINGER**

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

We have had no major storm events to note over the last 5 years.

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.
Extreme Cold	We have experienced a frozen water tower during periods of extended extreme cold temperatures.

- 4. Reduction in Vulnerability - Describe any actions your community has taken to reduce vulnerability against future severe weather or disaster events. This can include examples of any work that has been completed or is underway that reduces future risk.**

We have trimmed trees back from buildings. We have installed a re-circulator in water tower to keep water from freezing.

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

N/A

## **PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT**

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

Outdoor warning sirens. Weather Watchers. Polk County emergency notification system.

- 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?**

City does not currently do this.

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

Response: “No. The city does not participate and notes it is not in a floodplain.” / Note: The NFIP data for Polk County shows that the city of Winger does not participate in the NFIP but does have FEMA mapped high risk areas. The city has been put in touch with the MN DNR Floodplain Management Program to learn about their flood risk and how to enroll in the NFIP.

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

We open the community hall for a tornado shelter.

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

Maintenance department, Fire Department, and First Responders.

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

We participate in the Polk County emergency notification system.

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

City government; Fire Department, and Polk County Emergency Management.

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

We changed to LED street lights.

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

Otter Tail Power

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

We have a generator for our sewer 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.**

Continue to promote residents to sign up for county emergency notification system.

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

None.

#### **PART D: SURVEY PARTICIPANTS**

Dominica Zarkoff, City Clerk  
Ron Locken, Maintenance Supervisor  
Daniel Olson, Mayor  
Steve Massmann, City Council  
Nick Gercy, City Council  
Deb Matson, City Council  
Megan Morlock, City Council



# **Appendix D – Plans & Programs in Place**

# Polk County

## MHMP Plans in Place Form

### Planning & Regulatory

<i>Plans/Programs</i>	<i>Yes/No</i>	<i>Comments</i>
Comprehensive/Master Plan	Yes	Polk County Planning & Zoning Dept.
Capital Improvements Plan	Yes	Two Plans, 2020 through 2024, and other is 2022 through 2026
Economic Development Plan	TBD	
Emergency Operations Plan	Yes	Updated by Polk E.M.
Climate Adaptation Plan	No	
Continuity of Operations Plan	Yes	EOP Support Annex 9.8
Transportation Plan	No	
Stormwater Management Plan	Yes	PCZO sec 12.4110
Community Wildfire Protection Plan	No	MN DNR notes no CWPP for Polk County
FireWise Program	Yes	Local F.D.'s & MN DNR
Comprehensive Water Management Plan	Yes	5 Year Update Approved 9/13/17
One Watershed, One Plan (1W1P)	Yes	All four watersheds within Polk county participate in 1W1P
Wellhead Protection Plan	TBD	
Database of dry hydrants/well access	No	
Burning permits/restrictions	Yes	Local F.D.'s & MN DNR
Zoning ordinance	Yes	Revised 6-1-21
Subdivision ordinance	Yes	Sec 22 PCZO
Floodplain ordinance	Yes	Sec 19 PCZO
Natural hazard specific ordinance (i.e., stormwater, steep slope, wildfire)	Yes	Related standards in PCZO sec 12.4090
Flood insurance rate maps	Yes	FEMA 1983 unincorporated cities
Acquisition of homes (buyouts) due to repetitive flood damage or imminent risk of failure from erosion	Yes	1997 – 2002 Phase I, II & III buyout in rural Polk, Cities has additional projects.
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 Resource Manual
Tornado Safe Rooms/Outdoor Storm Shelters (list available)	No	Not currently, under update
Outdoor Warning sirens (list all locations)	Yes	Beltrami, Crookston, East Grand Forks, Climax, Erskine, Fisher, Fertile, Fosston, Gully, Lengby, McIntosh, Neilsville, and Winger
SKYWARN Program	Yes	Annual training with NWS
Emergency Mass Notification System (provide type, i.e., CodeRED)	Yes	Everbridge
Severe Weather Awareness Week	Yes	Annual participation in NWS event (April)
Winter Weather Awareness Week	Yes	Annual participation in NWS event (November)
NOAA Weather Radios	Yes	Polk County promotes use of NOAA weather radios
THIRA	Yes	Past THIRA but no longer required
<i>Other *please describe</i>		

**Administrative & Technical**

<i>Administration</i>	<i>Yes/No</i>	<i>Comments</i>
Planning Commission	Yes	PC P&Z Department
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		
<i>Staff</i>	<i>Yes/No</i>	<i>Comments</i>
Chief Building Official	Yes	Mark Dietz
Floodplain Administrator	Yes	Jacob Snyder
Emergency Manager	Yes	Jody Beauchane
County Coordinator	Yes	Chuck Whiting
Civil Engineer	Yes	Richard Sanders
GIS Coordinator	Yes	Rick Thompson
<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	American Red Cross, Salvation Army and leadership from local Fire, EMS and Law Enforcement partners
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Polk County Emergency Management and Polk County Public Health and Social Services
Natural disaster or safety related school programs	No	
StormReady certification	No	
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	No	
<i>Other *please list &amp; describe</i>		

# **Appendix E – Past Mitigation Action Review Status Report**

# Polk County

## Past Mitigation Action Review Status Report

Following is a report on the status of mitigation actions related to natural hazards listed in *Section 6: Mitigation Goals, Objectives, and Strategies* of the Polk 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
All-Hazards	Identify critical infrastructure that needs alternative power methods	County, All Cities	Ongoing	Polk County Emergency Management (PCEM) and local jurisdictions continue to identify where backup power is needed and obtain generators.
All-Hazards	Identify power lines that have an acute need of mitigation. (Bury lines to reduce power outages. / Employ above ground improvements.)	County, All Cities	Ongoing	Ongoing by municipal and rural electric cooperatives in coordination with county & municipalities.
All-Hazards	Educate on multiple hazards so that individuals take on the responsibility for the actions of themselves and their neighbors/families	County, All Cities	Ongoing	PCEM utilizes the Polk County website, Polk County Sheriff’s Office/Emergency Management Facebook page and local news media to communicate with residents and visitors on emergency preparedness.
All-Hazards	Continue working with the National Weather Service to improve storm warning and awareness	County, All Cities	Ongoing	PCEM and NWS – Grand Forks Office have an ongoing working relationship.
All-Hazards	Promote the weather radio for homes and businesses	County, All Cities	Ongoing	PCEM continue to promote the use of NOAA weather radios.
All-Hazards	Encourage no/limited travel during severe weather conditions.	County, All Cities	Delete	Not a necessary mitigation action. This is done regularly by the NWS and PCEM / Sheriff’s Office during periods of severe winter events.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
All-Hazards	Encourage the use of online information	County, All Cities	Ongoing	Polk County utilizes the Polk County website, Polk County Sheriff's Office/Emergency Management Facebook page and local news media to communicate with residents and visitors on emergency preparedness.
All-Hazards	Maintain an awareness of new technologies for citizen alert, such as reverse 911 and consider the local benefit.	County, All Cities	Delete	Polk County has established the Everbridge Emergency Notification System for Polk County.
All-Hazards	Annually review and update emergency response plans for cities, critical infrastructure and events.	County, All Cities	Ongoing	PCEM keeps the county EOP updated on an annual basis and jurisdictions with an EOP are encouraged to do the same.
All-Hazards	Continue to work with the National Weather Service to keep the emergency weather spotters program active in Polk County.	County	Ongoing	PCEM works with the NWS 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.
All-Hazards	Utilize GIS technology in emergency management and hazard mitigation when cost- efficient.	County	Ongoing	PCEM continues to work to incorporate GIS technology into our EM planning for all hazards mitigation, response, and recovery.
All-Hazards	Ensure that nursing homes, hospitals, public events and schools have updated storm plans, creating them if necessary	County, All Cities	Ongoing	PCEM and local jurisdictions continue to be aware of those facilities that house vulnerable populations and to assist with emergency planning as needed. Such facilities bear the legal responsibility to have plans in place.
All-Hazards	Identify shelters in Polk County for both tornadoes and winter storms	County, All Cities	Ongoing	PCEM and local jurisdictions continue to identify and address where storm shelters or tornado safe rooms are needed.
Drought	Enforce burning bans.	County	Ongoing	MN DNR puts fire restrictions in place during periods of high fire danger. PC Sheriff's Office and local law enforcement help to enforce burning restrictions.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Drought	Incorporate population growth patterns, drought and water supply shortages into planning efforts.	East Grand Forks	Ongoing	East Grand Forks continues to conduct local level growth planning and emergency planning for drought as well as other hazards.
Drought	Work with the USDA & FSA to protect those involved in ranching and agriculture (crop insurance, etc...)	USDA, FSA, Emergency Management	Delete	Not a necessary mitigation action for drought. This relates more to response & recovery planning.
Drought	Identify sources of water that could be provided if shortages occur	Cities, Emergency Management	Delete	Not a necessary mitigation action for drought. This relates more to response & recovery planning.
Tornado	Assess the current siren warning system for the county and cities on a regular basis.	County, All Cities	Ongoing	Ongoing by PCEM and cities where warning sirens are located (Beltrami, Crookston, East Grand Forks, Climax, Erskine, Fisher, Fertile, Fosston, Gully, Lengby, McIntosh, Neilsville, and Winger)
Tornado	Add sirens to areas that are not covered by the existing siren framework.	Fosston, Crookston, and Lakes area	Ongoing	PCEM continues to work with these communities on obtaining outdoor warning sirens.
Tornado	Encourage trailer courts to have either an on-site shelter or an evacuation plan to a nearby shelter	County, All Cities	Ongoing	Shelter and evacuation plans are developed with the assistance and approval of the municipality where the park is located as per the requirements of MN Statute 327.20.
Wildfire	Utilize controlled burns if the option is available. A permit might be required, as well as NRCS approval.	County, All Cities	Ongoing	Ongoing as applicable in coordination with MNDNR and NRCS.
Wildfire	Provide information to landowners that may not know about fire prevention methods	County, All Cities	Ongoing	PCEM and local cities continue to work on public outreach & education for wildfire prevention.
Wildfire	Utilize firebreaks around affected CRP. The NRCS would need to be contacted.	County, All Cities	Ongoing	Ongoing as applicable in coordination with MNDNR and NRCS.



Hazard	Mitigation Action	Jurisdiction	Status	Comments
Flooding	Continue to integrate the watershed management plan into the county's all hazard mitigation plan	County	Ongoing	PCEM is engaging watershed district partners in the MHMP update process and will incorporate relevant mitigation measures for flooding into the plan update.
Flooding	Continue the Red Lake watershed's plan to mitigate flooding on the Grand Marais Creek Subwatershed.	County	Ongoing	Same as above.
Flooding	Look at levee construction as a tool for flood mitigation	Crookston, East Grand Forks, Beltrami, and Nielsville	Ongoing	Polk County and local jurisdictions continue to identify a range of localized flood mitigation measures as appropriate to reduce risk to people and property from flooding.
Flooding	Continue plans for the protection of Crookston, including levees and the protection for the Chase-Loring and Sampson's Additions.	Crookston and Polk County	Ongoing	Polk County and local jurisdictions continue to identify a range of localized flood mitigation measures as appropriate to reduce risk to people and property from flooding.
Flooding	Identify sites to utilize the ring dike program, when funds are program is available.	County, All Cities	Ongoing	Polk County and local jurisdictions continue to identify a range of localized flood mitigation measures as appropriate to reduce risk to people and property from flooding.
Flooding	Buyout willing landowners if located in the floodplain and or are repetitively damaged properties.	County, All Cities	Ongoing	Polk County and local jurisdictions will continue to identify potential buyouts for properties that suffer from repetitive flooding.
Flooding	Enforce current floodplain ordinances.	County, All Cities	Ongoing	Polk County and cities that participate in the NFIP enforce local floodplain ordinances.
Flooding	Maintain efficient city drainage and propose solutions to decrease damage done by fast moving water and overland flooding.	County, All Cities	Ongoing	Polk County and local jurisdictions continue to identify a range of localized flood mitigation measures as appropriate to reduce risk to people and property from flooding.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Flooding	Protect cities that lie in the 100-yr floodplain, including planning for risk removal, such as dikes, gates and pumps.	County, All Cities	Ongoing	Ongoing by Polk County Planning & Zoning Dept, Polk County Public Works and individual cities.
Flooding	Thoroughly study the network of culverts in Polk County, replacing /repairing /resizing any that inhibit or prevent flow.	Beltrami, Polk County	Ongoing	Ongoing by Polk County Public Works and individual jurisdictions.
Flooding	Complete plans for the protection of East Grand Forks.	East Grand Forks	Ongoing	Flood mitigation planning and projects continue by the City of East Grand Forks.
Flooding	Modify, raise or install drainage upon repetitively damaged roads.	County, All Cities	Ongoing	Flood mitigation planning and projects continue by individual jurisdictions.
Flooding	Inventory county roads that suffer continuous damage from flooding events	County, All Cities	Ongoing	Ongoing by Polk County Public Works and individual jurisdictions.
Flooding	Ensure that flood mitigation is a factor for newly constructed roadways	County, All Cities	Ongoing	Ongoing by Polk County Public Works and individual jurisdictions.
Flooding	Investigate cost-effective methods for repairing repetitively damaged roads in Polk County	County, All Cities	Ongoing	Ongoing by Polk County Public Works and individual jurisdictions.
Flooding	Utilize buyouts when necessary for affected citizens.	Crookston	Ongoing	Property buyouts for flood prone properties are a mitigation measure to be considered by Polk County and all jurisdictions as necessary.
Flooding	Study ways to prevent the potential subsidence of US Highway 2, a major transportation route near subsidence-prone land.	Crookston	Ongoing	U.S. Hwy. 2 is under ownership and maintenance of MnDOT. MnDOT continues to oversee studies and projects related to Hwy. 2.
Flooding	Inspect local properties, roads and bridges to judge if any are at risk.	Crookston	Ongoing	Ongoing by MnDOT, Polk County Public Works and individual jurisdictions.
Flooding	Investigate cost-effective methods of stabilizing local eroding riverbanks. Mitigate if cost efficient.	Crookston and Polk County	Ongoing	Ongoing by City of Crookston and Polk County as relevant to any erosion issues.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Flooding	Identify other areas in Polk County where subsidence occurs. Plan mitigation if necessary.	All Townships	Ongoing	Ongoing by Polk County and Polk East/West SWCE as relevant to any erosion issues in township areas.
Flooding	Enforce current building and shoreland ordinances.	County, All Cities	Ongoing	Polk County and individual jurisdictions continue to enforce floodplain and shoreland ordinances that are in place.
Flooding	T-230 (Intersection of 200th Ave. SW and 270th St. SW) (Capistran). Replace culvert and repair erosion.	Polk County (Gentilly Twp)	Completed	Completed by Polk County Drainage Department in coordination with Gentilly Township.

# **Appendix F – Planning Team Meetings**

## Polk 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 Polk County Emergency Manager. The webinar included a project overview, U-Spatial@UMD's background, the roles and responsibilities of the Emergency Manager, the contents of the Multi-Hazard Mitigation Plan, the planning process, and the projected timeline of the project

#### Attached Documentation:

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

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

During 2021-2022, U-Spatial from the University of Minnesota Duluth (U-Spatial@UMD) will be working to update Multi-Hazard Mitigation Plans (MHMPs) for 9 counties. Our team consists of UMD staff who specialize in GIS applications and research and Hundrieser Consulting LLC, who specializes in stakeholder engagement and mitigation strategies.

## Participating Jurisdictions

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

## Overview of Update Process

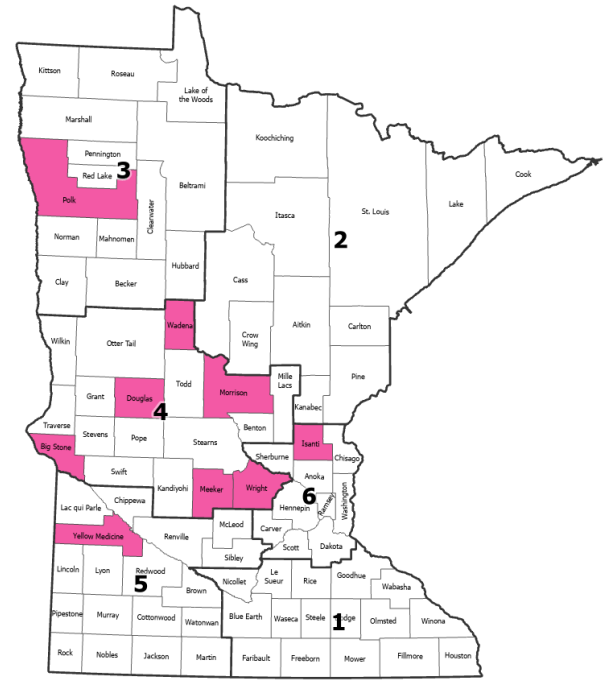
The U-Spatial@UMD team will coordinate with each Emergency Manager throughout the plan update process to engage participating jurisdictions and other stakeholders in the planning process. Following is an overview of key tasks that the U-Spatial@UMD team will facilitate to meet FEMA requirements in the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

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

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

## Contact

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

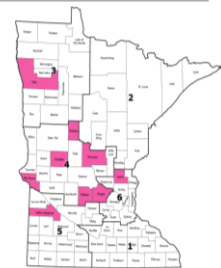
### Minnesota HSEM:

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
<b>Stage 1 Tasks (4-5 months)</b>	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
<b>Stage 2 Tasks (4-6 months)</b>	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
<b>Stage 3 Tasks (2-3 months)</b>	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
<b>Stage 4 Tasks (2-3 months)</b>	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](mailto:slstark@d.umn.edu)  
 218-726-7438

Example Plans:

<https://z.umn.edu/hazardmitigation>

# Polk County MHMP Update

## JURISDICTIONAL CONTACT LIST

---

### County Contacts

Name	Title	Phone	Email
Jody Beauchane	Emergency Management Director	218-470-8263	jody.beauchane@co.polk.mn.us
Jill Moreno	EM Support Staff	218-270-8290	jill.moreno@co.polk.mn.us
James Tadman	County Sheriff	218-281-0431	james.tadman@co.polk.mn.us
Jon Steiner	Environmental Services Director	218-281-6445	jon.steiner@co.polk.mn.us
Jacob Snyder	Planning & Zoning Director	218-281-5700	jacob.snyder@co.polk.mn.us
Richard Sanders	County Engineer (Public Works Dept.)	218-470-8253	rsanders@co.polk.mn.us
Sarah Reese	Public Health Director	218-281-3385	sarah.reese@co.polk.mn.us
Chuck Whiting	Polk County Administration Department Head	218-281-5408	chuck.whiting@co.polk.mn.us

### City Contacts

#### CITY OF BELTRAMI

Name	Title	Phone	Email
Stephanie Melby	Clerk	218-926-5300	cob56517@gmail.com
Dale Schoenborn	Mayor	218-926-5793	NA
Danny Netland	Fire Chief	218-289-7586	beltramifire@hotmail.com

#### CITY OF CLIMAX

Name	Title	Phone	Email
Jackie Voeller	Clerk	218-857-2715	cityofclimax@yahoo.com
Pamela Berg	Mayor (Acting)	218-289-1208	pberg@rrv.net
Chad Gunderson	Fire Chief	218-280-2299	cstm104@yahoo.com

#### CITY OF CROOKSTON

Name	Title	Phone	Email
Ashley Rystad	City Administrator	218-281-1232	arystad@crookston.mn.us
Dale Stainbrook	Mayor	218-281-1232	dstainbrook@crookston.mn.us
Tim Froeber	Fire Chief / EM	218-281-4584	tfroeber@crookston.mn.us

#### CITY OF EAST GRAND FORKS

Name	Title	Phone	Email
David Murphy	City Administrator	218-773-2483	dmurphy@egf.mn
Steve Gander	Mayor	218-773-2987	mayor@egf.mn
Jeff Boushee	Fire Chief / EM	218-773-2403	jboushee@egf.mn

CITY OF ERSKINE

Name	Title	Phone	Email
Angie Shimpa	Clerk	218-687-4646	cityerskine@gvtel.com
Marc Plante	Mayor	218-687-2595	NA
Jesse Hickman	Fire Chief	218-280-7849	erskinewefd@gvtel.com

CITY OF FERTILE

Name	Title	Phone	Email
Lisa Liden	Clerk	218-945-3136	fertile@gvtel.com
Daniel Wilkens	Mayor	218-280-0934	daniel.wilkens@sandhillwatershed.com
Jason Haas	Fire Chief	218-289-2348	fertilefd@gmail.com

CITY OF FISHER

Name	Title	Phone	Email
Kara Bowen	Clerk	218-891-2207	fishcity@rrv.net
Emily Tinkham	Mayor	218-891-2207	emilytinkham2020@gmail.com
Erik Quirk	Fire Chief	701-741-2874	equirk@grandforksgov.com

CITY OF FOSSTON

Name	Title	Phone	Email
Cassie Heide	Clerk	218-435-1959	cassie@fosston.com
James Offerdahl	Mayor	218-435-1162	jim@offerdahlbroadcast.com
Eric Murphy	Fire Chief	218-230-3717	ericmurphy@team-ind.com

CITY OF GULLY

Name	Title	Phone	Email
Barbara Sellers	Clerk	218-487-5515	cityofgully@yahoo.com
Cathy Bergerson	Mayor	218-268-4666	NA

CITY OF LENGBY

Name	Title	Phone	Email
Rosanne Erickson	Clerk	218-668-2057	Rosanne.erickson@gmail.com
Brian Ohren	Mayor	218-668-2229	NA

CITY OF MCINTOSH

Name	Title	Phone	Email
Melissa Finseth	Clerk	218-563-3043(w)	macclerk@gvtel.com
Toby Strom	Mayor	218-280-1703	NA
Justin Schultz	Fire Chief	218-639-8076	Jashultz1@hotmail.com

CITY OF MENTOR

Name	Title	Phone	Email
Lisa Schaumburg	Clerk	218-637-2911(w)	mentor@gvtel.com
Lonnei Morberg	Mayor	218-637-2911	NA
Jay Anderson	Fire Chief	218-779-4507	jkanderson@gvtel.com

CITY OF NIELSVILLE

Name	Title	Phone	Email
Stephanie Abentroth	Clerk	218-946-2881	rasanava@rrv.net
David Vraa	Mayor	218-946-2255	d_vaa@hotmail.com
Donnie Blasey	Fire Chief	218-280-1005	rasanava@rrv.net

CITY OF TRAIL

Name	Title	Phone	Email
Lori Wollman	Clerk	218-688-1921	lrwollman@gmail.com
Frank Buer	Mayor	218-268-4213	NA

CITY OF WINGER

Name	Title	Phone	Email
Dominica Zarkoff	Clerk	218-938-4150(w)	cityofwinger@gvtel.com
Darrell "Ole" Olson	Mayor	218-230-5411	NA
Steve Massmann	Fire Chief	218-280-3224	swmassmann@gmail.com

Township Contacts

Name of Township	Name & Title	Phone	Email
Polk County Township Association	Eugene Dufault, Clerk	218-891-2181	genedufault@gmail.com

Other Stakeholder Contacts

Name of Agency/Org.	Name & Title	Phone	Email
USDA Rural Development Community Programs	Laura Pettit, Area Specialist	(218) 847-9392 x3299	laura.pettit@usda.gov
Sand Hill River Watershed Fertile, MN	April Swenby Administrator	218-945-3204	april.swenby@sandhillwatershed.org
Red Lake Water District	Myron Jesme Administrator	218-686-9692	Myron.Jesme@redlakewatershed.org
Middle-Snake-Tamarac-River Water District	Mori Maher District Administrator	218-230-5703	morteza.maher@mstrwd.org
Wild Rice Watershed Ada, MN	Tara Jensen District Administrator	218-784-5502	tara@wildricewatershed.org
MN Homeland Security & Emergency Management	Heather Winkleblack, HSEM Region 3 Regional Program Coordinator	218-766-2301	Heather.Winkleblack@state.mn.us
East Polk Soil & Water Conservation District	Rachel Klein, District Manager	218-563-2777	klein.eastpolk@gmail.com
National Resource Conservation Service (East Polk SWCD)	Laura Schnapp, NRCS District Conservationist	218-563-2475	Laura.schnapp@usda.gov
West Polk Soil & Water Conservation District	Nicole Bernd, District Manager	218-281-6070	nicole.bernd@wpolk.mnswcd.org
National Resource Conservation Service (West Polk SWCD)	Luther Newton, NRCS Team Lead	218-281-1445	luther.newton@usda.gov

Otter Tail Power Crookston, MN	Tom Hrdlicka, System Operations Manager	(218) 739-8200	thrdlicka@otpc.com
Red Lake Electric Co-op	Stephanie Johnson, General Manager	218-253-2168	info@redlakeelectric.com
PKM (Polk-Kittson- Marshall) Electric Co-op Warren, MN	Karen Olson, CFO and Joe Marcotte, Operational Manager	218-745-4711	kolson@pkmcoop.com jmarcotte@pkmcoop.com
Wild Rice Electric Co-op Mahnomen, MN	Tommy Houdek	218-935-2517	thoudek@wildriceelectric.com
Clearwater-Polk Electric Co-op	Deanna Lefebvre General Manager	218-694-6241	dlefebvre@clearwater-polk.com
Climax-Shelly Public School District #592	Dave Dalchow, Superintendent	218-857-2932	ddalchow@isd592.org
Crookston Public School District #593	Dave Kuehn Superintendent	218-281-5313 ext.2102	davekuehn@isd593.org
East Grand Forks Public School District #595	Mike Kolness, Superintendent	218-793-2880	mkolness@egf.k12.mn.us
Fertile-Beltrami Public School District #599	Brian Clarke, Superintendent	218-945-6983 ext. 100	bclarke@isd599.org
Fosston Public School District #601	Todd Selk Superintendent	218-435-6335	tselk@isd601.org
Win-E-Mac Public School District #2609	Randy Bruer, Superintendent	218-687-2236	rbruer@win-e-mac.k12.mn.us
University of MN Crookston	Mary Holz-Clause, Chancellor / Ryan Moe, Facilities & Operations Director/ Kim Jenkins, Health & Safety Specialist	218-281-8343  218-281-8490  218-280-4395	mhclause@crk.umn.edu  moer@crk.umn.edu  jenk0004@crk.umn.edu
Northland Community & Technical College –East Grand Forks	Jodi Stauss, Dean	218-793-2800	Jodi.stauss@northlandcollege.edu

### Neighboring Jurisdiction Contacts

Name of Jurisdiction	Name & Title	Phone	Email
Pennington County	Erik Beitel, Emergency Management Director	218-683-7087	elbeitel@co.pennington.mn.us
Red Lake County	Mitch Bernstein, Sheriff/Emergency Management Director	218-253-2996	mbernstein@sheriff.co.red-lake.mn.us
Clearwater County	Candace Coulter, Emergency Management Director	218-694-1116	candice.coulter@co.clearwater.mn.us
Mahnomen County	Ed Snetsinger, Emergency Management Director	218-935-2488	edward.snetsinger@co.mahnomen.mn.us
Norman County	Garry Johanson, Emergency Management Director	218-784-5493	garry.johanson@co.norman.mn.us

# Polk County MHMP Planning Team Meeting #1

## February 2, 2022 - Meeting Summary & Documentation

**Summary:** On Wednesday, February 2, 2022 Polk County Emergency Management convened key county, city, and township representatives, as well as neighboring jurisdictions and other stakeholders to participate in the 1<sup>st</sup> Planning Team Meeting for the update of the Polk County Multi-Hazard Mitigation Plan (MHMP). The purpose of the meeting was to formally present information about the Polk 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:** Polk 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 **29** people attended the meeting. Representation included elected officials and departmental staff from Polk County and the following cities: Beltrami, Climax, Crookston, East Grand Forks, Erskine, Fosston, Gully, McIntosh, Mentor, and Nielsville. The cities of Fertile, Fisher, Lengby, Trail and Winger were unable to attend. Other stakeholders, including neighboring jurisdictions, participated in the meeting. A participant list is included with this meeting summary.

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

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

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

- Yes, I have previously participated in in a hazard mitigation planning process. **(8/24) 33%**
- No, but I am familiar with hazard mitigation planning. **(6/24) 25%**
- No, and this is all new to me. **(10/24) 42%**

**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 Polk 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
Drought	High	High
Winter Storms	Moderate	Moderate
Wildfire	Moderate	<b>High</b>
Windstorms	Moderate	<b>High</b>
Hail	Low	Low
Dam/Levee Failure	Low	Low
Extreme Heat	Low	Low
Lightning	Low	Low
Extreme Cold	N/A	Low
Landslides	N/A	Low

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

Meeting Participant	Comment, Question or Mitigation Idea Submitted	Facilitator Feedback / How to be Addressed in Plan Update
Jon Steiner, Polk County Environmental Services Administrator	<i>Regarding Dam/Levee Failure:</i> The dam/levee failure seems like a man-made issue, not natural disaster. The floodwaters from such a failure could be handled under the flood category.	Stacey Stark: Provided an explanation to everyone of how FEMA requires we evaluate if there are High Hazard Potential Dams (HHPD's) or other dams or levees that are at risk of failure. This is a failure of the structure, which results in flooding, but is separate from flooding.
Richard Sanders, Polk County Highway Engineer	<i>Regarding Landslides:</i> Landslide should be moved up to Moderate.	Jody Beauchane – felt that overall landslides at the county level could be prioritized as low. There is a county road along the Red River of the North that may have some risk concerns.

Meeting Participant	Comment, Question or Mitigation Idea Submitted	Facilitator Feedback / How to be Addressed in Plan Update
Jon Steiner, Polk County Environmental Services Administrator	<i>Regarding Flooding:</i> Should flooding be broken into 2 categories: flooding from rivers/streams/lakes vs. flooding from large rainfall events (flashfloods).	Stacey Stark: We include both in our flood risk analysis. "Flood" hazard includes riverine (and lakes) and flash floods. It also includes overtopping of It also includes overtopping of "ring levees" or, temporary flood mitigation structures.
Richard Sanders, Polk County Highway Engineer	<i>Regarding Extreme Wet / Frost Boils and damage to roads:</i> Extreme Wet / Frost Boils are an issue on our township roads. If you have a wet spring but not enough to cause flooding can cause gravel roads to become impassible due to wet or fast frost coming out of ground.	Stacey Stark: Frost boils are not something we have had come up in previous plans so we will follow up and see how to address this under Extreme Cold.
Mori Maher, Middle-Snake-Tamarac Rivers Watershed District (MSTRWD) Administrator	<i>Regarding Dam/Levee Failure:</i> Are ring dikes considered under the Dam/ Levee category?	Stacey Stark: No, we don't address these in the risk analysis for dam/levee failure. We are looking at large impoundment structures that, if they fail, would cause major community damages or put lives at risk.  Jon Steiner, Polk County Environmental Services Administrator - The federal / state government does not recognize ring dikes as providing protection from flood events. Unless designed by the Army Corps of Engineers, they ignore.
April Swenby, Sand Hill River Watershed District Administrator	<i>Regarding Dam/Levee Failure:</i> I feel like the Levee Failure is likely low risk of failure in our area - however, IF one were to fail the damage would be detrimental. Not sure if that ranks it higher. Several of our cities now have levee's that didn't in the original plan.	Stacey Stark: For the purposes of the MHMP we need to talk about impoundments protecting the public /community. If there is a potential inundation area at high risk by a public or private impoundment then we need to work with the county or city jurisdiction to address it. If it's in the MN DNR dam database or national levee inventory we would find it there.

Meeting Participant	Comment, Question or Mitigation Idea Submitted	Facilitator Feedback / How to be Addressed in Plan Update
Jon Steiner, Polk County Environmental Services Administrator	<p><i>Regarding Dam/Levee Failure:</i>            Unless you consider this under "Flooding", if "Levee" category includes the municipal dikes around the Cities of Crookston, EGF or other, then the risk should be more than "Low". Its relatively common that these cities are sandbagging to supplement the levee protection elevation in the event of an ice-jam or additional precipitation would suddenly raise the river levels. There have been 2 floods &gt;100 year flood events (1% chance) in last 20 years.</p>	<p>Stacey Stark/ Bonnie Hundrieser: Your concern is a flooding concern, not a dam/levee failure concern. It is agreed that flooding is of highest concern. As we work with each of the city jurisdictions they will be asked if their flood risk differs geographically from the rest of the county. If a city prioritizes their flood risk as moderate to high, they will have a local mitigation action chart where they identify their measures for reducing or eliminating risk, such as improving levees or continuing to be ready with emergency flood response plans and equipment such as sandbags and pumps.</p>
April Swenby, Sand Hill River Watershed District Administrator	<p><i>Regarding Dam/Levee Failure:</i>            Climax has one - whole city</p>	<p>Stacey Stark: Noted. Their levee is already a mitigation measure in place – if they city expresses that there is a current risk of failure, we can work with them to identify their mitigation actions they will undertake to address it.</p>
Mori Maher, Middle-Snake-Tamarac Rivers Watershed District (MSTRWD) Administrator	<p><i>Regarding Risk Assessments:</i>            In measuring the economic effect of each hazard area, does FEMA account for \$ value for the specific state? I mean a widow broken due to hail in MN would be less affordable compared to Washington DC elsewhere.</p>	<p>Stacey Stark: We don't have an economic loss analysis for hazards except flooding. We do use a national risk index from FEMA – as a companion to this plan you can use it for Polk County...it is something that both the State and FEMA try to take into consideration.</p>
Lisa Schaumburg, City of Mentor City Clerk/Treasurer	<p><i>Regarding Prioritization of Extreme Cold and Landslides:</i>            Extreme cold and landslides should both go higher. The cold probably wasn't dealt with last time because we always just sort of "deal with it" we're "cold blind".</p>	<p>Jody Beauchane: Felt that overall extreme cold and landslides can both remain low for the hazard prioritizations countywide.</p> <p>Stacey Stark: We can note to have extreme cold and landslides be prioritized as low, but we can still address them in the plan (just as dam failure is low, but still addressed with a hazard profile).</p>

Meeting Participant	Comment, Question or Mitigation Idea Submitted	Facilitator Feedback / How to be Addressed in Plan Update
Jon Steiner, Polk County Environmental Services Administrator	<i>Regarding Tornadoes and Windstorms:</i> If you are looking at mobile home parks to inventory for storm shelters, I'd recommend doing so with other similar land uses (rv parks, campgrounds, etc.).	Bonnie Hundrieser: As we work individually with city jurisdictions, we will collect information on where they have areas where people are vulnerable to high wind events like municipal campgrounds, RV parks, etc. Our database will only have licensed mobile home and /RV parks in it.
Jay Anderson, City of Mentor Vol. Fire and Rescue, Fire Chief	Our department is listed as a storm shelter with the county and have been working on getting a generator for backup power. Would this project be eligible for funding?	Bonnie Hundrieser: Obtaining generators with FEMA grant funding is not very likely. It would be best to inquire to the State Hazard Mitigation Officer regarding the project idea if it is for a permanent generator.
Eugene Dufault, Polk County Township Officer's Association - Chair	Great presentation. I would like to expand on the "frost boil" issue and will write that up.	Stacey Stark: Your follow up information will be appreciated, thank you.

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

- 2-2-22 Mtg. #1 Email Invitation
- 2-2-22 Mtg. #1 List of Participants
- 2-2-22 Mtg. #1 Power Point Slides
- 2-2-22 Mtg. #1 Handouts

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

**From:** [Jill Moreno](#)  
**To:** [genedufault@gmail.com](mailto:genedufault@gmail.com); [laura.pettit@usda.gov](mailto:laura.pettit@usda.gov); [Heather.Winkleblack@state.mn.us](mailto:Heather.Winkleblack@state.mn.us); [klein.eastpolk@gmail.com](mailto:klein.eastpolk@gmail.com); [jenny.burrack@mn.usda.gov](mailto:jenny.burrack@mn.usda.gov); [nicole.bernd@wpolk.mnswcd.org](mailto:nicole.bernd@wpolk.mnswcd.org); [luther.newton@usda.gov](mailto:luther.newton@usda.gov); [info@redlakeelectric.com](mailto:info@redlakeelectric.com); [ddalchow@isd592.org](mailto:ddalchow@isd592.org); [jeremyolson@isd593.org](mailto:jeremyolson@isd593.org); [mkolness@egf.k12.mn.us](mailto:mkolness@egf.k12.mn.us); [bclarke@isd599.org](mailto:bclarke@isd599.org); [schase@fosston.k12.mn.us](mailto:schase@fosston.k12.mn.us); [rbruer@win-e-mac.k12.mn.us](mailto:rbruer@win-e-mac.k12.mn.us); [mhclause@crk.umn.edu](mailto:mhclause@crk.umn.edu); [elbeitel@co.pennington.mn.us](mailto:elbeitel@co.pennington.mn.us); [mbernstein@sheriff.co.red-lake.mn.us](mailto:mbernstein@sheriff.co.red-lake.mn.us); [candice.coulter@co.clearwater.mn.us](mailto:candice.coulter@co.clearwater.mn.us); [edward.snetsinger@co.mahnomen.mn.us](mailto:edward.snetsinger@co.mahnomen.mn.us); [garry.johanson@co.norman.mn.us](mailto:garry.johanson@co.norman.mn.us); [James Tadman](#); [Jon Steiner](#); [Jacob Snyder](#); [Rich Sanders](#); [Sarah Reese](#); [Chuck Whiting](#); [Jody Beauchane](#); [Amy Finch](#); [Angie Shimpa](#); [Barbara Sellers](#); [Cassie Heide](#); [David Murphy](#); [Dominica Zarkoff](#); [Jackie Voeller](#); [Kara Bowen](#); [Lisa Liden](#); [Lisa Schaumburg](#); [Lori Wollman](#); [Melissa Finseth](#); [Roseanne Erickson](#); [Stephanie Abentroth](#); [Stephanie Melby](#); [Chad Gunderson - Climax](#); [Daniel Netland](#); [Eric Murphy - Fosston](#); [Jay Anderson - Mentor](#); [Jeff Boushee](#); [Jesse Hickman - Erskine](#); [Joshua Mailhot - Fisher](#); [Justin Shultz - McIntosh](#); [Scott Revier - Winger](#); [Tim Froeber](#); [Wolfe Clark -Fertile](#); [april.swenby@sandhillwatershed.org](mailto:april.swenby@sandhillwatershed.org); [Myron.Jesme@redlakewatershed.org](mailto:Myron.Jesme@redlakewatershed.org); [morteza.maher@mstrwd.org](mailto:morteza.maher@mstrwd.org); [kevin@wildricewatershed.org](mailto:kevin@wildricewatershed.org); [thrdlicka@otpc.com](mailto:thrdlicka@otpc.com); [kolson@pkmcoop.com](mailto:kolson@pkmcoop.com); [jmarcotte@pkmcoop.com](mailto:jmarcotte@pkmcoop.com); [bjjerke@clearwater-polk.com](mailto:bjjerke@clearwater-polk.com); [Jodi.stauss@northlandcollege.edu](mailto:Jodi.stauss@northlandcollege.edu); [shaaven@wildriceelectric.com](mailto:shaaven@wildriceelectric.com)  
**Cc:** [Bonnie K Hundrieser](#)  
**Subject:** Polk County Multi-Hazard Mitigation Plan Update - Meeting Invitation  
**Date:** Thursday, December 2, 2021 12:59:07 PM

---

## POLK COUNTY

### MULTI-HAZARD MITIGATION PLAN UPDATE – MEETING INVITATION

Greetings,

Your presence is requested at a Planning Team Meeting for the update of the **Polk 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: Wednesday, February 2, 2022

Time: 1:00 – 3:00 p.m.

Zoom Link: [https://umn-private.zoom.us/webinar/register/WN\\_\\_6Y4xZ8ZQb2OdDgdy9dUsQ](https://umn-private.zoom.us/webinar/register/WN__6Y4xZ8ZQb2OdDgdy9dUsQ)

**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 Polk 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 Polk 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 Polk 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,

**Jody Beauchane**

Emergency Manager

Polk County Sheriff's Office

(218) 470-8263

E.M: [www.co.polk.mn.us/EM](http://www.co.polk.mn.us/EM)

Disclaimer: Information in this message or an attachment may be government data and thereby subject to the Minnesota Government Data Practices Act, Minnesota Statutes, Chapter 13, may be subject to attorney-client or work product privilege, may be confidential, privileged, proprietary, or otherwise protected, and the unauthorized review, copying, retransmission, or other use or disclosure of the information is strictly prohibited. If you are not the intended recipient of this message, please immediately notify the sender of the transmission error and then promptly delete this message from your computer system.

## Polk County

### 2/2/22 MHMP Planning Team Meeting #1

#### List of Participants (29)

	First Name	Last Name	Organization	Job Title
1	Jody	Beauchane	Polk County Sheriff's Office	Emergency Management Director
2	Jill	Moreno	Polk County Sheriff's Office	Emergency Management Program Assistant
3	James	Tadman	Polk County Sheriff's Office	Sheriff
4	Sarah	Reese	Polk County Public Health	Director
5	Richard	Sanders	Polk County Highway	County Engineer
6	Jon	Steiner	Polk Co Env Svs/Solid Waste	Environmental Services Administrator
7	Terri	Oliver	Polk County Public Health	PHEP Coordinator
8	Daniel	Netland	City of Beltrami Fire Dept.	Fire Chief
9	Jacquelyn	Voeller	City of Climax	Clerk/Treasurer
10	Brandon	Carlson	City Of Crookston	Public Works Director
11	Tim	Froeber	City of Crookston Fire Dept.	Fire Chief
12	Jeff	Boushee	East Grand Forks Fire Dept.	Fire Chief/Emergency Manager
13	Angie	Shimpa	City of Erskine	Clerk/Treasurer
14	Cassie	Heide	City of Fosston	City Administrator
15	Barbara	Sellers	City of Gully	City Clerk
16	Melissa	Finseth	City of McIntosh	Clerk/Treasurer
17	Lisa	Schaumburg	City of Mentor	City Clerk / Treasurer
18	Jay	Anderson	City of Mentor Vol. Fire and Rescue	Chief
19	David	Vraa	City of Nielsville	Mayor
20	Eugene	Dufault	Polk County Township Officer's Association	Chair
21	Nick	Olson	Red Lake Watershed District	Engineering Specialist
22	Heather	Winkleblack	MN HSEM	Region 3 Regional Program Coordinator
23	Luther	Newton	USDA-NRCS	District Conservationist - Team Lead
24	David	Danforth	University of Minnesota Crookston	Director of Facilities and Operations
25	Karen	Olson	PKM Electric	CFO
26	Tara	Jensen	Wild Rice Watershed District	Administrator
27	April	Swenby	Sand Hill River Watershed District	Administrator
28	Nate	Koland	Red Lake Watershed	Field Tech
29	Mori	Maher	Middle-Snake-Tamarac Rivers Watershed District (MSTRWD)	Administrator

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

February 2, 2022



**U-SPATIAL**  
UNIVERSITY OF MINNESOTA DULUTH  
Driven to Discover

## Welcome & Introductions

### U-Spatial@UMD Project Leads



**Stacey Stark**  
Project Manager  
U-Spatial@UMD



**Bonnie Hundrieser**  
HM Planning Specialist  
Hundrieser Consulting LLC

### Polk County Project Lead

- Jody Beauchane, Polk County  
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



2016 Tornado, near City of Beltrami

The purpose of this meeting is to formally convene the **Polk County MHMP Planning Team** for a presentation of the plan update and discussion of key items.

### Agenda:

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

PRESENTER: STACEY STARK

## About your Project Team

**U-SPATIAL**  
UNIVERSITY OF MINNESOTA DULUTH  
Driven to Discover

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

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

### We Bring:

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

PRESENTER: STACEY STARK

## What is Hazard Mitigation?

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

### Hazard Mitigation Planning:

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



PRESENTER: BONNIE HUNDRIESER



## MHMP Overview & Timeline



2019 Flood, washed out County Road

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.

### Polk 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.

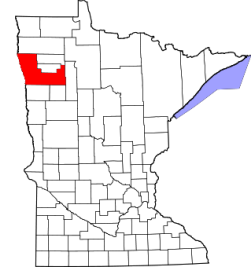
PRESENTER : BONNIE HUNDRIESER

## Who the Plan Covers



The Polk 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



### Polk County Planning Team

- Polk 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)



2019 Flood, home near Crookston



2019 High winds break power poles

PRESENTER : STACEY STARR

# Polk County Review of Existing Hazard Risk Prioritization

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

Please consider any changes for these priorities in 2022 based on:

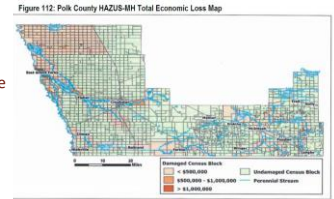
- Increase or decrease in risk over the last 5 years (probability + severity)
- Local vulnerabilities (people, systems, infrastructure)
- New development

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 NCEI Storm Events Database through 2021, the relative frequency of tornadoes is .38 per year (72 total)
- Tornadoes occurred in 2019 (EF2) and 2018 (EF1, EF2)
- Identify mobile home locations



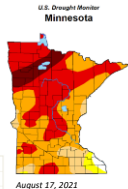
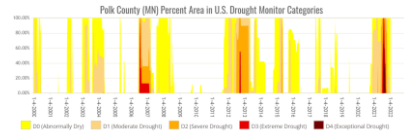
2018 City of Winger tornado damage

PRESENTER : STACEY STARK

## Drought (High)



- From 2000 – 2018, Polk County was in at least Moderate (D1) Drought 25 - 27% of the time.



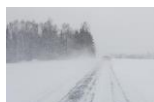
July, 2021 drought - low lake levels

PRESENTER : STACEY STARK

## Winter Storms (Moderate)



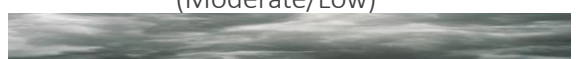
- 105 winter weather related events (blizzards, heavy snows, ice storms, winter storms, and winter weather ) have occurred since January 2012 (10-11 year)
- Based on all records in the NCEI Storm Events Database, the relative frequency of winter-related storm events is 9.6 per year.



Polk County blizzard warnings issued by NWS

PRESENTER : STACEY STARK

## Windstorms, Lightning, Hail (Moderate/Low)



- Each addressed individually
- The relative frequency of all wind-related events since January of 2012 is 10.5 per year.
- There were 58 hailstorms with hail greater or equal to 1-inch since 2012. The relative frequency of all hail events is 8.8 per year.
- Hazards deemed low risk and without significant mitigation actions, can be dropped from the plan.



Minnesota storm front, InForum photo



Central MN hailstorm Brainerd Dispatch photo

PRESENTER : STACEY STARK

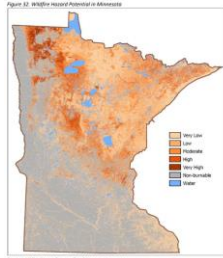
## Wildfire/Wildland Fire (Moderate)



- Minnesota DNR tracked wildfires in Polk County between 2000 and 2018 indicate 5 fires/yr and 690 acres/yr burned
- 10<sup>th</sup> highest in state for crop indemnity claims due to wildfire



2021 Glacial Ridge Wildfire



Source: USDA Forest Service, Fire Management Report

PRESENTER : STACEY STARK

## Extreme Heat (Low)



- From 2012 - 2021, daily high temperatures > 90 °F were recorded 67 times at Crookston NW Exp weather station. Polk County experiences an average of 6-7 extreme heat days each year.
- Three Excessive Heat Warnings (Heat Index > 105 °F) in NCEI database, One in the last 10 years.



## Extreme Cold (N/A)



- From 2012 - 2021, daily low temperatures < -18 °F were recorded 126 times at Crookston NW Exp weather station. Polk experiences an average of 12-13 extreme cold days each year.
- -38°F recorded by the Crookston NW Exp weather station on January 30-31, 2019
- The relative frequency of cold-related events (NWS Warning issued due to wind chill of -35 °F or colder ) in Polk County is 6.5 per year.

PRESENTER : STACEY STARK

## Dam Failure (Low)



- No high hazard potential dams in Polk County
- 18 dams in Polk 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



## Polk County Review of Hazard Risk Prioritization

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

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

PRESENTER : STACEY STARK

## Mitigation Strategies & Example Actions



See Handout: Mitigation Strategies & Action Types

PRESENTER : BONNIE HUNDRIESER

## #1 - Local Planning & Regulations



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

**EXAMPLES:**

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



PRESENTER : BONNIE HUNDRIESER

## #2 – Structure and Infrastructure Projects



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

**EXAMPLES:**

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



PRESENTER : BONNIE HUNDRIESER

## Tornado Safe Rooms

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



1998 Tornado damage to MHP in Le Center, MN.



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



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

PRESENTER : BONNIE HUNDRIESER

## Utility Undergrounding

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



PRESENTER : BONNIE HUNDRIESER

## #3 – Natural Systems Protection



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

**EXAMPLES:**

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



PRESENTER : BONNIE HUNDRIESER

## #4 – Education & Awareness Programs

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

**EXAMPLES:**

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



PRESENTER : BONNIE HUNDRIESER

## #5 – Mitigation Preparedness & Response Support

These are actions that help to protect life and property prior to, during, and immediately after a disaster or hazard event.

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



**EXAMPLES:**

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

PRESENTER : BONNIE HUNDRIESER

## FEMA HMA Grant Program

See Handout: HSEM HMA Grants Program Overview

✓ All applicants must have or be covered under an approved MHMP.

✓ Eligible applicants: State & local governments, Tribal Communities, and certain private non-profit organizations or institutions.

✓ Cost Share: Federal 75%/ Applicant 25%

✓ Eligible projects must be identified in the local MHMP.

**Examples of Eligible Activities**

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

PRESENTER : BONNIE HUNDRIESER

## Historical Projects in Polk County Resulting from HMA Funding

## 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

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](mailto:U-Spatial@UMD)

[slstark@d.umn.edu](mailto:slstark@d.umn.edu)

218-726-7438

Bonnie Hundrieser, Consultant

**Hundrieser Consulting LLC**

[hundrieserconsulting@outlook.com](mailto:hundrieserconsulting@outlook.com)

218-343-3468

**U-SPATIAL**  
UNIVERSITY OF MINNESOTA DULUTH  
Driven to Discover

  
**HUNDRIESER CONSULTING LLC**

PRESENTER : STACEY STARK

# Mitigation Strategies & Action Types

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

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

Mitigation Strategy	Description	Example Mitigation Actions
<b>Local Planning and Regulations</b>	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"> <li>• Comprehensive plans</li> <li>• Land use ordinances</li> <li>• Planning and zoning</li> <li>• Building codes and enforcement</li> <li>• Floodplain ordinances</li> <li>• NFIP Community Rating System</li> <li>• Capital improvement programs</li> <li>• Open space preservation</li> <li>• Shoreline codes</li> <li>• Stormwater management regulations and master plans</li> <li>• Mobile home park compliance for storm shelters</li> </ul>
<b>Structure and Infrastructure Projects</b>	<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"> <li>• Property Acquisitions and elevations of structures in flood prone areas</li> <li>• Utility undergrounding</li> <li>• Structural retrofits (i.e., metal roofs)</li> <li>• Floodwalls and retaining walls</li> <li>• Detention and retention structures</li> <li>• Culvert Installation/Modification</li> <li>• Roads &amp; Bridge risk reduction</li> <li>• Safe Room (New construction or facility retrofit)</li> <li>• Green Infrastructure Methods</li> </ul> <p><i>Many of these types of actions are projects eligible for funding through FEMA HMA grant programs.</i></p>

Mitigation Strategy	Description	Example Mitigation Actions
<p><b>Natural Systems Protection</b></p>	<p>These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.</p>	<ul style="list-style-type: none"> <li>• Soil stabilization for sediment and erosion control</li> <li>• Floodplain and Stream corridor restoration</li> <li>• Slope management</li> <li>• Forest management (defensible space, fuels reduction, sprinkler systems)</li> <li>• Conservation easements</li> <li>• Wetland restoration and preservation</li> <li>• Aquifer Storage &amp; Recovery</li> <li>• Flood Diversion and Storage</li> </ul> <p><i>Many of these types of actions are projects eligible for funding through FEMA HMA grant programs.</i></p>
<p><b>Education and Awareness Programs</b></p>	<p>These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady or Firewise Communities. Although this type of mitigation reduces risk less directly than structural projects or regulation, it is an important foundation. A greater understanding and awareness of hazards and risk among local officials, stakeholders, and the public is more likely to lead to direct actions that support life safety and lessen property damage.</p>	<ul style="list-style-type: none"> <li>• Radio or television spots</li> <li>• Websites with maps and information</li> <li>• Social media outreach</li> <li>• Promotion of sign-up for emergency warnings</li> <li>• Real estate disclosure</li> <li>• Promotion of NFIP insurance to property owners</li> <li>• Presentations to school groups or neighborhood organizations</li> <li>• Mailings to residents in hazard-prone areas.</li> <li>• NWS StormReady Program</li> <li>• Firewise Communities</li> </ul> <p><i>Some of these types of actions may be projects eligible for funding through the FEMA HMA "5 Percent Initiative Program".</i></p>
<p><b>Mitigation Preparedness and Response Support</b></p>	<p>This is a State of Minnesota mitigation strategy with the intent of covering emergency preparedness actions that protect life and property prior to, during, and immediately after a disaster or hazard event. These activities are typically not considered mitigation, but support reduction of the effects of damaging events.</p>	<ul style="list-style-type: none"> <li>• Emergency Operations Plan</li> <li>• Flood fight plans and preparedness measures</li> <li>• Dam emergency action plans</li> <li>• Emergency Warning Systems (i.e., CodeRed, warning sirens)</li> <li>• Generator backup power</li> <li>• NWS Storm Spotter Training</li> <li>• Training and education for local elected officials and key partners.</li> </ul>





**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

# Polk County MHMP Planning Team Meeting #2

## November 14, 2022 - Meeting Summary & Documentation

**Summary:** On Monday, November 14, 2022, Polk County Emergency Management convened key county, city, and township representatives, as well as neighboring jurisdictions and other stakeholders to participate in the 2<sup>nd</sup> and final Planning Team Meeting for the update of the Polk County Multi-Hazard Mitigation Plan (MHMP). The purpose of the meeting was to formally convene the Polk 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:** Polk 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 **25** people attended the meeting. Representation included elected officials and departmental staff from Polk County and the cities of Climax, Crookston, East Grand Forks, Fosston, Gully, McIntosh, Mentor, Nielsville, and Winger. The cities of Beltrami, Erskine, Fertile, Fisher, Lengby, and Trail were not available to attend. Other stakeholders, including neighboring jurisdictions, participated in the meeting. A participant list is included with this meeting summary.

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

- Meeting Purpose and Agenda
- About the Project Team
- Overview of Plan Update
- Who the Plan Covers
- Who Needs to Participate
- Prioritization of Hazards
- Hazards Risk Assessment (Critical Infrastructure, Population Vulnerability Factors, and Review of High/Moderate Priority Natural Hazards)
- Development of Mitigation Actions
- FEMA HMA Grant Funding
- Overview of Mitigation Action Charts and Discussion
- Discussion of Next Steps & answer your questions

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

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

Meeting Participant	Comment, Question or Mitigation Idea Submitted	Facilitator Feedback / How to be Addressed in Plan Update
Rich Sanders, Polk County Director of Public Works	Regarding flooding slide, historical events – When will 2022 be included?	Stacey Stark - We refresh the data on the website quarterly so that it syncs with the database. I did find a record for 2022 (Rich noted this was a county wide flood event).
Rich Sanders, Polk County Director of Public Works	Regarding slide on extreme cold and the data shared from the Crookston Northwest Experiment Station – MnDOT has other weather stations located in Polk or surrounding areas.	Stacey Stark – Noted the data may not be in the same format we use; good to know this however.
Mori Maher, Middle-Snake-Tamarac Rivers Watershed District, Administrator	Regarding the new interactive map for the plan update - Can you provide the link to the current interactive map?	Stacey Stark – We will be sharing it soon when we conduct the open public review period. Both the PDF version of the plan and the interactive content will be available.
Rich Sanders, Polk County Director of Public Works  Nicole Bernd, West Polk SWCD, Local Water Planner	Regarding hazard profile slide on landslides and overview of data on landslide events in Polk County – I saw that most of the landslide data was along the Red Lake River... there should be same if not more along Red River of the North and Sandhill River.	Stacey Stark – The data source we have is from a detailed study by multiple universities, where they chose specific areas to focus on. It’s not really a great assessment of the entire risk but it is the data we have to work with. If anyone has further data in spatial or narrative form of events in other areas we would take them.  Nicole Bernd – I can get you information on the bank slide on the Red River of the North that happened recently if you wish. / Stacey Stark - Thank you. Please send to me and we can include additional spatial or narrative data.
Eugene Dufault, Polk County Township Association President	Regarding final adoptions for the plan – Will Townships need to do this as well (pass adopting resolutions?)	Bonnie Hundrieser – It is not necessary for townships to pass a resolution to adopt the plan as they fall under the umbrella of the county. However, if the Township Association would like to pass one shared resolution that would be fine if you would like to do so. This is something we can check back in with you when Polk County Emergency Management is working on gathering the city adoptions.

**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.

**Post Meeting Discussion Regarding the Prioritization of Natural Hazards:**

After further consideration after the 2<sup>nd</sup> planning team meeting, Polk County Emergency Management contacted the U-Spatial team with a request to make a distinction between the highest priority hazards of flooding, tornadoes, and wind from other significant hazards, so drought and wildfire were moved to the moderate priority. Similarly, although extreme cold was expressed as a low risk at the meetings, to acknowledge its higher priority than other low priority hazards, it was also moved to the moderate category. The changes in hazard prioritizations will be as following in the list below.

Updated prioritization of hazards for 2023 Polk County HMP update

Flooding: High  
Tornadoes: High  
Drought: High (**changed to Moderate**)  
Wildfire: High (**changed to Moderate**)  
Windstorms: High  
Winter Storms: Moderate  
Dam/Levee Failure: Low – but included  
Extreme Cold: Low – but included (**changed to Moderate**)  
Landslides: Low – but included  
Hail: Low  
Extreme Heat: Low  
Lightning: Low

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

- 11-14-22 Mtg. #2 Email Invitation
- 11-14-22 Mtg. #2 List of Participants
- 11-14-22 Mtg. #2 Power Point Slides
- 11-14-22 Mtg. #2 Handouts

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

**From:** [Jill Moreno](#)  
**To:** ["genedufault@gmail.com"](#); ["laura.pettit@usda.gov"](#); ["klein.eastpolk@gmail.com"](#); ["jenny.burrack@mn.usda.gov"](#); ["nicole.bernd@wpolk.mnswcd.org"](#); ["luther.newton@usda.gov"](#); ["info@redlakeelectric.com"](#); ["ddalchow@isd592.org"](#); ["davekuehn@isd593.org"](#); ["mkolness@egf.k12.mn.us"](#); ["bclarke@isd599.org"](#); ["schase@fosston.k12.mn.us"](#); ["rbruer@win-e-mac.k12.mn.us"](#); ["mhclause@crk.umn.edu"](#); ["elbeitel@co.pennington.mn.us"](#); ["mbernstein@sheriff.co.red-lake.mn.us"](#); ["candice.coulter@co.clearwater.mn.us"](#); ["edward.snetsinger@co.mahnomen.mn.us"](#); ["garry.johanson@co.norman.mn.us"](#); ["james.tadman"](#); ["Jon Steiner"](#); ["Jacob Snyder"](#); ["Rich Sanders"](#); ["Sarah Reese"](#); ["Chuck Whiting"](#); ["Jody Beauchane"](#); ["Angie Shimpa"](#); ["Barbara Sellers"](#); ["Cassie Heide"](#); ["David Murphy"](#); ["Dominica Zarkoff"](#); ["Jackie Voeller"](#); ["Kara Bowen"](#); ["Lisa Liden"](#); ["Lisa Schaumburg"](#); ["Lori Wollman"](#); ["Melissa Finseth"](#); ["Roseanne Erickson"](#); ["Stephanie Abentroth"](#); ["Stephanie Melby"](#); ["Chad Gunderson - Climax"](#); ["Danny Netland - Beltrami"](#); ["Eric Murphy - Fosston"](#); ["Jay Anderson - Mentor"](#); ["Jeff Boushee"](#); ["Jesse Hickman - Erskine"](#); ["Justin Shultz - McIntosh"](#); ["Tim Froeber"](#); ["april.swenby@sandhillwatershed.org"](#); ["Myron.Jesme@redlakewatershed.org"](#); ["morteza.maher@mstrwd.org"](#); ["tara@wildricewatershed.org"](#); ["thrdlicka@otpc.com"](#); ["kolson@pkmcoop.com"](#); ["jmarcotte@pkmcoop.com"](#); ["bbjerke@clearwater-polk.com"](#); ["Jodi.stauss@northlandcollege.edu"](#); ["thoudek@wildriceelectric.com"](#); ["Steve Massmann -Winger"](#); ["Jason Haas"](#); ["arystad@crookston.mn.us"](#); ["equirk@grandforksgov.com"](#); ["heather.winkleblack@state.mn.us"](#)  
**Cc:** [Bonnie K Hundrieser](#)  
**Subject:** POLK COUNTY MULTI-HAZARD MITIGATION PLAN UPDATE - MEETING INVITATION 11-14-22  
**Date:** Friday, September 23, 2022 10:51:55 AM

---

## POLK COUNTY

### MULTI-HAZARD MITIGATION PLAN UPDATE – MEETING INVITATION

Greetings,

Your presence is requested at the **2nd Planning Team Meeting** for the update of the **Polk 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: Monday, November 14, 2022

Time: 2:00 p.m. – 4:00 p.m.

Zoom Link: [https://umn-private.zoom.us/webinar/register/WN\\_wYGzo6zdS2WJBifjC\\_USDg](https://umn-private.zoom.us/webinar/register/WN_wYGzo6zdS2WJBifjC_USDg)

#### **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 Polk 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 Polk 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,

**Jody Beauchane**

Emergency Manager

Polk County Sheriff's Office

(218) 470-8263

E.M: [www.co.polk.mn.us/EM](http://www.co.polk.mn.us/EM)

Disclaimer: Information in this message or an attachment may be government data and thereby subject to the Minnesota Government Data Practices Act, Minnesota Statutes, Chapter 13, may be subject to attorney-client or work product privilege, may be confidential, privileged, proprietary, or otherwise protected, and the unauthorized review, copying, retransmission, or other use or disclosure of the information is strictly prohibited. If you are not the intended recipient of this message, please immediately notify the sender of the transmission error and then promptly delete this message from your computer system.



**From:** [Jill Moreno](mailto:Jill.Moreno)  
**To:** "[genedufault@gmail.com](mailto:genedufault@gmail.com)"; "[laura.pettit@usda.gov](mailto:laura.pettit@usda.gov)"; "[klein.eastpolk@gmail.com](mailto:klein.eastpolk@gmail.com)"; "[jenny.burrack@mn.usda.gov](mailto:jenny.burrack@mn.usda.gov)"; "[nicole.bernd@wpolk.mnswcd.org](mailto:nicole.bernd@wpolk.mnswcd.org)"; "[luther.newton@usda.gov](mailto:luther.newton@usda.gov)"; "[info@redlakeelectric.com](mailto:info@redlakeelectric.com)"; "[ddalchow@isd592.org](mailto:ddalchow@isd592.org)"; "[davekuehn@isd593.org](mailto:davekuehn@isd593.org)"; "[mkolness@egf.k12.mn.us](mailto:mkolness@egf.k12.mn.us)"; "[bclarke@isd599.org](mailto:bclarke@isd599.org)"; "[rbruer@win-e-mac.k12.mn.us](mailto:rbruer@win-e-mac.k12.mn.us)"; "[mhclause@crk.umn.edu](mailto:mhclause@crk.umn.edu)"; "[elbeitel@co.pennington.mn.us](mailto:elbeitel@co.pennington.mn.us)"; "[mbernstein@sheriff.co.red-lake.mn.us](mailto:mbernstein@sheriff.co.red-lake.mn.us)"; "[candice.coulter@co.clearwater.mn.us](mailto:candice.coulter@co.clearwater.mn.us)"; "[edward.snetsinger@co.mahnomen.mn.us](mailto:edward.snetsinger@co.mahnomen.mn.us)"; "[garry.johanson@co.norman.mn.us](mailto:garry.johanson@co.norman.mn.us)"; [James tadman](#); [Jon Steiner](#); [Jacob Snyder](#); [Rich Sanders](#); [Sarah Reese](#); [Chuck Whiting](#); [Jody Beauchane](#); [Angie Shimpa](#); [Barbara Sellers](#); [Cassie Heide](#); [David Murphy](#); [Dominica Zarkoff](#); [Jackie Voeller](#); [Kara Bowen](#); [Lisa Liden](#); [Lisa Schaumburg](#); [Lori Wollman](#); [Melissa Finseth](#); [Roseanne Erickson](#); [Stephanie Abentroth](#); [Stephanie Melby](#); [Chad Gunderson - Climax](#); [Danny Netland - Beltrami](#); [Eric Murphy - Fosston](#); [Jay Anderson - Mentor](#); [Jeff Boushee](#); [Jesse Hickman - Erskine](#); [Justin Shultz - McIntosh](#); [Tim Froeber](#); [april.swenby@sandhillwatershed.org](mailto:april.swenby@sandhillwatershed.org)"; [Myron.Jesme@redlakewatershed.org](mailto:Myron.Jesme@redlakewatershed.org)"; [morteza.maher@mstrwd.org](mailto:morteza.maher@mstrwd.org)"; [tara@wildricewatershed.org](mailto:tara@wildricewatershed.org)"; [thrdlicka@otpc.com](mailto:thrdlicka@otpc.com)"; [kolson@pkmcoop.com](mailto:kolson@pkmcoop.com)"; [jmarcotte@pkmcoop.com](mailto:jmarcotte@pkmcoop.com)"; [dlefebvre@clearwater-polk.com](mailto:dlefebvre@clearwater-polk.com)"; [Jodi.stauss@northlandcollege.edu](mailto:Jodi.stauss@northlandcollege.edu)"; [thoudek@wildriceelectric.com](mailto:thoudek@wildriceelectric.com); [Steve Massmann -Winger](#); [Jason Haas](#); [arystad@crookston.mn.us](mailto:arystad@crookston.mn.us)"; [equirk@grandforksgov.com](mailto:equirk@grandforksgov.com); [heather.winkleblack@state.mn.us](mailto:heather.winkleblack@state.mn.us)"; [tseik@isd601.org](mailto:tseik@isd601.org)  
**Cc:** "[Bonnie K Hundrieser](mailto:Bonnie.K.Hundrieser)"  
**Subject:** RE: POLK COUNTY MULTI-HAZARD MITIGATION PLAN UPDATE - MEETING INVITATION 11-14-22  
**Date:** Monday, November 7, 2022 3:20:23 PM

---

This is a friendly reminder to please register for the upcoming Polk County Multi-Hazard Mitigation plan update meeting. This meeting is the Final planning meeting for the hazard mitigation planning process. Please use the link below to register. Once you are registered you will be sent the meeting information and be placed on the RSVP list. Please let me know if you have questions.

**We will be holding the meeting virtually using Zoom webinar:**

Date: Monday, November 14, 2022

Time: 2:00 p.m. – 4:00 p.m.

Zoom Link: [https://umn-private.zoom.us/webinar/register/WN\\_wYGzo6zdS2WJBifjC\\_USDg](https://umn-private.zoom.us/webinar/register/WN_wYGzo6zdS2WJBifjC_USDg)

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

Jill Moreno

EM Support

Polk County Sheriff's Office

Ph 218-470-8290

---

**From:** Jill Moreno

**Sent:** Friday, September 23, 2022 10:52 AM

**To:** 'genedufault@gmail.com' <genedufault@gmail.com>; 'laura.pettit@usda.gov' <laura.pettit@usda.gov>; 'klein.eastpolk@gmail.com' <klein.eastpolk@gmail.com>; 'jenny.burrack@mn.usda.gov' <jenny.burrack@mn.usda.gov>; 'nicole.bernd@wpolk.mnswcd.org' <nicole.bernd@wpolk.mnswcd.org>; 'luther.newton@usda.gov' <luther.newton@usda.gov>; 'info@redlakeelectric.com' <info@redlakeelectric.com>; 'ddalchow@isd592.org' <ddalchow@isd592.org>; 'davekuehn@isd593.org' <davekuehn@isd593.org>; 'mkolness@egf.k12.mn.us' <mkolness@egf.k12.mn.us>; 'bclarke@isd599.org'

## Polk County

11/14/22 MHMP Planning Team Meeting #2

List of Participants (25)

	<b>First Name</b>	<b>Last Name</b>	<b>Organization</b>	<b>Job Title</b>
1	Jody	Beauchane	Polk County Emergency Management	Emergency Management Director
2	Jill	Moreno	Polk County Emergency Management	EM Program Assistant
3	Jacob	Snyder	Polk County Environmental Services	Asst. Administrator
4	Rich	Sanders	Polk County Public Works	County Engineer
5	Jim	Tadman	Polk County Sheriff's Office	Sheriff
6	Chuck	Whiting	Polk County	County Administrator
7	Jacquelyn	Voeller	City of Climax	Clerk/Treasurer
8	Brandon	Carlson	City Of Crookston	Public Works Director
9	Ryan	Lindtwed	City of Crookston	Finance Director
10	Darin	Selzler	City of Crookston	Chief of Police
11	Megan	Nelson	City of East Grand Forks	City Clerk
12	Jeff	Boushee	City of East Grand Forks	Fire Chief / EM
13	Cassie	Heide	City of Fosston	City Administrator
14	Barbara	Sellers	City of Gully	City Clerk
15	Melissa	Finseth	City of McIntosh	Clerk/Treasurer
16	Stephanie	Abentroth	City of Nielsville	City Clerk
17	David	Vraa	City of Nielsville	Mayor
18	Lisa	Schaumburg	City of Winger and City of Mentor	City Clerk – Treasurer (both cities)
19	Eugene	Dufault	Polk County Township Officer's Association	President
20	Luther	Newton	USDA-NRCS	District Conservationist
21	Nicole	Bernd	West Polk Soil & Water Conservation District	Local Water Planner
22	Mori	Maher	Middle-Snake-Tamarac Rivers Watershed District	Administrator
23	April	Swenby	Sand Hill River Watershed District	Administrator
24	Dan	Dalchow	Climax Shelly ISD 592	Supt.
25	Todd	Selk	Fosston Public Schools	Superintendent

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

November 14, 2022



## Welcome & Introductions

U-Spatial@UMD Project Leads



**Stacey Stark**  
Project Manager  
U-Spatial@UMD



**Bonnie Hundrieser**  
HM Planning Specialist  
Hundrieser Consulting LLC

Polk County Project Lead

- Jody Beauchane, Polk County 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



2016 Tornado, near City of Beltrami

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

Polk 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.

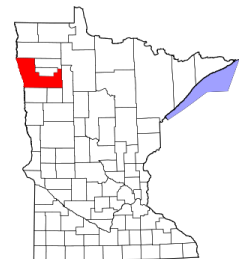
PRESENTER: BONNIE HUNDRIESER

## Who the Plan Covers



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

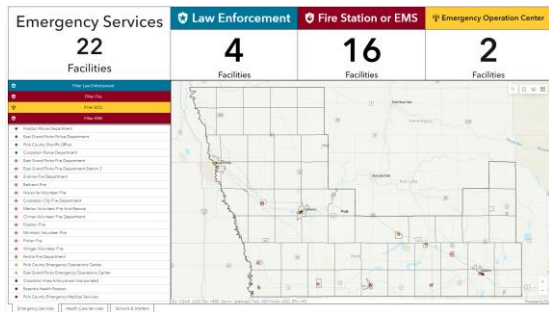
### Website companion

- 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



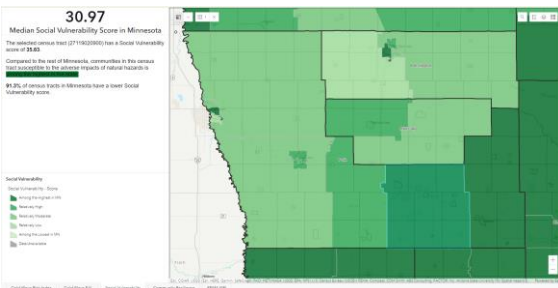
PRESENTER: STACEY STARK

## All Hazards - Critical Infrastructure



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



2019 Flood, washed out County Road

PRESENTER: STACEY STARK

# Prioritization of Hazards for Polk County



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

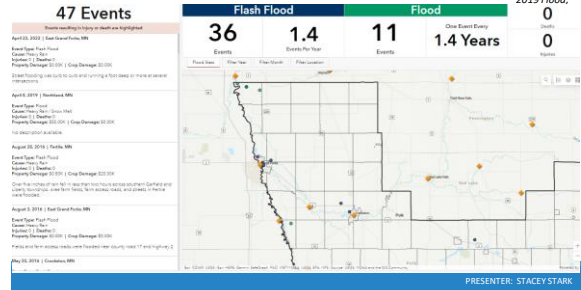
- Probability and Severity of natural hazard events (risk)
- Observed increase or decrease in risk since 2015
- Jurisdictional variations in risk (i.e., local vulnerabilities, changes in development)

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

PRESENTER: BONNIE HUNDRIESER

## POLK COUNTY: Flooding (High)

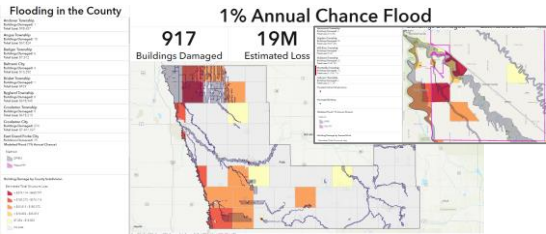
2019 flood over county road



## POLK COUNTY: Flooding (High)



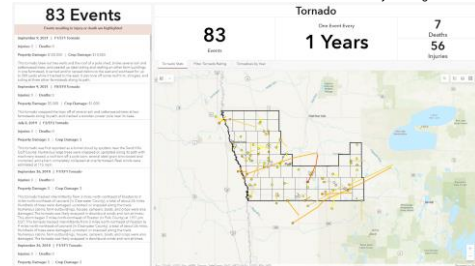
2019 Flood, home near Crookston



## POLK COUNTY: Tornadoes (High)



2018 City of Winger tornado damage



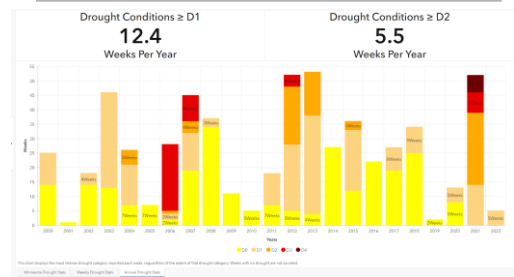
## POLK COUNTY: Windstorms (High)



2019 High winds break power poles



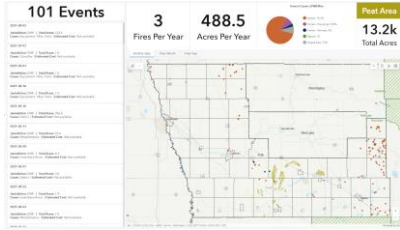
## POLK COUNTY: Drought (High)



## POLK COUNTY: Wildfire (High)



2021 Glacial Ridge Fire

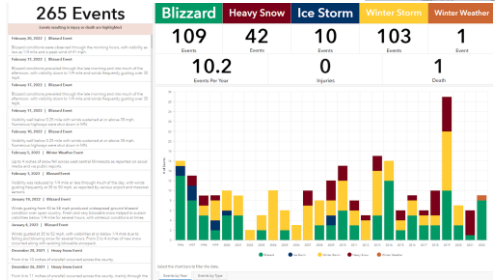


**Program Gaps:**

- Update of Polk County Community Wildfire Protection Plan (CWPP)
- Continued wildfire safety & awareness to the public
- Rural water access for wildland fire fighting (dry hydrants, well access)

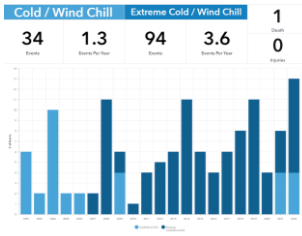
PRESENTER: STACEY STARK

## POLK COUNTY: Winter Storms (Moderate)



PRESENTER: STACEY STARK

## POLK COUNTY: Extreme Cold (Low, but included)



The Crookston Northwest Experiment Station experiences a daily minimum temperature of  $\leq -18^{\circ}\text{F}$  an average of 69 days per year.

**Program Gaps and Deficiencies:**

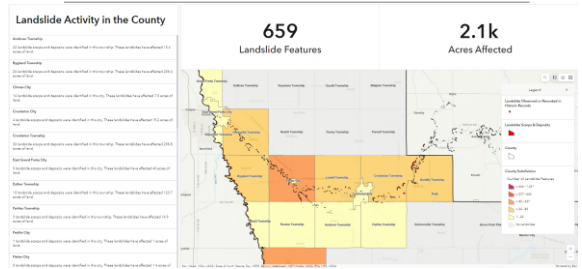
*Obtaining generators for backup power to healthcare facilities and designated shelter facilities.*

**Plans and Programs in Place**

- Emergency Notifications – NWS & Polk County
- Emergency Management
- School Closings – policy and communication plans
- NWS Winter Hazard Awareness Week – public education & awareness

PRESENTER: STACEY STARK

## POLK COUNTY: Landslides (Low, but included)



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



**Polk County Examples:**

- Participating in the NFIP
- Collaborating with East/West SWCD's and local watershed districts for flood damage reduction planning & projects
- Working with MHP operators to be in compliance with Minnesota State statutes for storm shelters & evacuation plans.
- Work with MN DNR Firewise and local fire departments to develop a Community Wildfire Protection Plan for Polk County



PRESENTER: BONNIE HUNDRIESER

## Structure & Infrastructure Projects

**Polk County Examples:**

- Address the need for storm shelters and outdoor warning sirens at Cross Lake-Tillberg Park and Polk County Park.
- Burying powerlines to reduce power failure
- Implementing stormwater improvement projects (i.e. drainage improvements, culvert upsizing).
- Working with Sand Hill River Watershed District on slope stabilization & flood mitigation project
- Conducting property buyouts of homes at risk from repetitive flooding and convert to open space.



PRESENTER: BONNIE HUNDRIESER

## Natural Systems Protection



**Polk County Examples:**

- Work with property owners to address fuels reduction for wildfire mitigation
- 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

**Polk County Examples:**

- Promoting sign-up for the County's Everbridge emergency notification system.
- Promoting residents to be aware of and prepared for severe weather and periods of extreme cold.
- Encouraging residents to maintain sump pumps and to clear street drains of debris.
- Conducting public outreach during periods of drought to raise awareness of water conservation measures and the dangers of wildland fire.



PRESENTER: BONNIE HUNDRIESER

# Mitigation Preparedness & Response Support

## Polk County Examples:

- Work with local jurisdictions to acquire generator backup power (i.e., lift stations, City Hall, Fire Hall, community centers).
- Updating County/Local EOPs
- Mass Care Shelter Planning
- Working with long-term care facilities to be prepared for power outages or evacuation.
- Annual SKYWARN Storm Spotter Training with National Weather Services



PRESENTER: BONNIE HUNDRIESER

# Comments and Questions?



## Fall/Winter 2022

### EM Review of Draft Plan and Public Review & Comment Period



Following Planning Team Mtg. #2

- EM review of draft plan
- Conduct public review & comment period (News Release #2)
- Document public outreach
- Incorporate public 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](mailto:slstark@d.umn.edu)  
 218-726-7438

Bonnie Hundrieser, HM Planner  
**Hundrieser Consulting LLC**  
[hundrieserconsulting@outlook.com](mailto: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
<b>Local Planning and Regulations</b>	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"> <li>• Comprehensive plans</li> <li>• Land use ordinances</li> <li>• Planning and zoning</li> <li>• Building codes and enforcement</li> <li>• Floodplain ordinances</li> <li>• NFIP Community Rating System</li> <li>• Capital improvement programs</li> <li>• Open space preservation</li> <li>• Shoreline codes</li> <li>• Stormwater management regulations and master plans</li> <li>• Mobile home park compliance for storm shelters</li> </ul>
<b>Structure and Infrastructure Projects</b>	<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"> <li>• Property Acquisitions and elevations of structures in flood prone areas</li> <li>• Utility undergrounding</li> <li>• Structural retrofits (i.e., metal roofs)</li> <li>• Floodwalls and retaining walls</li> <li>• Detention and retention structures</li> <li>• Culvert Installation/Modification</li> <li>• Roads &amp; Bridge risk reduction</li> <li>• Safe Room (New construction or facility retrofit)</li> <li>• Green Infrastructure Methods</li> </ul> <p><i>Many of these types of actions are projects eligible for funding through FEMA HMA grant programs.</i></p>

Mitigation Strategy	Description	Example Mitigation Actions
<p><b>Natural Systems Protection</b></p>	<p>These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.</p>	<ul style="list-style-type: none"> <li>• Soil stabilization for sediment and erosion control</li> <li>• Floodplain and Stream corridor restoration</li> <li>• Slope management</li> <li>• Forest management (defensible space, fuels reduction, sprinkler systems)</li> <li>• Conservation easements</li> <li>• Wetland restoration and preservation</li> <li>• Aquifer Storage &amp; Recovery</li> <li>• Flood Diversion and Storage</li> </ul> <p><i>Many of these types of actions are projects eligible for funding through FEMA HMA grant programs.</i></p>
<p><b>Education and Awareness Programs</b></p>	<p>These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady or Firewise Communities. Although this type of mitigation reduces risk less directly than structural projects or regulation, it is an important foundation. A greater understanding and awareness of hazards and risk among local officials, stakeholders, and the public is more likely to lead to direct actions that support life safety and lessen property damage.</p>	<ul style="list-style-type: none"> <li>• Radio or television spots</li> <li>• Websites with maps and information</li> <li>• Social media outreach</li> <li>• Promotion of sign-up for emergency warnings</li> <li>• Real estate disclosure</li> <li>• Promotion of NFIP insurance to property owners</li> <li>• Presentations to school groups or neighborhood organizations</li> <li>• Mailings to residents in hazard-prone areas.</li> <li>• NWS StormReady Program</li> <li>• Firewise Communities</li> </ul> <p><i>Some of these types of actions may be projects eligible for funding through the FEMA HMA "5 Percent Initiative Program".</i></p>
<p><b>Mitigation Preparedness and Response Support</b></p>	<p>This is a State of Minnesota mitigation strategy with the intent of covering emergency preparedness actions that protect life and property prior to, during, and immediately after a disaster or hazard event. These activities are typically not considered mitigation, but support reduction of the effects of damaging events.</p>	<ul style="list-style-type: none"> <li>• Emergency Operations Plan</li> <li>• Flood fight plans and preparedness measures</li> <li>• Dam emergency action plans</li> <li>• Emergency Warning Systems (i.e., CodeRed, warning sirens)</li> <li>• Generator backup power</li> <li>• NWS Storm Spotter Training</li> <li>• Training and education for local elected officials and key partners.</li> </ul>

# **Appendix G – Public Outreach & Engagement Documentation**

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

**Overview:** On September 2, 2021, Polk 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. Polk 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 Polk 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 Polk 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**

##### **9/4/21 County Resident Email to Polk County Emergency Management**

One of the things that concerns me about any potential threat to our area is communications. Not only for our first responders but also the general public. Let’s say cell phone service goes out and members of the public need to contact first responders but area unable to because there is no phone service. One of the things I found was a device called gotenna. It is a small bluetooth device that pairs with a person’s

phone and using radio frequencies is able to transmit data and location information. So, in the situation above with the cell phone service out. If the person had a gotenna they could use the shout out feature that basically lets every other gotenna user in the area know that there is an emergency and the location of that emergency. In essence the gotenna creates a mesh network. This is what Puerto Rico did in 2019 with great success. I think if our community set up some strategic gotenna relays in our area and then educated the public on their practical application it could be very effective back up communication system for a community. As I read up more on them it appears more and more emergency management offices are doing just that.

Thank you,  
Shane

### **9/9/21 Polk County Emergency Management Response**

Hello Shane,

Thank you for submitting your feedback to us regarding the Polk County hazard mitigation plan update. We appreciate your concern and suggestions regarding emergency communications. We've made note of your thoughtful comment and resource links and will evaluate how it may be addressed under the plan update.

Thank you for your time.  
Best Regards,

*Jill Moreno*  
Records Technician  
/ EM Support  
Polk County Sheriff's Office

### **Comment #2**

#### **9/8/21 County Resident Email to Polk County Emergency Management**

Please review the storm drains in the industrial park in East Grand Forks. The roads flood during most hard rains.

### **9/10/21 Polk County Emergency Management Response**

Hello Christopher,

Thank you for submitting your feedback to us regarding the Polk County hazard mitigation plan update. We have made note of your request to address storm water management issues in the industrial park of East Grand Forks. We'll share this with the city of EGF as they work to address local mitigation issues and solutions.

*Jill Moreno*  
Records Technician  
/ EM Support  
Polk County Sheriff's Office

**Comment #3**

**9/24/21 County Resident comment submitted on Polk County Sheriff's Office FB Page:**

More shelter belts – More tree lines have been taken down; it would be nice to see more planted again, makes a huge difference in the winter time.

**Incorporation:** A need for more living snow fences will be noted for work on the Polk County mitigation action chart, and any noted specific road corridors.

**Comment #4**

**9/27/21 Letter from Brink Lawyers, P.A., representing the Middle-Snake-Tamarac Rivers Watershed District - See attached letter**

**Incorporation:** Polk County Emergency Management is engaging all of the watershed districts within the county in the MHMP plan update process. As Polk County works on any future drainage projects, it will continue to work in coordination on with the associated watershed districts on those planning and project efforts.



BRINK  
LAWYERS, P.A.

Listed in *Bar Register of Preeminent Lawyers*

Roger C. Malm \*  
Robert M. Albrecht \*  
Jeffrey W. Hane \*  
Denise A. Sollund \*  
George H. Hanson \*  
Kaitlyn N. Bjornson \*

234 South Birch Ave., P.O. Box 790  
Hallock, MN 56728  
Phone: 218-843-3686  
Fax: 218-843-2724

-----  
\* Licensed in Minnesota & North Dakota

September 27, 2021

Jody Beauchane  
Polk County Emergency Management Director  
P.O. Box 416  
Crookston, MN 56716

RE: The Multi-Hazard Mitigation Plan

Dear Ms. Beauchane,

Our office represents the Middle-Snake-Tamarac Rivers Watershed District which is in receipt of your news release seeking public input with regard to the multi-hazard mitigation plan.

The Middle-Snake-Tamarac Rivers Watershed District is charged with the task of managing surface and subsurface water drainage across the entire Watershed District. While your county is naturally focused on only the natural hazards that cause serious impacts within Polk County, it's the mission of the Watershed District to consider these in a broader context. So, while local governments might focus on hazard mitigation in terms of a specific road, bridge, or localized recurring flooding event, the Watershed District is required to evaluate drainage decisions based on overall impacts, including upstream impacts, downstream impacts, and ultimately the effects of flooding on the Red River.

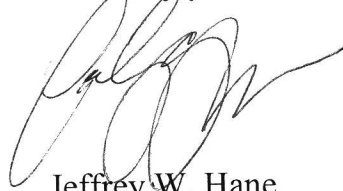
The Middle-Snake-Tamarac Rivers Watershed District is divided into five planning regions which consist of the Tamarac River, the Middle River, the Snake River, the Melgard-Swift Coulee, and the Angus-Oslo region.

As your planning group receives public comment with regard to previous disasters or requested mitigations for future problems, it's the request of the District that your planning

decisions incorporate consideration of the downstream impacts when altering or improving existing drainage.

Years ago, in order to better manage the overall drainage needs of the District and make drainage rights more equitable, the Watershed District adopted a culvert sizing policy. This policy is based on the capacities for properly placed culverts to drain a given drainage area based on a 10-year flood event. When making any decisions with regard to the alteration of existing drainage, the District would encourage the county to consult with it in order to continue consistent implementation of the policy. The county is probably aware of certain legal drains and natural water courses that are unfortunately undersized, and a delicate drainage balance exists between granting drainage to an adequate outlet and preventing downstream flooding. To accomplish that, we ask Polk County to remember to focus its vision on the overall goal of water management and avoid decisions that merely pass existing flooding problems downstream to the next owners.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Jeffrey W. Hane", written in a cursive style.

Jeffrey W. Hane

[jeff.hane@brinklawayers.com](mailto:jeff.hane@brinklawayers.com)

JWH: mlmn

**From:** [Jill Moreno](#)  
**To:** [genedufault@gmail.com](mailto:genedufault@gmail.com); [laura.pettit@usda.gov](mailto:laura.pettit@usda.gov); [Heather.Winkleblack@state.mn.us](mailto:Heather.Winkleblack@state.mn.us); [klein.eastpolk@gmail.com](mailto:klein.eastpolk@gmail.com); [jenny.burrack@mn.usda.gov](mailto:jenny.burrack@mn.usda.gov); [nicole.bernd@wpolk.mnswcd.org](mailto:nicole.bernd@wpolk.mnswcd.org); [luther.newton@usda.gov](mailto:luther.newton@usda.gov); [info@redlakeelectric.com](mailto:info@redlakeelectric.com); [info@pkmcoop.com](mailto:info@pkmcoop.com); [ddalchow@isd592.org](mailto:ddalchow@isd592.org); [jeremyolson@isd593.org](mailto:jeremyolson@isd593.org); [mkolness@egf.k12.mn.us](mailto:mkolness@egf.k12.mn.us); [bclarke@isd599.org](mailto:bclarke@isd599.org); [schase@fosston.k12.mn.us](mailto:schase@fosston.k12.mn.us); [rbruer@win-e-mac.k12.mn.us](mailto:rbruer@win-e-mac.k12.mn.us); [mhclause@crk.umn.edu](mailto:mhclause@crk.umn.edu); [elbeitel@co.pennington.mn.us](mailto:elbeitel@co.pennington.mn.us); [mbernstein@sheriff.co.red-lake.mn.us](mailto:mbernstein@sheriff.co.red-lake.mn.us); [candice.coulter@co.clearwater.mn.us](mailto:candice.coulter@co.clearwater.mn.us); [edward.snetsinger@co.mahnomen.mn.us](mailto:edward.snetsinger@co.mahnomen.mn.us); [garry.johanson@co.norman.mn.us](mailto:garry.johanson@co.norman.mn.us); [james.tadman](mailto:james.tadman); [Jon.Steiner](mailto:Jon.Steiner); [Jacob.Snyder](mailto:Jacob.Snyder); [Rich.Sanders](mailto:Rich.Sanders); [Sarah.Reese](mailto:Sarah.Reese); [Chuck.Whiting](mailto:Chuck.Whiting); [Jody.Beauchane](mailto:Jody.Beauchane); [Amy.Finch](mailto:Amy.Finch); [Angie.Shimpa](mailto:Angie.Shimpa); [Barbara.Sellers](mailto:Barbara.Sellers); [Cassie.Heide](mailto:Cassie.Heide); [David.Murphy](mailto:David.Murphy); [Dominica.Zarkoff](mailto:Dominica.Zarkoff); [Jackie.Voeller](mailto:Jackie.Voeller); [Kara.Bowen](mailto:Kara.Bowen); [Lisa.Liden](mailto:Lisa.Liden); [Lisa.Schaumburg](mailto:Lisa.Schaumburg); [Lori.Wollman](mailto:Lori.Wollman); [Melissa.Finseth](mailto:Melissa.Finseth); [Roseanne.Erickson](mailto:Roseanne.Erickson); [Stephanie.Abenroth](mailto:Stephanie.Abenroth); [Stephanie.Melby](mailto:Stephanie.Melby); [Chad.Gunderson](mailto:Chad.Gunderson) - Climax; [Daniel.Netland](mailto:Daniel.Netland); [Eric.Murphy](mailto:Eric.Murphy) - Fosston; [Jay.Anderson](mailto:Jay.Anderson) - Mentor; [Jeff.Boushee](mailto:Jeff.Boushee); [Jesse.Hickman](mailto:Jesse.Hickman) - Erskine; [Joshua.Mailhot](mailto:Joshua.Mailhot) - Fisher; [Justin.Shultz](mailto:Justin.Shultz) - McIntosh; [Scott.Revier](mailto:Scott.Revier) - Winger; [Tim.Froeber](mailto:Tim.Froeber); [Wolfe.Clark](mailto:Wolfe.Clark) -Fertile  
**Cc:** [hundrieserconsulting@outlook.com](mailto:hundrieserconsulting@outlook.com)  
**Subject:** Polk County Multi-Hazard Mitigation Plan Update  
**Date:** Thursday, September 2, 2021 3:09:10 PM  
**Attachments:** [News Release 9-2-21.pdf](#)

---

## Polk County Multi-Hazard Mitigation Plan Update

Greetings,

Polk County Emergency Management is commencing work on the update of the Polk 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 Polk County MHMP update.

If you have any questions, please let me know.

Thank you,

**Jody Beauchane**

Emergency Manager

Polk County Sheriff's Office

(218) 470-8263

E.M: [www.co.polk.mn.us/EM](http://www.co.polk.mn.us/EM)

Disclaimer: Information in this message or an attachment may be government data and thereby subject to the Minnesota Government Data Practices Act, Minnesota Statutes, Chapter 13, may be subject to attorney-client or work product privilege, may be confidential, privileged, proprietary, or otherwise protected, and the unauthorized review, copying, retransmission, or other use or disclosure of the information is strictly prohibited. If you are not the intended recipient of this message, please immediately notify the sender of the transmission error and then promptly delete this message from your computer system.

**From:** [Jill Moreno](#)  
**To:** [april.swenby@sandhillwatershed.org](mailto:april.swenby@sandhillwatershed.org); [Myron.Jesme@redlakewatershed.org](mailto:Myron.Jesme@redlakewatershed.org); [morteza.maher@mstrwd.org](mailto:morteza.maher@mstrwd.org); [kevin@wildricewatershed.org](mailto:kevin@wildricewatershed.org)  
**Cc:** [Bonnie K Hundrieser](#)  
**Subject:** Polk County Multi-Hazard Mitigation Plan Update  
**Date:** Tuesday, September 14, 2021 2:57:36 PM  
**Attachments:** [News Release 9-2-21.pdf](#)

---

## Polk County Multi-Hazard Mitigation Plan Update

Greetings,

Polk County Emergency Management is commencing work on the update of the Polk 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 Polk County MHMP update.

If you have any questions, please let me know.

Thank you,

**Jody Beauchane**  
Emergency Manager  
Polk County Sheriff's Office  
(218) 470-8263

**From:** [Jill Moreno](#)  
**To:** [13\\_Towns \(13\\_Towns \(13towns@gvtel.com\)\)](#); [Crookston Times \(Crookston Times \(editor@crookstontimes.com\)\)](#); [Dave Burns](#); [Erskine Echo \(Erskine Echo \(echonews@gvtel.com\)\)](#); [Exponent; Fertile Journal \(fertilejournal@hwy32publishing.com\)](#); [fox \(fox9news@foxtv.com\)](#); [GF H3](#); [Guy D Still \(gdstill@wcco.com\)](#); [Jess Bengtson \(jbengtson@crookstontimes.com\)](#); [KFGO](#); [KKCQ](#); [KNOX](#); [KROX](#); [krox \(krox \(chrisjfee@yahoo.com\)\)](#); [KVRR NEW ROOM](#); [Lakeland News](#); [McIntosh](#); [MHenson News](#); [Mike Christopherson \(mchristopherson@crookstontimes.com\)](#); [MPR](#); [Neil Carlson](#); [Richards](#); [Star tribune](#); [tips@wcco.com](#); [Valley news live](#); [Warren Sheaf \(news@warrensheaf.com\)](#); [WDAZ News](#)  
**Cc:** [hundrieserconsulting@outlook.com](#)  
**Subject:** News Release -Hazard Mitigation Plan  
**Date:** Thursday, September 2, 2021 4:23:15 PM  
**Attachments:** [News Release 9-2-21.pdf](#)

---

Good Afternoon,

In an effort to make the public aware that input is wanted, as Polk County updates the Multi-Hazard Mitigation Plan. I would appreciate if you would publicize the attached information on behalf of the Polk County Emergency Management Director.

Thank you in advance for your time.

**Jill Moreno**

Emergency Management Support Staff

Polk County Sheriff's Office

**Disclaimer:** Information in this message or an attachment may be government data and thereby subject to the Minnesota Government Data Practices Act, Minnesota Statutes, Chapter 13, may be subject to attorney-client or work product privilege, may be confidential, privileged, proprietary, or otherwise protected, and the unauthorized review, copying, retransmission, or other use or disclosure of the information is strictly prohibited. If you are not the intended recipient of this message, please immediately notify the sender of the transmission error and then promptly delete this message from your computer system.

# POLK COUNTY SHERIFF'S OFFICE

**Sheriff James Tadman**

**Chief Deputy Mike Norland**

## POLK COUNTY NEWS RELEASE

September 2, 2021

### **Public Input Wanted as County Updates Multi-Hazard Mitigation Plan**

The Polk 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 Polk County MHMP is a multi-jurisdictional plan that covers Polk County, including the cities of Beltrami, Climax, Crookston, East Grand Forks, Erskine, Fertile, Fisher, Fosston, Gully, Lengby, McIntosh, Mentor, Nielsville, Trail, and Winger. The Polk 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 Jody Beauchane, Polk County Emergency Management Director. "Understanding the natural hazards that can cause serious impact to our communities and taking action to reduce or eliminate the impact of future disasters makes us more resilient. Hazard mitigation helps us to break the cycle of damage and repair caused by things like flooding, ice storms, and severe wind events that can damage property, stress economies, and threaten life safety in our county."

Examples of hazard mitigation include actions include improvement of roads and culverts that experience repetitive flooding; construction of safe rooms at campgrounds, public parks, mobile home parks or schools to protect lives in the event of tornadoes 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, Polk 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?

600 Bruce Street • P.O. Box 416 • Crookston, MN 56716  
218.281.0431 • Fax 218.281.0401  
james.tadman@co.polk.mn.us  
www.co.polk.mn.us

- 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 Polk County Emergency Management by phone or email. Public comments may also be submitted on the Polk County Sheriff's Office/Emergency Management 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**

Jody Beauchane  
Polk County Emergency Management Director  
Phone: 218-470-8263  
Email: [www.co.polk.mn.us/EM](http://www.co.polk.mn.us/EM)



# Polk County MHMP News Release #1

## Documentation of News Release Postings

### COUNTY POSTINGS

#### Polk County Sheriff's Office/Emergency Mgmt. Facebook page September 8, 2021

Like Share ...

**Polk County Sheriff's Office/Emergency Management**  
September 3 at 11:27 AM · 🌐

**PUBLIC INPUT WANTED AS POLK COUNTY UPDATES MULTI-HAZARD MITIGATION PLAN**  
September 3, 2021

The Polk 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. Identifin...  
[Continue Reading](#)

6 1 Comment 5 Shares

Like Comment Share

#### Polk County Website September 8, 2021

Government Department

**PUBLIC INPUT WANTED - MULTI-HAZARD MITIGATION PLAN**

Public Input is wanted as Polk County Updates the Multi-Hazard Mitigation Plan. The plan assesses the natural hazards that pose risk to the county and identifies ways to minimize the damage of future events.

**NEWS RELEASE..**

County Home  
Facebook  
Emergency Notifications  
Department Directory

## LOCAL MEDIA POSTINGS

### KROX online, 105.7 FM Radio September 3, 2021

MONDAY, OCTOBER 18, 2021 208 S MAIN ST, CROOKSTON, MN 56716 LISTEN LIVE CONTACT US

**KROX** The Voice of the Valley  
105.7 FM • 1260 AM

WELCOME TO CROOKSTON

HOME NEWS SPORTS WEATHER COMMUNITY WEATHER CANCELLATIONS LISTEN LIVE

RiverView Coronavirus Nurse Screening Hotline 218-470-7983

State Farm Discounts up to 40%\* on auto insurance with Discount Double Check. SEE YOUR POLICY DOCUMENT  
Andy Oman, Agent | 423 N Main St, Crookston, MN 56718

### PUBLIC INPUT WANTED AS POLK COUNTY UPDATES MULTI-HAZARD MITIGATION PLAN

September 3, 2021



The Polk 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 Polk County MHMP is a multi-jurisdictional plan that covers Polk County, including the cities of Crookston, East Grand Forks, Erskine, Fertile, Fisher, Fosston, Gully, Lengby, McIntosh, Mentor, Nielsville, Trail, and Winger. The Polk 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.



### Crookston Times online news September 7, 2021

SUBSCRIBE NOW  
\$1 for 6 Months. Save 98%.

CROOKSTON TIMES

News Sports Entertainment Lifestyle Opinion USA TODAY Obituaries E-Edition Calendar

NEWS

## Public input wanted as county updates Multi-Hazard Mitigation Plan


Submitted by Polk County Crookston Times  
Published 11:33 p.m. CT Sept. 6, 2021

The Polk 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 Polk County MHMP is a multi-jurisdictional plan that covers Polk County, including the cities of Beltrami, Climax, Crookston, East Grand Forks, Erskine, Fertile, Fisher, Fosston, Gully, Lengby, McIntosh, Mentor, Nielsville, Trail, and Winger. The Polk 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.

Advertisement

## Newsbreak (online) September 7, 2021

< View more in  Polk County, MN

### Public input wanted as county updates Multi-Hazard Mitigation Plan

Crookston Daily Times 2021-09-07

The Polk 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.

**CROOKSTON  
TIMES**

[www.crookstontimes.com](http://www.crookstontimes.com)

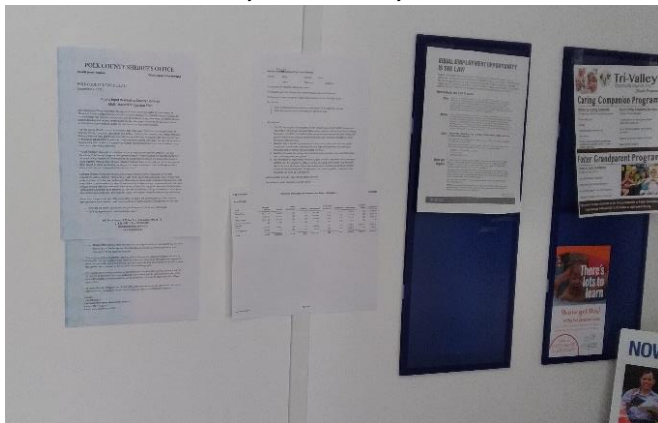
Comments / 0 See all >

What are your thoughts? Post

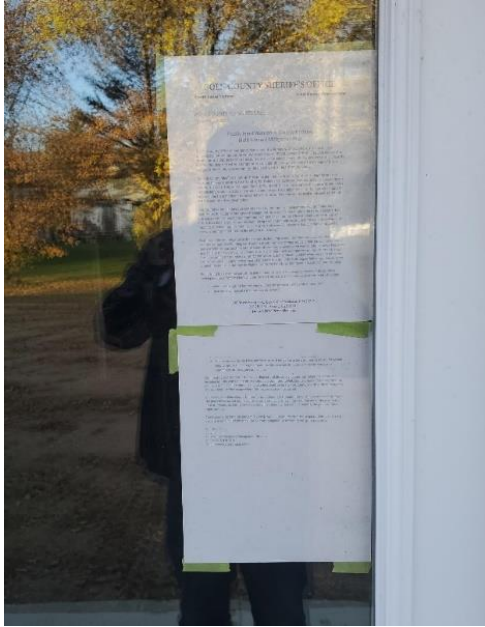
[Community Policy](#)

## CITY POSTINGS

### City of Beltrami Beltrami Post Office, October 18, 2021



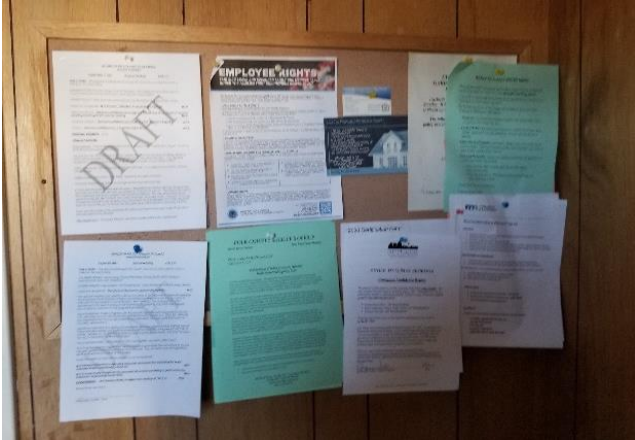
**City of Beltrami  
Fire Department posting, October 18, 2021**



**City of Climax  
Climax Post Office, September 27, 2021**



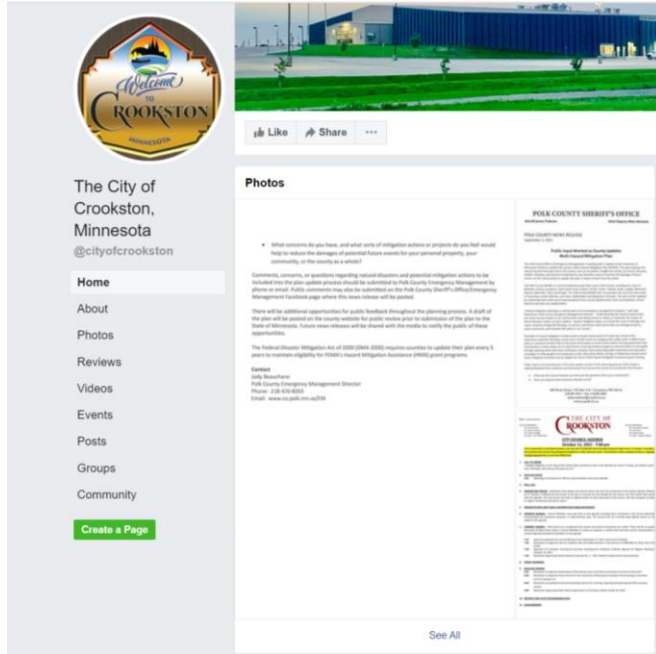
**City of Climax,  
Climax City Hall, September 27, 2021**



**City of Crookston  
City Website Posting, October 7, 2021**



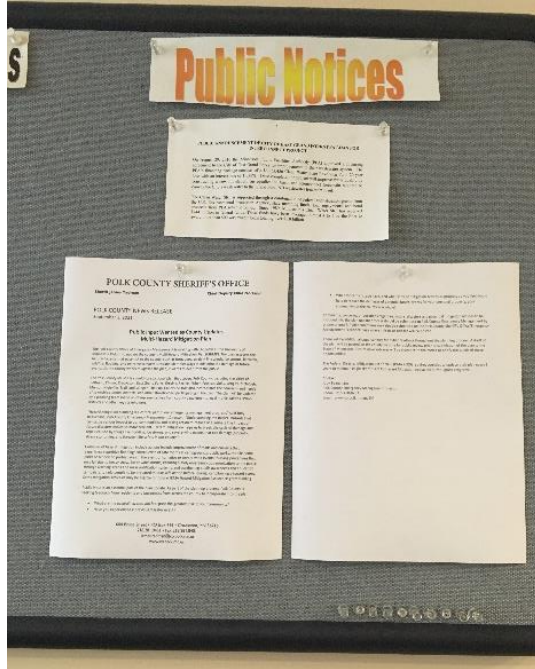
**City of Crookston**  
**City Facebook Posting, October 7, 2021**



**City of East Grand Forks**  
**East Grand Forks Newspaper (The Exponent), September 8, 2021**



**City of East Grand Forks  
EGF Firehall, September 8, 2021**



**City of Erskine  
The Erskine Echo, September 9, 2021**

THE ERSKINE ECHO  
ERSKINE, MINNESOTA 56335  
THURSDAY, SEPTEMBER 9, 2021



**Public input  
wanted as Polk  
County updates  
Multi-hazard  
mitigation plan**

The Polk 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 Polk County MHMP is a multi-jurisdictional plan that covers Polk County, including the cities of Crookston, East Grand Forks, Erskine, Fertile, Fisher, Fosston, Gully, Lengby, McIntosh, Mentor, Nissville, Trail, and Winger. The Polk 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 Jody Beauchane, Polk County Emergency Management Director. "Understanding the natural hazards that can cause serious impact to our communities and taking action to reduce or eliminate the impact of future disasters makes us more resilient. Hazard mitigation helps us to break the cycle of damage and repair caused by things like flooding, ice storms, and severe wind events that can damage property, stress economies, and threaten life safety in our county."

Examples of hazard mitigation include actions include improvement of roads and culverts that experience repetitive flooding; construction of safe rooms at campgrounds, public parks, mobile home parks, or schools to protect lives in the event of tornadoes 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, Polk 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 mitiga-

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 in the plan update process should be submitted to Polk County Emergency Management by phone or email. Public comments may also be submitted on the Polk County Sheriff's Office / Emergency Management 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 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 Jody Beauchane, Polk County Emergency Management Director at 218-470-8263 or email [jbeauchane@polk.mn.us](mailto:jbeauchane@polk.mn.us) or visit [www.co.polk.mn.us/EM](http://www.co.polk.mn.us/EM)

# City of Erskine Website posting, September 28, 2021



Address: [105 Ross Avenue, Erskine, MN 56535](#)  
Post Office Box: PO Box 59, Erskine, MN 56535  
Contact: [cityerskine@gvtel.com](mailto:cityerskine@gvtel.com) / 218-687-4646



## Public Input Wanted as County Updates Multi-Hazard Mitigation Plan

September 27, 2021 | Updates



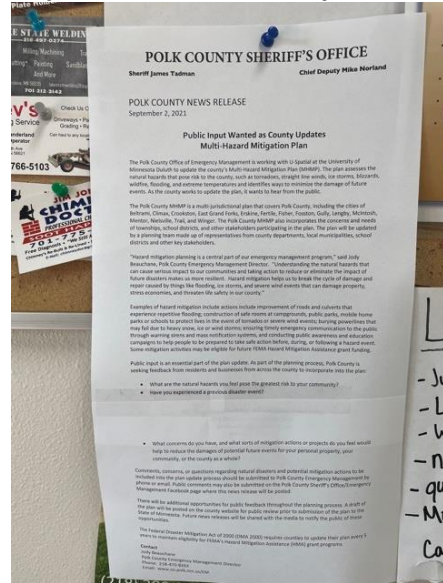
### LINKS

- [Lakes 'n Woods](#)
- [NW MN Tourism](#)
- [Polk County, MN](#)
- [Win-E-Mac School](#)

### META

- [Log in](#)
- [Entries feed](#)
- [Comments feed](#)
- [WordPress.org](#)

## City of Erskine Community Bulletin Board Posting





# City of Fertile City Website Posting, October 11, 2021



**Stay Updated**

The City Council meets on the second Monday of every month at 6:30 PM and the public is always welcome to attend and participate. City Hall is located at 101 South Mill Street in the Duane Knutson Community Center. You can view our minutes by [clicking here](#).





**Pay your bills on-line!**

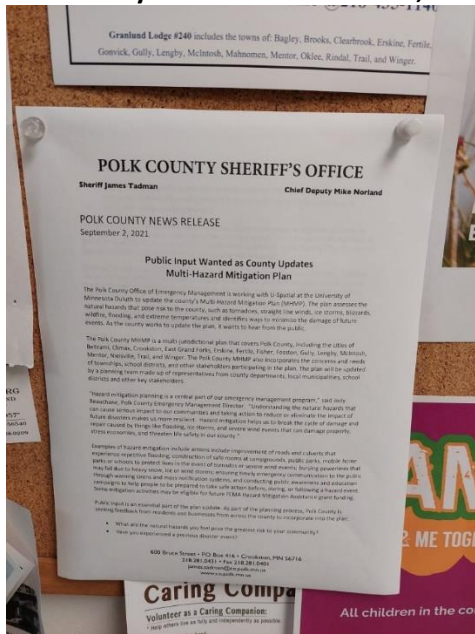
The City of Fertile now offers online access to our water customers so they can go online to view and/or pay their water and sewer bill. There is a small transaction fee that will be charged for online payments. Click [here](#) ([www.ub-pay.com](http://www.ub-pay.com)) and use Municipal Code: FertileMN540



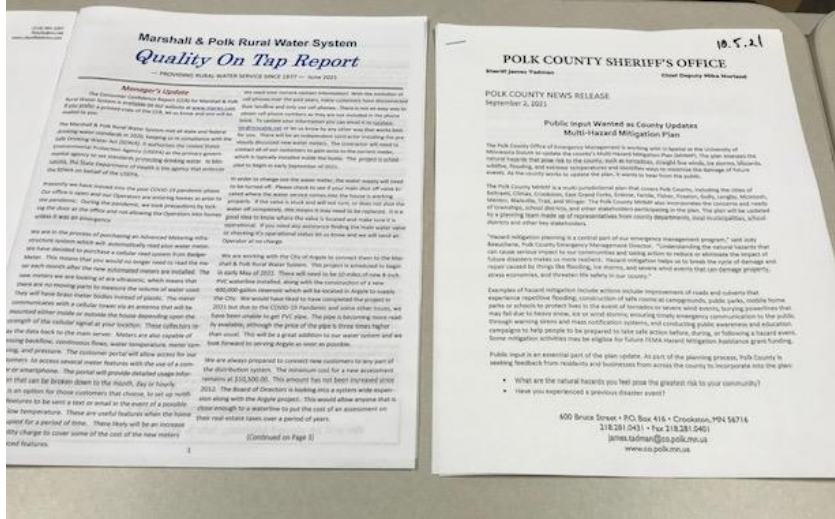
**Public Notices**

- The City Council passed Ordinance #2021-2 allowing for the use of and permitting of special vehicles within the City of Fertile. The Ordinance takes effect July 1<sup>st</sup> and applications are available [here](#) or can be picked up at the City Office during regular business hours.
- City Office hours have changed. The office will be open from 8 a.m. to 4:30 p.m. Monday through Friday.
- Public input wanted! Multi Hazard Mitigation Plan

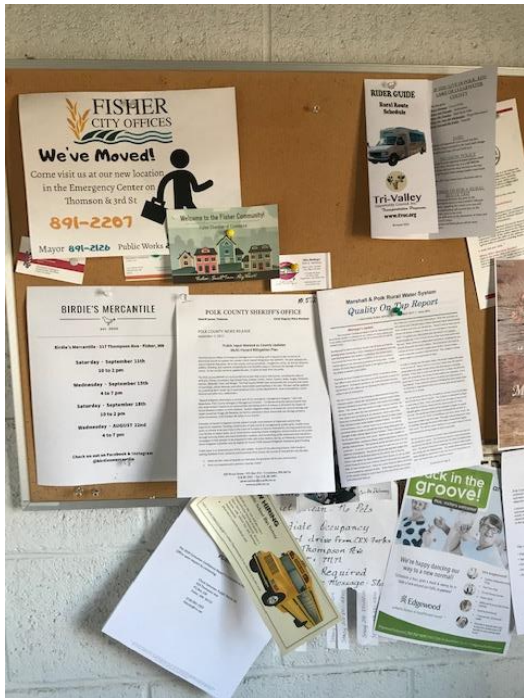
# City of Fertile Community Center Bulletin Board, October 11, 2021



# City of Fisher City Hall Posting, October 5, 2021



# City of Fisher Post Office Bulletin Board, October 5, 2021



## City of Fosston City Website, September 1, 2021

Community pride is evident throughout Fosston. Friendly and progressive, we welcome the opportunity to have you as our guest. Our slogan, "Where the Prairie Meets the Pines" personifies that this is truly "God's Country."

- [January 2021 City News](#)
- [February 2021 City News](#)
- [March 2021 City News](#)
- [April 2021 City News](#)
- [May 2021 City News](#)
- [June 2021 City News](#)
- [July 2021 City News](#)
- [August 2021 City News](#)
- [September 2021 City News](#)
- [Polk County Public Input Wanted! Multi-Hazard Mitigation Plan](#)

## City of Fosston – The Thirteen Towns newspaper September 28, 2021

---

The Thirteen Towns, Fosston, Minnesota - Tuesday, September 28, 2021 **5**

---

### Public input sought for hazard mitigation plan

The Polk 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 Polk County MHMP is a multi-jurisdictional plan that covers Polk County, including the cities of Beltrami, Climax, Crookston, East Grand Forks, Erskine, Fertile, Fisher, Fosston, Gully, Lengby, McIntosh, Mentor, Nielsville, Trail, and Winger. The Polk 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 plan-

ning is a central part of our emergency management program," said Jody Beauchane, Polk County Emergency Management Director. "Understanding the natural hazards that can cause serious impact to our communities and taking action to reduce or eliminate the impact of future disasters makes us more resilient. Hazard mitigation helps us to break the cycle of damage and repair caused by things like flooding, ice storms, and severe wind events that can damage property, stress economies, and threaten life safety in our county."

Examples of hazard mitigation include actions include improvement of roads and culverts that experience repetitive flooding; construction of safe rooms at campgrounds, public parks, mobile home parks or schools to protect lives in the event of tornadoes 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, Polk 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?

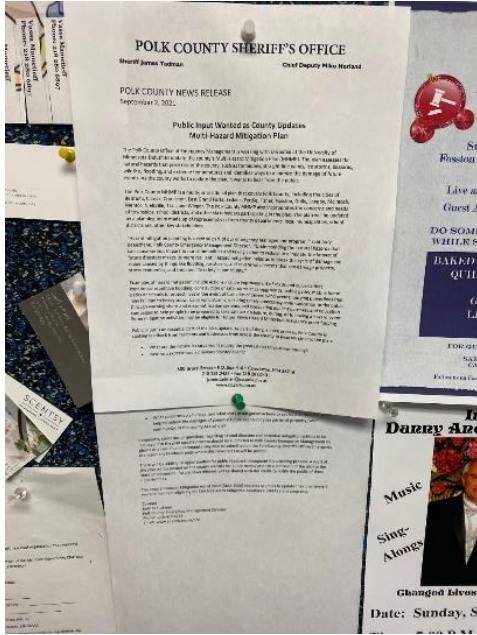
- What concerns do you have, and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for your personal property, your community, or the county as a whole?

Comments, concerns, or questions regarding natural disasters and potential mitigation actions to be included into the plan update process should be submitted to Polk County Emergency Management by phone or email.

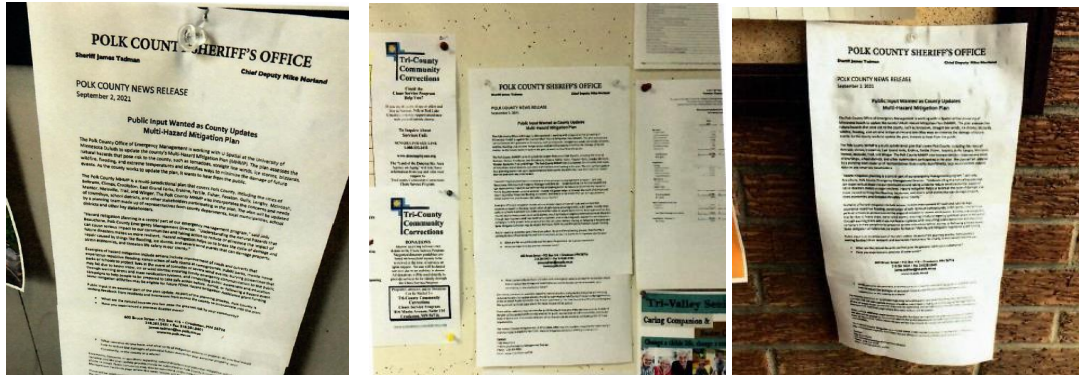
To contact PCEM, go online to [www.co.polk.mn.us/](http://www.co.polk.mn.us/) EM or call Polk County Emergency Management Director Jody Beauchane at 218-470-8263.



# City of McIntosh McIntosh Community Center Bulletin Board, October 6, 2021

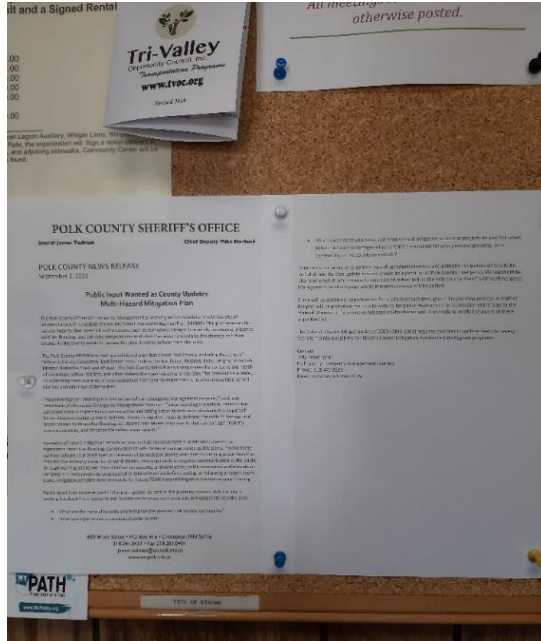


# City of Mentor Mentor Municipal Building, Community Center, and Post Office September 1, 2021



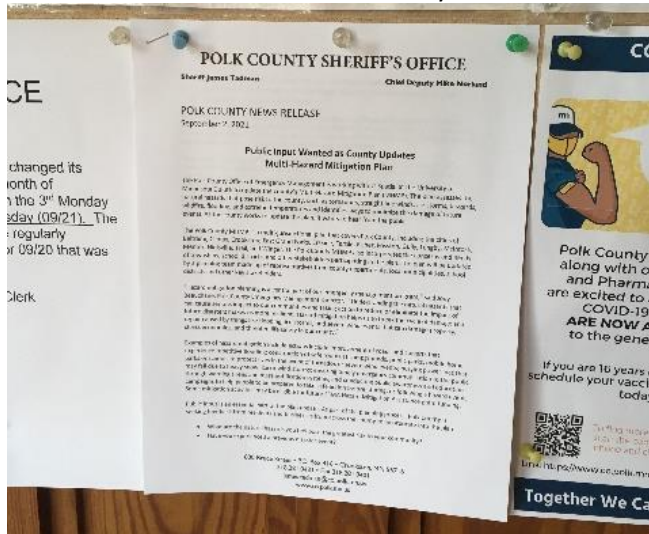


# City of Winger City Hall Bulletin Board, October 6, 2021



## TOWNSHIP POSTINGS

### Polk County Township Association. September 15, 2021 St. Peter's Catholic Church in Gentilly



## OTHER POSTINGS

### Climax-Shelly School, District 592 School Website, September 1, 2021

#### CLIMAX-SHELLY SCHOOL DISTRICT #592

*Home of the Knights*

"Preparing Students Today for Success in a Challenging Tomorrow"

#### **Climax Community Club**

[2021/22 Safe Return to  
School Plan](#)

[Enrollment](#)

[District Budget](#)

[District Wellness Policy](#)

[WBWF](#)

[Air Quality](#)

[Milk Bids 2021-22](#)

[2019 Ag Credit Impact  
on Existing Debt](#)

[Read Well by Third Grade-  
Local Literacy Plan](#)

[Alumni](#)

[Polk County Multi-Hazard Mitigation Plan Update](#)

### Wild Rice Watershed website, September 14, 2021

The screenshot shows the Wild Rice Watershed District website. The browser address bar displays "wildricewatershed.org/links/". The navigation menu includes: HOME, ABOUT US, RESOURCES, PROJECTS, ONE WATERSHED ONE PLAN, LINKS, and CONTACT US. The main content area features a "Useful Links" section with a "County Government" sub-section listing Becker County, Clearwater County, Clay County, Mahanomen County, Norman County, and Polk County. A link for "Polk County Multi-Hazard Mitigation Plan Update News Release 09-02-2021" is also present. On the right side, there is a "PERMIT APPLICATION" section and a "DISTRICT CALENDAR" showing "Columbus Day - Office Closed" on Oct 11th and a "Regular Board Meeting" on Oct 13th from 8:30 am to 11:00 am.



# Middle-Snake-Tamarac Rivers Watershed District Website posting, September 15, 2021

## Middle-Snake-Tamarac Rivers Watershed District



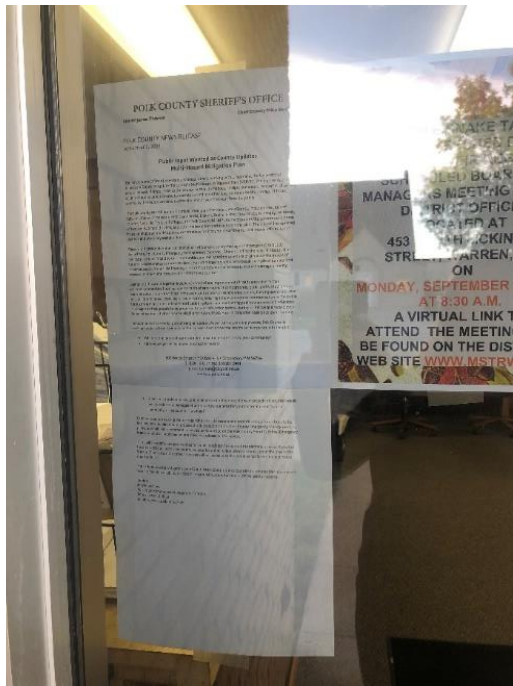
Home

[Polk County News Release](#)

Calendar

September 2021						
Mo	Tu	We	Th	Fr	Sa	Su
		1	2	3	4	5
6	7	8	9	10	11	12

# Middle-Snake-Tamarac Rivers Watershed District Website posting, September 15, 2021



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

**Overview:** On January 12, 2023 Polk 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 Polk 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 1/12/23 to 1/26/23, 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 Polk 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 Polk County news release and how the input will be incorporated into the plan update, and if not relevant to be addressed, why.

### **Plan review comments from April Swenby, Sand Hill River Watershed Administrator**

The following comments are in reference to local vulnerabilities noted in Section 3.4.1, Jurisdictional Responses

**COMMENT #1 - Polk County (Page 13): Flooding:** *Numerous legal ditch systems are present in Polk County and provide drainage in rural areas. Flooding along these ditch systems often results in damage and poses a risk to agricultural property, public infrastructure, and structures. One example highlighting risk is the Sand Hill Ditch that was constructed to straighten and channelize a poorly defined reach of the Sand Hill River. The project serves as the primary outlet for the Sand Hill River Watershed and is managed by the Sand Hill River Watershed District as a legal drainage system. High flows have resulted in significant channel erosion and bank failures. This has encroached on adjacent private agricultural land and public infrastructure.*

### **Incorporation:**

- This information was added into Section 3.4.1 for Polk County.
- Mitigation Action #21 in the Polk County mitigation action chart addresses mitigation efforts for this issue. The mitigation action was submitted by April Swenby as a planning team member during the HMP update process. *(Work with the Sand Hill River Watershed District to address*

*slope stabilization to the Sand Hill Ditch and potential property acquisition of adjacent public township road that is at risk on the south side of the channel.)*

**COMMENT #2** - *City of Beltrami, MN (Page 14): Flooding: The City of Beltrami, MN is within the FEMA regulatory 100-year floodplain along the Sand Hill Ditch, primarily located east of Minnesota Highway 9. This results in increased flood insurance costs for structures located within the floodplain. Additional hydraulic analysis completed by the Sand Hill River Watershed District has validated flood risk for the community.*

***Incorporation:***

- This information was added into Section 3.4.1 for the City of Beltrami.
- Mitigation Action #6 was added to the city of Beltrami mitigation action chart regarding working with the MN DNR to learn about their official mapped floodplain area and develop a floodplain ordinance. *(Work with the MN DNR to develop a floodplain ordinance for the city.)*
- Section 5.1.1 NFIP Participation Table also includes this information for the city of Beltrami.

**COMMENT #3** - *City of Nielsville, MN (Page 18): Flooding: Sand Hill River Watershed District Project No. 24 is a legal ditch system that flows through the City of Nielsville. Flows higher than the design event along this ditch system creates flood risk for the community. Impacts include risk to structures and infrastructure. These impacts were not studied in sufficient detail in the Flood Insurance Study to reflect the actual risk to the community.*

***Incorporation:***

- This information was added into Section 3.4.1 for the City of Nielsville.
- The city of Nielsville mitigation action chart – action #5 addresses enforcement of the city’s floodplain ordinance *(Enforce city ordinances and develop plans that reduce the impacts of high rain events and risk of flooding to areas of new development.)*
- A new mitigation action #8 was added to address the city working with the Sand Hill Watershed District on Project No. 24, which addresses mitigation for this legal ditch system that runs through the city and poses flood risk. *(Work with the Sand Hill Watershed District to address flood risk reduction to the legal ditch system that runs through the city.)*

**From:** [Bonnie K Hundrieser](#)  
**To:** [Bonnie K Hundrieser](#)  
**Subject:** News Release - Public Comment Sought for Polk County Hazard Mitigation Plan  
**Date:** Thursday, January 12, 2023 10:01:02 AM  
**Attachments:** [News Release Polk Hazard Mitigation Plan Public Review \(1-12-23\).pdf](#)  
**Importance:** High

---

**From:** Bonnie K Hundrieser

**Sent:** Thursday, January 12, 2023 8:53 AM

**To:** 'genedufault@gmail.com' <genedufault@gmail.com>; 'laura.pettit@usda.gov' <laura.pettit@usda.gov>; 'klein.eastpolk@gmail.com' <klein.eastpolk@gmail.com>; 'laura.schnapp@usda.gov' <laura.schnapp@usda.gov>; 'nicole.bernd@wpolk.mnswcd.org' <nicole.bernd@wpolk.mnswcd.org>; 'luther.newton@usda.gov' <luther.newton@usda.gov>; 'info@redlakeelectric.com' <info@redlakeelectric.com>; 'ddalchow@isd592.org' <ddalchow@isd592.org>; 'davekuehn@isd593.org' <davekuehn@isd593.org>; 'mkolness@egf.k12.mn.us' <mkolness@egf.k12.mn.us>; 'bclarke@isd599.org' <bclarke@isd599.org>; 'rbruer@win-e-mac.k12.mn.us' <rbruer@win-e-mac.k12.mn.us>; 'mhclause@crk.umn.edu' <mhclause@crk.umn.edu>; 'elbeitel@co.pennington.mn.us' <elbeitel@co.pennington.mn.us>; 'mbernstein@sheriff.co.red-lake.mn.us' <mbernstein@sheriff.co.red-lake.mn.us>; 'candice.coulter@co.clearwater.mn.us' <candice.coulter@co.clearwater.mn.us>; 'edward.snetsinger@co.mahnomen.mn.us' <edward.snetsinger@co.mahnomen.mn.us>; 'garry.johanson@co.norman.mn.us' <garry.johanson@co.norman.mn.us>; 'james.tadman' <james.tadman@co.polk.mn.us>; 'Jon Steiner' <jon.steiner@co.polk.mn.us>; 'Jacob Snyder' <jacob.snyder@co.polk.mn.us>; 'Rich Sanders' <rsanders@co.polk.mn.us>; 'Sarah Reese' <Sarah.Reese@co.polk.mn.us>; 'Chuck Whiting' <Chuck.Whiting@co.polk.mn.us>; 'Jody Beauchane' <jody.beauchane@co.polk.mn.us>; 'Angie Shimpa' <cityerskine@gvtel.com>; 'Barbara Sellers' <cityofgully@yahoo.com>; 'Cassie Heide' <cassie@fosston.com>; 'David Murphy' <dmurphy@egf.mn>; 'Dominica Zarkoff' <cityofwinger@gvtel.com>; 'Jackie Voeller' <cityofclimax@yahoo.com>; 'Kara Bowen' <fishcity@rrv.net>; 'Lisa Liden' <fertile@gvtel.com>; 'Lisa Schaumburg' <mentor@gvtel.com>; 'Lori Wollman' <lrwollman@gmail.com>; 'Melissa Finseth' <macclerk@gvtel.com>; 'Roseanne Erickson' <rosanne.erickson@gmail.com>; 'Stephanie Abentroth' <rasanava@rrv.net>; 'Stephanie Melby' <cob56517@gmail.com>; 'Chad Gunderson - Climax' <cstm104@yahoo.com>; 'Danny Netland - Beltrami' <beltramifire@hotmail.com>; 'Eric Murphy - Fosston' <ericmurphy@team-ind.com>; 'Jay Anderson - Mentor' <jkanderson@gvtel.com>; 'Jeff Boushee' <jboushee@egf.mn>; 'Jesse Hickman - Erskine' <erskinewefd@gvtel.com>; 'Justin Shultz - McIntosh' <jashultz1@hotmail.com>; 'Tim Froeber' <tfroeber@crookston.mn.us>; 'april.swenby@sandhillwatershed.org' <april.swenby@sandhillwatershed.org>; 'Myron.Jesme@redlakewatershed.org' <Myron.Jesme@redlakewatershed.org>; 'morteza.maher@mstrwd.org' <morteza.maher@mstrwd.org>; 'tara@wildricewatershed.org' <tara@wildricewatershed.org>; 'thrdlicka@otpc.com' <thrdlicka@otpc.com>; 'kolson@pkmcoop.com' <kolson@pkmcoop.com>; 'jmarcotte@pkmcoop.com' <jmarcotte@pkmcoop.com>; 'dlefevre@clearwater-polk.com' <dlefevre@clearwater-polk.com>; 'Jodi.stauss@northlandcollege.edu' <Jodi.stauss@northlandcollege.edu>; 'thoudek@wildriceelectric.com' <thoudek@wildriceelectric.com>; 'Steve Massmann - Winger' <swmassmann@gmail.com>; 'Jason

Haas' <fertilefd@gmail.com>; 'arystad@crookston.mn.us' <arystad@crookston.mn.us>;  
'equirk@grandforksgov.com' <equirk@grandforksgov.com>; 'heather.winkleblack@state.mn.us'  
<heather.winkleblack@state.mn.us>; 'tselk@isd601.org' <tselk@isd601.org>; 'moer@crk.umn.edu'  
<moer@crk.umn.edu>; 'jenk0004@crk.umn.edu' <jenk0004@crk.umn.edu>

**Cc:** Jody Beauchane <jody.beauchane@co.polk.mn.us>; 'Jill Moreno' <jill.moreno@co.polk.mn.us>

**Subject:** News Release - Public Comment Sought for Polk County Hazard Mitigation Plan

**Importance:** High

Greetings,

Attached is a news release announcing the public review and comment period is open for the Polk County Hazard Mitigation Plan from January 12 – January 26 prior to submission of the plan to FEMA. As a jurisdiction, related agency, or neighboring jurisdiction involved in the Polk 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 are specifically requested to post the news release for their community. As a multi-jurisdictional plan, we are required to document the participation of cities helping to conduct this local outreach. Townships and other agency stakeholders are also encouraged to participate in posting the news release. You can post the news release in any of the ways below:**

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

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:**

[Polk 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 and review is very important. This is our final step in completing the update of the Polk 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:** [Jill Moreno](#)  
**To:** [13\\_Towns \(13\\_Towns \(13towns@gvtel.com\)\)](#); [AM 1100 Fargo](#); [april@trftimes.com](#); [Dave Burns](#); [Doug KNOX](#); [Erskine Echo \(Erskine Echo \(echonews@gvtel.com\)\)](#); [Exponent](#); [Fertile Journal \(fertilejournal@hwy32publishing.com\)](#); [fox \(fox9news@foxtv.com\)](#); [GF H3](#); [Guy D Still gdstill@wcco.com](#); [Jess Bengtson \(jbengtson@crookstontimes.com\)](#); [KFGO](#); [KNOX](#); [KROX](#); [krox \(krox \(chrisjfee@yahoo.com\)\)](#); [KVRB NEW ROOM](#); [Lakeland News](#); [McIntosh](#); [MHenson News](#); [MPR](#); [Neil Carlson](#); [Pat Sweeney KNOX Radio](#); [pbauer@wday.com](#); [Richards](#); [Star\\_tribune](#); [tips@wcco.com](#); [Valley news live](#); [Warren Sheaf \(news@warrensheaf.com\)](#); [WDAZ News](#)  
**Cc:** ["Bonnie K Hundrieser"](#)  
**Subject:** Polk County News Release  
**Date:** Wednesday, January 11, 2023 4:34:07 PM  
**Attachments:** [Hazard Mitigation News Release1-12-23.pdf](#)

---

Good Afternoon,

In an effort to make the public aware that input is wanted, as Polk County updates the Multi-Hazard Mitigation Plan. I would appreciate if you would publicize the attached information on behalf of the Polk County Emergency Management Director.

Thank you in advance for your time.

**Jill Moreno**

Emergency Management Support Staff

Polk County Sheriff's Office

**Disclaimer:** Information in this message or an attachment may be government data and thereby subject to the Minnesota Government Data Practices Act, Minnesota Statutes, Chapter 13, may be subject to attorney-client or work product privilege, may be confidential, privileged, proprietary, or otherwise protected, and the unauthorized review, copying, retransmission, or other use or disclosure of the information is strictly prohibited. If you are not the intended recipient of this message, please immediately notify the sender of the transmission error and then promptly delete this message from your computer system.

# POLK COUNTY SHERIFF'S OFFICE

**Sheriff James Tadman**

**Chief Deputy Mike Norland**

## POLK COUNTY NEWS RELEASE

January 12, 2023

### **Public Comment Sought for County's Hazard Mitigation Plan**

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

All county residents, as well as other interested stakeholders (those in neighboring counties or working with affected agencies) are strongly encouraged to review and offer feedback on the interactive website, PDF of the draft plan, and proposed local mitigation actions. The review and comment period is open for a period of 15 days through January 26, 2023. The public can access the plan using the following links:

[Polk County HMP Website](https://z.umn.edu/PolkHMP) (z.umn.edu/PolkHMP)

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

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

The Polk County HMP is a multi-jurisdictional plan that covers Polk County, including the cities of Beltrami, Climax, Crookston, East Grand Forks, Erskine, Fertile, Fisher, Fosston, Gully, Lengby, McIntosh, Mentor, Nielsville, Trail, and Winger. The Polk 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 Polk 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 Polk 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

600 Bruce Street • P.O. Box 416 • Crookston, MN 56716  
218.281.0431 • Fax 218.281.0401  
james.tadman@co.polk.mn.us  
www.co.polk.mn.us



disaster, and breaks the cycle of response and recovery. Updating the plan further allows Polk 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. Polk 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 Polk County Emergency Management.

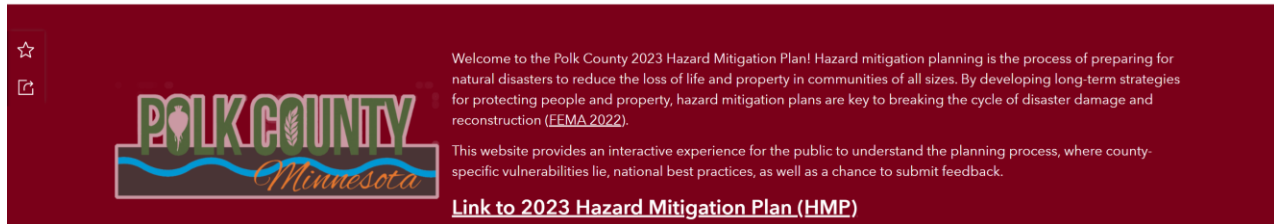
**Contact:**

Jody Beauchane  
Polk County Emergency Management Director  
Phone: 218-470-8263  
Email: [jody.beauchane@co.polk.mn.us](mailto:jody.beauchane@co.polk.mn.us)

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

[Polk County Hazard Mitigation Plan 2023](#) [About HMP Planning](#) [County Profile](#) [All Natural Hazards](#) [Mitigation Actions](#) [Climate Change](#)

## Polk County Minnesota Hazard Mitigation Planning



The Polk County 2023 Hazard Mitigation Plan was made available for public review online with a website hosted by U-Spatial@UMD ([Polk 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 |

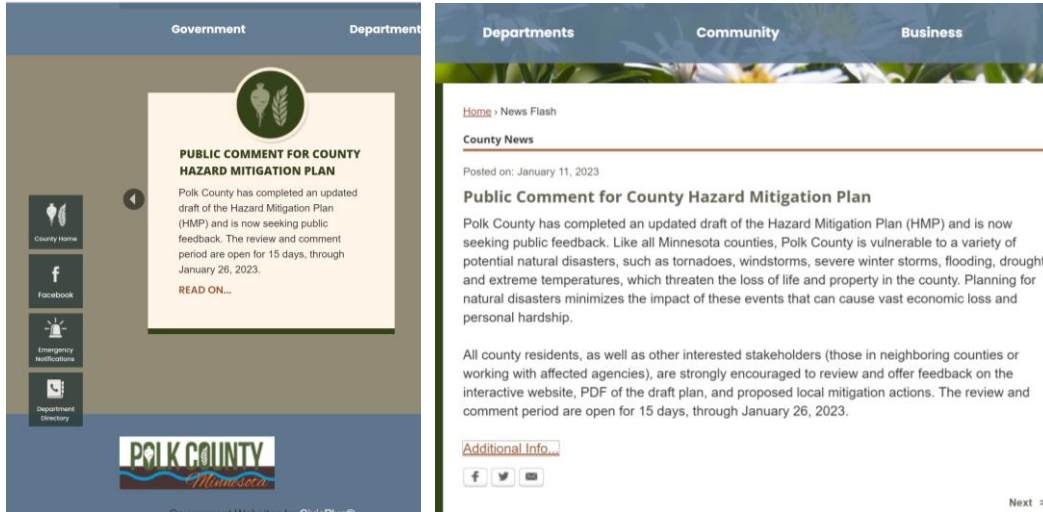
**What mitigation strategy best describes this action?** Select all that apply

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

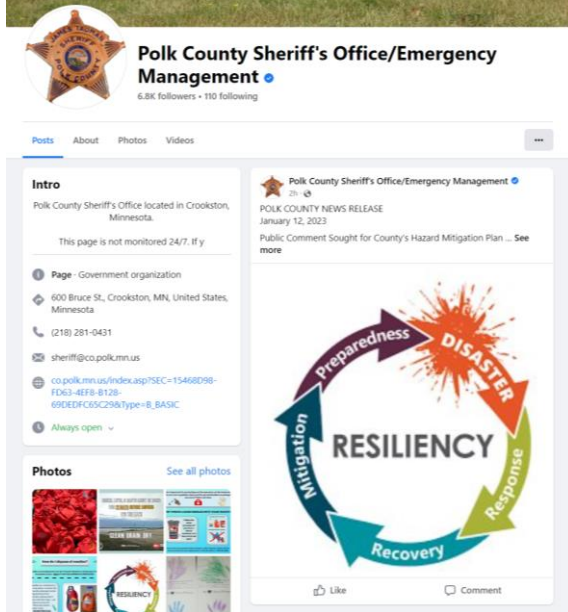
# Polk County MHMP News Release #2 Documentation of News Release Postings

## COUNTY POSTINGS

1/12/23 Polk County Website



1/12/23 Polk County Sheriff's Office/Emergency Management Facebook Page



# LOCAL MEDIA POSTINGS

1/12/23 KROX 105.7 FM/1260 AM Radio website posting



Get your FLU shot, not the FLU!  
For appointments, call 281-9595.

Dustin Buse  
Financial Advisor  
206 S Main St.,  
Crookston, MN 56716  
(218) 281-1224

Contact me today

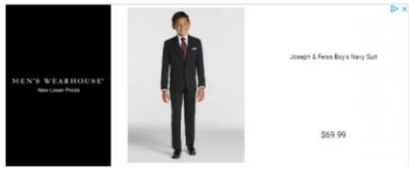
Edward Jones

AUTO RATES ALL IN ONE PLACE

PROGRESSIVE

Get a quote

## PUBLIC COMMENT SOUGHT FOR POLK COUNTY'S HAZARD MITIGATION PLAN



January 11, 2023

Polk County has completed an updated draft of the Hazard Mitigation Plan (HMP) and is now seeking public feedback. Like all Minnesota counties, Polk 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 and other interested stakeholders (those in neighboring counties or working encouraged to review and offer feedback on the interactive with affected agencies) around the website, PDF of the draft plan, and proposed local mitigation actions. The review and comment period are open for 15 days, through January 26, 2023. The public can access the plan using the following links:

- Polk County HMP Website ([z.umn.edu/PolkHMP](https://z.umn.edu/PolkHMP))
- Mitigation Action Charts (<https://polk-county-hmp-umn.hub.arcgis.com/pages/mitigation-actions>)
- Public Comment Feedback Form (<https://z.umn.edu/PolkSurveyHMP>)

The Polk County HMP is a multi-jurisdictional plan that covers Polk County, including the cities of Beltrami, Climax, Gully, Lengby, McIntosh, concerns, and needs of East Grand Forks, Erskine, Fertile, Fisher, Fosston, Mentor, Nielsville, Trail, and Winger. The Polk County HMP also incorporates the townships, school districts, and other stakeholders participating in the plan.

An update of the plan has been under the direction of Polk 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 the 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 fall due to heavy snow, ice, or windstorms; 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 Polk County and other jurisdictions protect their residents.

Working with local co...

Allegria Hives  
RELIEVES ITCHING FROM HIVES FOR 24 HOURS  
SAVE \$4

BANANA SPLIT  
Play Now

BANANA SPLIT  
Go Bonanza with Monkey Mike  
Play Now

EGG-LAND'S BEST  
LEARN MORE

ANYTIME FITNESS  
JOIN ONLINE TODAY  
Add pick-up your key

96% Of People Who Notice This Will

1/11/23, AM 1100FM 93.3 WZFG

AM 1100 FM 93.3 WZFG THE FLAG

HOME NEWS WEATHER SPORTS FEATURES PODCASTS BIG DEALS SCHEDULE

COUPON CODES AVAILABLE GET CODES

### Polk County seeking public comment for County Hazard Mitigation Plan

January 11, 2023 - 7:37pm | By Ty Schonert

f t e +

Courtesy: Polk County  
(Polk County, MN) --  
Polk County finished their updated draft of a Hazard Mitigation Plan (HMP), and are seeking feedback based on

## CITY POSTINGS

### City of Beltrami

1/19/23 Hardcopy Posting

A printed copy of the news release was posted at the Beltrami Post Office.

### City of Climax

1/17/23 Hardcopy Postings

Printed copies of the news release were posted at the Climax City Hall, Post Office, and Credit Union.

### City of Crookston

1/13/23, City of Crookston Website

Create a Website Account - Manage notification subscriptions, save form progress and more.

THE CITY OF CROOKSTON

Government Community Services

#### Polk County Mitigation Plan

Download a PDF copy here or read below

News Release Polk Hazard Mitigation Plan Public Review (1-12-23)

### POLK COUNTY SHERIFF'S OFFICE

Sheriff James Tadman Chief Deputy Mike Norland

#### POLK COUNTY NEWS RELEASE

January 12, 2023

##### Public Comment Sought for County's Hazard Mitigation Plan

Polk County has completed an updated draft of the of its Hazard Mitigation Plan (HMP) and is now seeking public feedback. Like all Minnesota counties, Polk County is vulnerable to a variety of potential natural disasters, such as tornados, wildfires, severe winter storms, flooding, drought, and extreme temperatures, which threaten the lives 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 off-ener agencies) are strongly encouraged to review and offer feedback on the interactive website, PDF of the draft plan, and proposed local mitigation actions. The review and comment period is open for a period of 15 days through January 26, 2023. The public can access the plan using the following links:

[Polk County HMP Website \(www.edu/polk-HMP\)](https://www.edu/polk-HMP)  
[Mitigation Action Charts \(https://polk-county.hmp.mn.us/hub-angels.com/pages/mitigation-actions\)](https://polk-county.hmp.mn.us/hub-angels.com/pages/mitigation-actions)  
[Public Comment Feedback Form \(https://www.edu/polk-HMP\)](https://www.edu/polk-HMP)

The Polk County HMP is a multi-jurisdictional plan that covers Polk County, including the cities of Beltrami, Climax, Crookston, East Grand Forks, Erskine, Fertile, Fisher, Fosston, Gully, Langby, McIntosh, Mentor, Newville, Trail, and Wingler. The Polk 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 Polk 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 tornados and severe storms events, buying powerlines that may fall due to heavy snow, ice or wind storms, ensuring timely emergency communication to the public through warning sirens and mass notification systems, and conducting public awareness and education campaigns to help people be prepared to take safe action before, during, or following a hazard event.

# 1/13/23, City of Crookston Facebook Page

**The City of Crookston, Minnesota**  
3m · 🌐

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

All county residents, as well as other interested stakeholders (those in neighboring counties or working with affected agencies) are strongly encouraged to review and offer feedback on the interactive website, PDF of the draft plan, and proposed local mitigation actions. The review and comment period is open for a period of 15 days through January 26, 2023. The public can access the plan using the following links:

- Polk County HMP Website ([z.umn.edu/PolkHMP](https://z.umn.edu/PolkHMP))
- Mitigation Action Charts (<https://polk-county-hmp-umn.hub.arcgis.com/.../mitigation...>)
- Public Comment Feedback Form (<https://z.umn.edu/PolkSurveyHMP>)

**POLK COUNTY SHERIFF'S OFFICE** breaks the cycle of response and recovery. Updating the plan further allows Polk County residents to be eligible to apply for Future FEMA Hazard Mitigation Assistance grant projects that help to reduce or eliminate the impacts of future natural hazard events.

**James Tadmán** Sheriff  
**Chief Deputy Mike N...** Chief Deputy

**COUNTY NEWS RELEASE**  
January 12, 2023

**Public Comment Sought for County's Hazard Mitigation Plan**

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

All county residents, as well as other interested stakeholders (those in neighboring counties or working with affected agencies) are strongly encouraged to review and offer feedback on the interactive website, PDF of the draft plan, and proposed local mitigation actions. The review and comment period is open for a period of 15 days through January 26, 2023. The public can access the plan using the following links:

- Polk County HMP Website ([z.umn.edu/PolkHMP](https://z.umn.edu/PolkHMP))
- Mitigation Action Charts (<https://polk-county-hmp-umn.hub.arcgis.com/pages/mitigation-actions>)
- Public Comment Feedback Form (<https://z.umn.edu/PolkSurveyHMP>)

Polk County HMP is a multi-jurisdictional plan that covers Polk County, including the cities of Bettman, Climes, Crookston, East Grand Forks, Erskine, Fertile, Fisher, Fosston, Gully, Lenoxy, Montebello, Mentor, Nellsville, Trail, and Winger. The Polk County HMP also incorporates the concerns and needs of township, school districts, and other stakeholders participating in the plan.

## 1/13/23 Hardcopy Postings

Printed copies of the news release were posted at the Crookston Public Library and the Crookston City Hall.

## 1/13/23 City of Crookston Website

ULTIMATE GUITAR TABS - 1,100 | New Tab | Emergency Management | Crookston | +

https://www.crookston.mn.us/190/Emergency-Management

Create a Website Account - Manage notification subscriptions, save form progress and more.

**THE CITY OF CROOKSTON**  
Government Community Services

**Polk County Mitigation Plan**  
Download a PDF copy here or read below  
News Release Polk Hazard Mitigation Plan Public Review (1-12-23)

**POLK COUNTY SHERIFF'S OFFICE**  
Sheriff James Tadmán Chief Deputy Mike Norland

**POLK COUNTY NEWS RELEASE**  
January 12, 2023

**Public Comment Sought for County's Hazard Mitigation Plan**

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

All county residents, as well as other interested stakeholders (those in neighboring counties or working with affected agencies) are strongly encouraged to review and offer feedback on the interactive website, PDF of the draft plan, and proposed local mitigation actions. The review and comment period is open for a period of 15 days through January 26, 2023. The public can access the plan using the following links:

- Polk County HMP Website ([z.umn.edu/PolkHMP](https://z.umn.edu/PolkHMP))
- Mitigation Action Charts (<https://polk-county-hmp-umn.hub.arcgis.com/pages/mitigation-actions>)
- Public Comment Feedback Form (<https://z.umn.edu/PolkSurveyHMP>)

The Polk County HMP is a multi-jurisdictional plan that covers Polk County, including the cities of Bettman, Climes, Crookston, East Grand Forks, Erskine, Fertile, Fisher, Fosston, Gully, Lenoxy, Montebello, Mentor, Nellsville, Trail, and Winger. The Polk County HMP also incorporates the concerns and needs of township, school districts, and other stakeholders participating in the plan.

Update of the plan has been under direction of Polk County Emergency Management in cooperation with US-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 frequent flooding, construction of safe rooms in areas where residents and visitors are vulnerable to tornadoes and severe storm events; burying powerlines that may fall due to heavy snow, ice or wind storms; ensuring timely emergency communication to the public through warning sirens and mass notification systems; and conducting public awareness and education campaigns to help people be prepared to take safe action before, during, or following a hazard event.

1/13/23 City of Crookston Facebook Page

**The City of Crookston, Minnesota**  
2.5K followers • 34 following

**Intro**  
Welcome to Crookston, Minnesota! We are a friendly, safe, and progressive community located on the b...

**Page** - Local business  
124 N Broadway, Crookston, MN, United States, Minnesota  
(218) 281-1232  
contact@crookston.mn.us  
crookston.mn.us

**Photos** See all photos

**The City of Crookston, Minnesota** 2d · 🌐

Polk County has completed an updated draft of the of its Hazard Mitigation Plan (HMP) and is now seeking public feedback. Like all Minnesota counties, Polk 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 los... [See more](#)

**POLK COUNTY SHERIFF'S OFFICE**  
Chief Deputy Mike J...  
POLK COUNTY NEWS RELEASE  
12, 2023

**Public Comment Request for County's Hazard Mitigation Plan**  
Polk County has completed an updated draft of the of its Hazard Mitigation Plan (HMP) and is now seeking public feedback. Like all Minnesota counties, Polk 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 los... and personal hardship.

1 Like 2 shares

Like Comment

City of East Grand Forks

1/12/23 City of East Grand Forks City website

Create a Website Account · Manage notification subscriptions, save form progress and more.

**Life Connected**  
East Grand Forks, MN

HOME DEPARTMENTS COMMUNITY BUSINESS VISITORS I WANT TO... Search...

**Flood Information**  
**Election Information**  
**Employment**  
**City Council**  
**License Forms & Applications**  
**E-Services**

Home > News Flash  
**East Grand Forks News and Announcements**  
Posted on: January 12, 2023  
**Public Input Requested for Polk County Hazard Mitigation Plan**  
Polk County has completed an updated draft of the of its Hazard Mitigation Plan (HMP) and is now seeking public feedback.  
Like all Minnesota counties, Polk County is vulnerable to a variety of potential natural disasters, such as tornadoes, windstorms, severe winter storms, flooding, drought, and extreme temperatures, which threaten the loss of life and property in the county. Planning for natural disasters minimizes the impact of these events that can cause vast economic loss and personal hardship.  
All county residents, as well as other interested stakeholders (those in neighboring counties or working with affected agencies) are strongly encouraged to review and offer feedback on the interactive website, PDF of the draft plan, and proposed local mitigation actions. The review and comment period is open for a period of 15 days through January 26, 2023. The public can access the plan using the following links:  
[Polk County HMP Website](#)  
[Mitigation Action Charts](#)  
[Public Comment Feedback Form](#)  
The Polk County HMP is a multi-jurisdictional plan that covers Polk County, including the cities of Beltrami, Climax, Crookston, East Grand Forks, Erskine, Fertile, Fisher, Foston, Gully, Lengby, McIntosh, Mentor, Nielsville, Trail, and Winger. The Polk County HMP also incorporates the concerns and needs of townships, school districts, and other stakeholders participating in the plan.

**Search**  
All categories  
Tools  
RSS  
Notify Me  
Categories  
All Categories  
East Grand Forks News and Announcements  
Home - 2019 - Water & Light  
Campbell Library News and Announcements



### **City of Erskine**

1/13/23 Hardcopy Posting

A printed copy of the news release was posted at the Erskine Community Center where the Clerk's office is located.

### **City of Fertile**

1/23/23 Hardcopy Posting

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

### **City of Fisher**

1/23/23 Hardcopy Posting

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

### **City of Fosston**

1/19/23 City of Fosston Website

[Check out the City of Fosston Youtube channel!](#)

[January 2022 City News](#)

[February 2022 City News](#)

[March 2020 City News](#)

[April City News](#)

[May 2022 City News](#)

[June 2022 City News](#)

[July 2022 City News](#)

[August 20 City News](#)

[September 2022 City News](#)

[October 2022 City News](#)

[November 2022 City News](#)

[December 2022 City News](#)

[Polk County Public Input Wanted! Multi-Hazard Mitigation Plan](#)

[Public Notice - Airport DBE](#)

[News Release - Polk County Hazard Mitigation Plan - Public Review](#)





**City of Gully**

1/13/23 Hardcopy Posting

A printed copy of the news release was posted at the Gully Post Office within the city of Gully Mall.

**City of Lengby**

1/20/23 Hardcopy Postings

Printed copies of the news release were posted at the Lengby Community Hall and the Post Office.

**City of McIntosh**

1/20/23 Hardcopy Posting

A printed copy of the news release was posted on the Community Center bill board.

**City of Mentor**

1/12/23 Hardcopy Postings

Printed copies of the news release were posted at the Community Center, local bar, and the Post Office.

**City of Nielsville**

1/13/23 Hardcopy Postings

Printed copies of the news release were posted at the Fire Hall/City Hall and the Post Office.

**City of Trail**

1/24/23 Hardcopy Posting

A printed copy of the news release was posted on the community bulletin board at the Post Office, where our meetings are held.

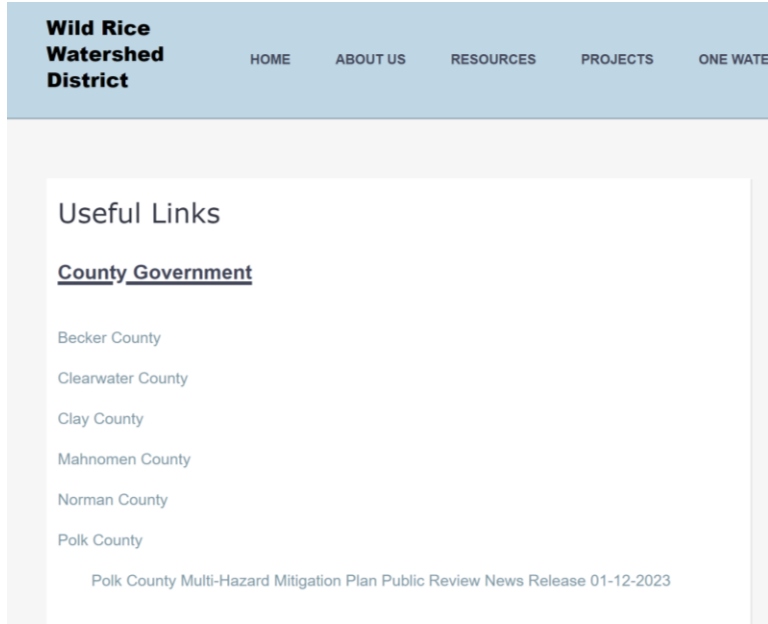
**City of Winger**

1/12/23 Hardcopy Postings

Printed copies of the news release were posted on the Lions Bulletin Board, at the Community Center and Post Office.

## OTHER POSTINGS

1/12/23, Wild Rice Watershed District Website



**Wild Rice Watershed District**

HOME ABOUT US RESOURCES PROJECTS ONE WATER

### Useful Links

**County Government**

- Becker County
- Clearwater County
- Clay County
- Mahnomen County
- Norman County
- Polk County

[Polk County Multi-Hazard Mitigation Plan Public Review News Release 01-12-2023](#)

1/17/23 School District ISD 592 Website

## District ISD 592

---

**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:

[Polk County HMP Website](#)

# **Appendix H – Mitigation Actions by Jurisdiction**

**CITY OF BELTRAMI**

**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 Everbridge emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	This is something that the city has not done to date. We can use the community bulletin board at the Post Office to put up flyers during the year to remind residents to sign up on the Polk County website.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and periods of extreme cold.	Existing High 2023-2028	City Admin, City EM	Announcements for the residents of the city are posted at the Post Office. If it is vital information for the residents, we will send out a mailing. The city is part of a Civil Defense Siren program.	City
3	Severe Winter & Summer Storms	Local Planning & Regulations	Continue participation in the MN Rural Water program to plan for protection of the city’s water supply in the event of a disaster.	Existing Moderate 2023-2028	City Admin, City EM	The city currently has a contingency plan in place through Minnesota Rural Water and the wellhead protection program. The purpose of this plan is to protect the city’s water supply in the event of a natural disaster that could impact it.	City, MN Rural Water
4	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Acquire additional portable generators to add to the city’s emergency backup power supply.	Existing Moderate 2023-2028	City Admin, City EM	The city currently owns one small generator but would like to acquire two additional generators if possible. The city will work to purchase more portable generators as city funding allows.	City
5	Severe Summer Storms	Mitigation Preparedness & Response Support	Work to Polk County Emergency Management to explore construction of a community safe room for people at-risk to high wind or tornado events.	New High 2023-2028	City Admin, City EM in coord with PCEM	The city has several residents who do not have basements. We would like to explore the feasibility of constructing a facility that could serve people in the community to take shelter from severe wind events. If a tornado safe room is our best option, FEMA HMA grant funding may be applied for with assistance from Polk County Emergency Management.	City, FEMA HMA grant funding

**CITY OF BELTRAMI****Mitigation Action Chart**

<b>#</b>	<b>Hazard</b>	<b>Mitigation Strategy</b>	<b>Mitigation Action</b>	<b>Status Priority Timeframe</b>	<b>Responsibility</b>	<b>Comments on Implementation &amp; Integration</b>	<b>Possible Funding</b>
6	Flooding	Local Planning & Regulations	Work with the MN DNR to develop a floodplain ordinance for the city.	New High 2023-2028	City Admin in coord with MN DNR NFIP Program	The city of Beltrami is working with the Minnesota NFIP coordinator to learn about their official mapped floodplain and to develop a floodplain ordinance that will establish restrictions for development in the high-risk flood areas.	City, MN DNR

**CITY OF CLIMAX**

**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 Everbridge emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city continues to encourage businesses and residents to enroll in the county's emergency notification system so they will be aware of dangerous storm events. We placed a link to the county's sign-up page in our newsletter, and the city has also increased use of our Facebook page to communicate with residents on emergency preparedness.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and periods of extreme cold.	Existing High 2023-2028	City Admin, City EM	To share information with residents, the city uses our Facebook page. We also post information on bulletin boards at the Post Office, Credit Union, and City Hall.	City
3	Severe Summer Storms	Structure & Infrastructure Projects	Upgrade the city's outdoor warning siren.	New High 2023-2028	City Admin, City EM in coord with PCEM	The city will work with Polk County Emergency Management to see if it may be possible to apply for USDA Rural Development Community Program funds to purchase and install a new warning siren that will be connected to the county system.	City, USDA RD Grant funds
4	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 participates in the NFIP and enforces Ordinance #1997-1 Floodplain Management in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city. We also have a sump pump ordinance in place to mitigate against overload of the city's I&I system.	City

**CITY OF CROOKSTON**

**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 Everbridge emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	We use our city web page and our Facebook page 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 periods of extreme cold.	Existing High 2023-2028	City Admin, City EM	Our Fire Chief works with the county to participate in the National Weather Service's annual Severe Winter/Spring Weather Awareness Week by posting severe weather awareness information out on our city Facebook page, web page, and our local news media outlets.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Install Auto start backup generators on lift stations and the water treatment plant.	New High 2023-2028	City Admin, City EM, City Public Works	Install generators at lift stations 1-4 and the Water Treatment plant on Fairfax Ave.	City, MN DNR FHM grant program, FEMA HMA Grant Program
4	Severe Summer Storms	Mitigation Preparedness & Response Support	Convert our outdoor warning sirens to DC power back-up in case of a power failure	New Medium, 2023-2028	Emergency Management Dept.	Convert seven outdoor warning sirens to DC power back-up in case we lose power to them during a weather event	City, HSEM, FEMA or other grants
5	Severe Summer Storms	Education & Awareness Programs	Place signage at the City Campground directing campers to City Hall for their protection from storm and high wind events.	In-Progress High 2023-2028	City Admin, City EM, City Public Works	We are currently getting estimates for the signage to be placed at our campground.	City
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 High 2023-2028	City Admin	The city enforces requirements of the NFIP through Chapter 33: Special Service Districts, Subchapter Flood Control District, sections 33.01 – 33.03 in the city's code of ordinances. This chapter regulates development in the flood hazard areas of the city.	City



**CITY OF CROOKSTON**

**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
7	Flooding	Structure & Infrastructure Projects	Conduct property buyouts for 2 homes that are prone to flooding.	New High 2023-2028	City Admin in coordination with property owners	The city would like to buy out 2 homes that are prone to flooding. The city would like to work with the property owners to buy out these homes. The city needs funding assistance to buy out residential properties that have experienced repetitive loss from flooding. Funding may be sought from the MN DNR Flood Hazard Mitigation Grant Assistance Program (FHM) grant program and/or the FEMA HMA grant program.	City, MN DNR FHM grant program, FEMA HMA Grant Program
8	Flooding	Structure & Infrastructure Projects	Install larger levees to better protect Crookston from future flood events.	New High 2023-2028	City Admin, City EM, City Public Works	Raise levee heights in 4 locations to match protection levels that are consistent with all other levees withing the City of Crookston.	City, MN DNR FHM grant program, FEMA HMA Grant Program
9	Flooding	Structure & Infrastructure Projects	Stabilize sluffing riverbanks within the City of Crookston.	New High 2023-2028	City Admin, City EM, City Public Works	Slope and stabilize banks in 6 locations within the City of Crookston.	City, MN DNR FHM grant program, FEMA HMA Grant Program
10	Flooding	Structure & Infrastructure Projects	Resolve flooding issues on the NE corner of Crookston	New High 2023-2028	City Admin, City EM, City Public Works	Model and complete recommended actions to resolve flooding events during heavy rains on the Northeast corner of Crookston.	City, MN DNR FHM grant program, FEMA HMA Grant Program

**CITY OF EAST GRAND FORKS**

**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 Everbridge emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city encourages residents to sign up for the Polk County alerting system by having a link provided on our city website.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and periods of extreme cold.	Existing High 2023-2028	City Admin, City EM	The city participates in the National Weather Service's annual Severe Weather Awareness Week by posting severe weather awareness information out on our city website and Facebook page. Our city also participates in the annual statewide tornado drill. Our local school practices tornado drills on an annual basis.	City
3	Severe Summer Storms	Structure & Infrastructure Projects	Purchase and install an additional warning siren, located to cover the Red River State Recreation Area which is adjacent to the city.	New Moderate 2023-2028	City Admin, City EM in coord with PCEM	The city would like to install a new outdoor warning siren, to locate on top of Fire Station 1 which will be used to notify campers within the Red River State Recreation Area of severe wind or tornado events. The project is dependent upon possible future funding budgeted by the city or availability of supportive grant funding from the USDA Rural Development Community Facilities grant program for warning sirens.	City, USDA RD CF Grant Program

**CITY OF EAST GRAND FORKS**

**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
4	Severe Summer Storms	Structure & Infrastructure Projects	Retrofit the Civic Center and the VFW Arena to serve as a storm shelter/tornado safe room for vulnerable areas residents during severe storm and high wind events.	In-Progress High 2023-2028	City Admin, City EM, City Parks & Recreation	The city has been working on plans to completely redo our Civic Center and VFW Arena to better serve as storm shelters to residents who are most vulnerable to high wind or tornado events. This includes residents of the city's mobile home park and area residents with homes built on slab. Both facilities serve as our designated storm shelters, but neither is built to any specifications for severe storm events. The city wishes to retrofit both the Civic Center and VFW to better serve as storm shelters, with the potential to construct tornado safe rooms within each if we can obtain sufficient funding to do so. This project was in the tax bill to allow EGF to collect a local sales tax to fund the project, however no tax bills were approved prior to the end of the legislative session. This project is in limbo until such time as the legislature either reconvenes in special session or next legislative session. The city may also seek to apply for FEMA HMGP grant funds for tornado safe room projects for both facilities.	City, State, Federal, Local Sales Tax (Pending), FEMA HMGP
5	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 Community Development in coord with MN DNR	The city is working with the MN DNR Floodplain Manager to develop an updated floodplain ordinance. The entirety of the city is in the flood protection system constructed in 2000 by the Army Corps of Engineers flood risk reduction project, but there are FEMA mapped floodplain areas outside of this area.	City

**CITY OF ERSKINE****Mitigation Action Chart**

<b>#</b>	<b>Hazard</b>	<b>Mitigation Strategy</b>	<b>Mitigation Action</b>	<b>Status Priority Timeframe</b>	<b>Responsibility</b>	<b>Comments on Implementation &amp; Integration</b>	<b>Possible Funding</b>
1	All-Hazards	Education & Awareness Programs	Encourage all city residents to sign-up for the county's Everbridge emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city has a website we can use to direct residents to sign up by going directly to the Polk County website.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and periods of extreme cold.	Existing High 2023-2028	City Admin, City EM	The city will seek to share information we receive from Polk County Emergency Management with our community about severe weather awareness through the use of our city website and occasional announcements at City Council meetings.	City

**CITY OF FERTILE****Mitigation Action Chart**

<b>#</b>	<b>Hazard</b>	<b>Mitigation Strategy</b>	<b>Mitigation Action</b>	<b>Status Priority Timeframe</b>	<b>Responsibility</b>	<b>Comments on Implementation &amp; Integration</b>	<b>Possible Funding</b>
1	All-Hazards	Education & Awareness Programs	Encourage all city residents to sign-up for the county's Everbridge emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city has a website we will seek to use to encourage residents to sign up and direct them to the Polk County website to do so.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and periods of extreme cold.	Existing High 2023-2028	City Admin, City EM	The city puts out notice to residents during periods of extreme cold that we are experiencing increases in frozen water lines and ask that residents trickle their water to keep their service lines open.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Acquire a generator for the City Offices/Community Center building and the Fire Hall for emergency backup power.	New High 2023-2028	City Admin, City EM	The city would like to acquire portable generators for these buildings that support city operations and emergency response. The Community Center is our designated shelter if needed. The city will seek to purchase generators as funding allows in the future.	City

# CITY OF FISHER

# 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 Everbridge emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	This is something the city has not done to date, but moving forward we will seek to use our city website and website page to connect residents to the Polk 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 periods of extreme cold.	Existing High 2023-2028	City Admin, City EM	We use our city website and Facebook page. We also post information on bulletin boards at the gas station and at the Post Office.	City
3	Extreme Cold	Education & Awareness Programs	Encourage residents to trickle hot water during periods of extreme cold to avoid frozen pipes.	New High 2023-2028	City Admin, City Public Works Dept.	In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold. We will work to raise public awareness on how to avoid burst pipes through our existing means of public outreach.	City
4	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, City Public Works Dept.	We have a sump pump ordinance in place to mitigate against overload of our cities lift station. The city also is noted as participating in the NFIP but we do not have a floodplain ordinance in place. The city will seek to work with the MN DNR to develop an appropriate flooding ordinance for our city.	City
5	Flooding	Structure & Infrastructure Projects	Update culvert covers along the levy.	In-Progress Moderate 2023-2028	City Engineer, City Public Works Director	The city is looking into updating our culvert covers along the levy. This will hopefully aid in reduction in spring flooding and man hours on Levy/dike watch.	City
6	Wildfire	Mitigation Preparedness & Response Support	Work with local farmers and the railroad to reduce wildland fire risk due to controlled burns and sparks from trains.	New Moderate 2023-2028	City Admin in coord with Volunteer Fire Dept.	The city and local volunteer fire department will seek to encourage area farmers and the railroad to minimize risk of wildland fire, which our VFD is responsible to respond to.	City, Private Landowner, RR

**CITY OF FOSSTON**

**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 Everbridge emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city has not done this to date, but moving forward we can post announcements in our city newsletter. We can also use our city website & Facebook page to direct residents to the Polk 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 periods of extreme cold.	Existing High 2023-2028	City Admin, City EM	We make announcements during severe weather season using our Facebook and city website. Our schools work to educate children on weather awareness. Our fire department also works with the community. Newsletters include information on severe weather awareness.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Acquire portable generators for the city to use during power outages from severe storms to support delivery of services and government operations.	New High 2023-2028	City Admin, City EM	The city wishes to acquire backup generators for our firehall and our civic center. Both facilities are labeled as storm shelter facilities and do not currently have backup generators in place. The city will seek to purchase new generators if funding is available. If the purchase of generators for critical facilities is eligible for FEMA HMA grant funding, we would seek to apply to that program.	City, FEMA HMA grant funding
4	Extreme Cold	Education & Awareness Programs	Encourage residents to trickle hot water during periods of extreme cold to avoid frozen pipes.	New High 2023-2028	City Admin, City Public Works Dept.	In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold. We will work to raise public awareness on how to avoid burst pipes through our existing means of public outreach.	City

**CITY OF FOSSTON**

**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	Address the need for a new outdoor warning siren to cover the mobile home park and new development on the north side of town that are both located a long distance from the existing siren.	New High 2023-2028	City Admin, City EM in coord with PCEM	The city will work with Polk County Emergency Management to research if we are eligible to apply to the USDA Rural Development Community Facilities grant program for a warning siren. If eligible the city will look into submitting an application.	City, USDA RD grant funding
6	Severe Summer Storms	Structure & Infrastructure Projects	Construct a new storm shelter or tornado safe room at the mobile home park on the west end of the city.	New High 2023-2028	City Admin, City EM in coord with PCEM	The city will work with Polk County Emergency Management to look into how we can address the need for protective shelter for residents at our mobile home park. If a tornado safe room is the desired course of action, the city will potentially work with PCEM to research and apply for FEMA HMA grant funding. The city will need outside funding assistance to implement this project.	City, FEMA HMA grant funding, Other (TBD)



**CITY OF GULLY****Mitigation Action Chart**

<b>#</b>	<b>Hazard</b>	<b>Mitigation Strategy</b>	<b>Mitigation Action</b>	<b>Status Priority Timeframe</b>	<b>Responsibility</b>	<b>Comments on Implementation &amp; Integration</b>	<b>Possible Funding</b>
1	All-Hazards	Education & Awareness Programs	Encourage all city residents to sign-up for the county's Everbridge emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	The city continues to encourage businesses and residents to enroll in the county's emergency notification system so they will be aware of dangerous storm events. We are a small city with no website or Facebook. Instead, we post flyers to share information.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and periods of extreme cold.	Existing High 2023-2028	City Admin, City EM	We share information we receive from Polk County Emergency Management by posting information on bulletin boards at the Community Center and the Post Office.	City
3	Severe Summer Storms	Mitigation Preparedness & Response Support	Ensure residents of the mobile home park are aware of evacuation and sheltering plans in times of severe weather.	Existing High 2023-2028	City Admin, City EM	The city continues to work with our mobile home park to inform residents on where to evacuate to in times of severe weather.	City

**CITY OF LENGBY****Mitigation Action Chart**

<b>#</b>	<b>Hazard</b>	<b>Mitigation Strategy</b>	<b>Mitigation Action</b>	<b>Status Priority Timeframe</b>	<b>Responsibility</b>	<b>Comments on Implementation &amp; Integration</b>	<b>Possible Funding</b>
1	All-Hazards	Education & Awareness Programs	Encourage all city residents to sign-up for the county's Everbridge emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	This is not something the city has done to date; however we have a city website we can use to direct residents to sign up on the Polk County website.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and periods of extreme cold.	Existing High 2023-2028	City Admin, City EM	We use the "Announcements" portion of our city website to share information from Polk County Emergency Management with residents.	City

# CITY OF MCINTOSH

# 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 Everbridge emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	This is not something the city has done to date; however we can use our city website and Facebook page to direct residents to the Polk 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 periods of extreme cold.	Existing High 2023-2028	City Admin, City EM	We use our city Facebook page and post information on bulletin boards at the Community Center and Post Office. Our city works with the county to participate in the National Weather Service's annual Severe Winter/Spring Weather Awareness Week by posting severe weather awareness information through our city's newspaper and making announcements on our local radio station during severe weather season.	City
3	Severe Winter & Summer Storms	Structure & Infrastructure Projects	Reduce the risk of downed trees and branches that may come down during severe storm events.	Existing Moderate 2023-2028	City Public Works Dept.	The city has an ongoing practice of removing trees around powerlines and boulevards.	City
4	Extreme Cold	Education & Awareness Programs	Encourage residents to trickle hot water during periods of extreme cold to avoid frozen pipes.	New High 2023-2028	City Admin, City Public Works Dept.	In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold. We will work to raise public awareness on how to avoid burst pipes through our existing means of public outreach.	City
5	Flooding	Education & Awareness Programs	Conduct outreach to businesses and homeowners on stormwater management to reduce impacts to the city's storm sewer system.	Existing Moderate 2023-2028	City Public Works Dept.	The city continues to encourage businesses and residents to limit storm sewer overload during severe weather events.	City
6	Flooding	Structure & Infrastructure Projects	Work to manage frozen culverts against causing localized flooding in the spring.	Existing Moderate 2023-2028	City Public Works Dept.	This is an ongoing element of our Public Works Department work to maintain our local roads and culverts.	City

## CITY OF MENTOR

## 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 Everbridge emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	We are a small city and mostly use in-person verbal reminders for residents to encourage them to sign up for the county system. We do not have a city website but can post flyers in public locations.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and periods of extreme cold.	Existing High 2023-2028	City Admin, City EM	The city continues to use our in-person interactions with residents and posting of information to share information about severe weather we receive from Polk County Emergency Management.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Acquire a portable backup generator to provide emergency power for the city's Firehall.	New High 2023-2028	City Admin, City EM	The city's Fire Hall serves as our community shelter and does not have a backup generator. The city will work to purchase a generator if funding allows.	City
4	Severe Summer Storms	Structure & Infrastructure Projects	Work with Polk County Emergency Management to address the city's need for an outdoor warning siren.	New High 2023-2028	City Admin, City EM in coord with PCEM	The city does not have an outdoor warning siren and would like to be able to purchase and install one. We will work with PCEM on this effort and research if we are eligible to apply for USDA Rural Development Community Facilities grant program to support purchase of the siren.	City, USDA CF grant program
5	Wildfire	Education & Awareness Programs	Conduct public outreach to inform residents on the dangers of wildfire and how to reduce risk through awareness and safe activities.	Existing High 2023-2028	City Fire Dept.	The city fire department holds a yearly fire prevention open house to inform people of fire risks and how to avoid them.	City
6	Wildfire	Natural Systems Protection	Work with the MN DNR to regularly address wildfire mitigation measures to reduce wildfire risk to the city.	Existing High 2023-2028	City Fire Dept. in coord with MN DNR	The city's fire department continues to work with the MN DNR Forestry Division to conduct prescribed burns where needed.	City, MN DNR

**CITY OF MENTOR**

**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
7	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 enforces requirements of the NFIP through “Floodplain Management Ordinance” adopted October 17, 2002 in the city’s code of ordinances. This chapter regulates development in the flood hazard areas of the city.	City
8	Flooding	Structure & Infrastructure Projects	Assess and address how to reduce flooding at the Community Center.	In-Progress High 2023-2028	City Admin, City Public Works	The city is discussing putting in a drain field and mound system to try and mitigate the problem of flooding at the Community Center. We have already removed shrubs and increased the slope of dirt away from the building as well as installing rain gutters and downspouts that should get the water away from the building.	City
9	Flooding	Structure & Infrastructure Projects	Work with the Polk County Highway Department to address flood mitigation projects for Stephens Street and 2 <sup>nd</sup> Street.	In-Progress High 2023-2028	City Admin, City Public Works	The city has been in touch with the Polk County Engineer to try and piggyback on any projects they may have planned in Mentor since half of our roads are county roads. We will continue to work with Polk County Highway Dept. on these projects.	City, County

## CITY OF NIELSVILLE

## 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 Everbridge emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	We plan to encourage business, and residents to enroll in the county's emergency notification system so they will be aware or dangerous storm events. We will send out the information in our monthly newsletter and post the information on the bulletin board at the Fire Hall and Post Office.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and periods of extreme cold.	Existing High 2023-2028	City Admin, City EM	Our city works with Polk County to participate in the National Weather Service's annual Winter/Spring weather awareness week. We post information on bulletin boards at the Fire Hall and at the Post Office. Polk County dispatch warns us of severe weather. We also have SkyWarn Spotters.	City
3	Severe Winter & Summer Storms	Structure & Infrastructure Projects	Implement measures to reduce the occurrence of power failures in the city due to downed power lines from severe storm events.	Existing Moderate 2023-2028	City of Nielsville municipal utility	We have our own municipal utility that is responsible for mitigating against power outages. The city has a program to manage vegetation near powerlines to reduce the risk of power outages during bad weather.	City (Utility)
4	Severe Summer Storms	Structure & Infrastructure Projects	Upgrade the city's outdoor warning siren.	New Moderate 2023-2028	City Admin, City EM	The city will work with Polk County Emergency Management to research if we are eligible to apply to the USDA Rural Development Community Facilities grant program for a warning siren. If eligible the city will work with PCEM to submit an application.	City, USDA CF Grant Program

**CITY OF NIELSVILLE**

**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
5	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 High 2023-2028	City Admin, City Public Works	The city has a floodplain ordinance in place that was adopted May 19, 2000. The City Council oversees compliance with the ordinance. We also have a sump pump ordinance in place to mitigate against overload of the city's I & I system. The Council will check to make sure residents are in compliance.	City
6	Flooding	Education & Awareness Programs	Conduct public outreach to encourage residents to maintain sump pumps to avoid basement flooding.	Existing High 2023-2028	City Admin, City Public Works	Each spring and winter we do encourage residents to maintain their sump pumps to reduce the chances of their basements flooding.	City
7	Flooding	Local Planning & Regulations	Reduce the impact of debris clogging gutters and causing localized flooding after high rain events.	Existing Moderate 2023-2028	City Public Works	Each fall and spring we do clear the debris from roadside gutters to prevent clogging and over the road flooding in these areas.	City
8	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Work with the Sand Hill Watershed District to address flood risk reduction to the legal ditch system that runs through the city.	New High 2023-2028	City Admin and Public Works in coord with the Sand Hill Watershed District	Sand Hill River Watershed District Project No. 24 is a legal ditch system that flows through the City of Nielsville. Flows higher than the design event along this ditch system creates flood risk for the community. Impacts include risk to structures and infrastructure. These impacts were not studied in sufficient detail in the Flood Insurance Study to reflect the actual risk to the community. The city will work with the Sand Hill River Watershed District on the Project No. 24 efforts reduce future flooding risk from this ditch running through the city. This may also include an update to the city's floodplain ordinance and zoning map.	SHWD

**CITY OF TRAIL****Mitigation Action Chart**

<b>#</b>	<b>Hazard</b>	<b>Mitigation Strategy</b>	<b>Mitigation Action</b>	<b>Status Priority Timeframe</b>	<b>Responsibility</b>	<b>Comments on Implementation &amp; Integration</b>	<b>Possible Funding</b>
1	All-Hazards	Education & Awareness Programs	Encourage all city residents to sign-up for the county's Everbridge emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	We are a very small city with no website or Facebook. We share information with residents through our in-person interactions or announcements at City Council meetings. We can encourage residents to go to the Polk County website 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 periods of extreme cold.	Existing High 2023-2028	City Admin, City EM	We rely on Polk County and local news to provide. We do not have a city website. We will continue to urge our residents to be aware of storm events and to be prepared.	City



**CITY OF WINGER****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 Everbridge emergency notification alert system.	Existing High 2023-2028	City Admin, City EM	We participate in the Polk County emergency notification system and encourage residents to go to the county website to sign up. We do not have a website or Facebook page.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events and periods of extreme cold.	Existing High 2023-2028	City Admin, City EM	We rely on Polk County and local news to provide. We do not have a city website. We will continue to urge our residents to be aware of storm events and to be prepared.	City
3	Severe Winter & Summer Storms	Structure & Infrastructure Projects	Manage vegetation near buildings to reduce the risk of damages from downed limbs during severe storm events.	Existing Moderate 2023-2028	City Public Works	The city has an ongoing practice of trimming trees back from buildings to reduce risk from damages during high wind or other storm events.	City