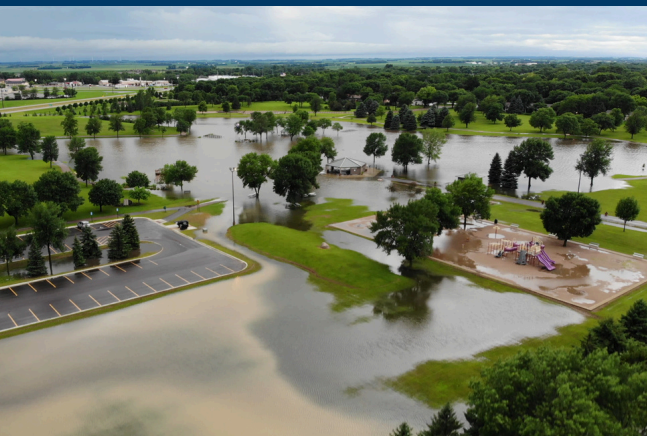


Lyon County 2024 Hazard Mitigation Plan



Lyon County Minnesota

2024 Hazard Mitigation Plan

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Section 1 – Introduction

1.1 Hazard Mitigation Planning in Minnesota

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

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

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

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

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

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

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

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

[*Lyon County HMP Website*](#)

1.1.1 Scope

U-Spatial, University of Minnesota, was contracted by Minnesota Homeland Security and Emergency Management using FEMA Pre-Disaster Mitigation (PDM) grant funds to work with Lyon County Emergency Management to facilitate an update to the 2017 Lyon 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 Lyon 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 Lyon County, including the cities of Balaton, Cottonwood, Garvin, Ghent, Lynd, Marshall, Minneota, Russell, Taunton, and Tracy. The city of Florence (population 28) was included in the planning process, but ultimately did not contribute as a plan participant and is not seeking to adopt the plan. The Lyon 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 Lyon County after final approval by FEMA (see Appendix B).

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

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

1.1.2 Hazard Mitigation Definition

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

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

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

1.2 State Administration of Mitigation Grants

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

Section 2 – Public Planning Process

2.1 Planning Team Information

The Lyon County HMP planning team is headed by the Lyon County emergency manager, who is the primary point of contact. Planning team members include representatives from public and governmental sectors. Table 1 identifies the planning team individuals and the organizations they represent.

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

Table 1. Hazard Mitigation Planning (HMP) Team

Name	Agency/Organization	Participant Title
Emily Coequyt	Lyon County Emergency Management	Emergency Management Director
Todd Draper	Lyon County Board of Commissioners	County Commissioner
Loren Stomberg	Lyon County	County Administrator
Thomas Andries	Lyon County	County Commissioner
Keith Lindeman	Lyon County	Facilities Manager
Gary Crowley	Lyon County	Commissioner
Jason Lenz	Lyon County	IT Director
Mark Volz	Lyon County	GIS Coordinator
Roger Schroeder	Lyon County	Environmental Administrator
Eric Wallen	Lyon County Sheriff's Office	Sheriff
John Biren	Lyon County P&Z/SWCD	Zoning Administrator
Aurora Heard	Lyon County	Auditor Treasurer
Todd Roelfsema	Lyon County Sheriff's Office	Chief Deputy
Aaron VanMoer	Lyon County Highway Department	Highway Engineer
Kimberly Wall	City of Balaton	Clerk-Treasurer
Teather Bliss	City of Cottonwood	City Administrator
Matt Norby	City of Ghent	Emergency Manager
Dawn Vlainck	City of Ghent	City Administrator/Clerk
Sue Paradis	City of Lynd	Clerk-Treasurer
Justin Guggisberg	City of Lynd/Lynd Fire Department	Mayor
Steven Anderson	City of Marshall	City Clerk
Alex Peterson	City of Marshall Emergency Management	Communications Specialist & Emergency Manager
James Marshall	City of Marshall Police Department	Director of Public Safety
Ryan Hoffman	City of Marshall, Police Department	Captain
Robert Vidoloff	City of Minneota	City Administrator
Bill Bolt	City of Minneota Police Department	Chief
Jeff Carpenter	City of Tracy	City Administrator
Jason Lichty	City of Tracy Police Dept	Chief of Police
Laurie Millner	City of Russell	Clerk Treasurer

Name	Agency/Organization	Participant Title
John Wiese	City of Russell Fire Department	Chief
Mark Marcy	MN HSEM	RPC
Ann Orren	Southwest Health and Human Services	Community Public Health Supervisor
Deann Holland	Southwest Health and Human Services	Emergency Preparedness/Health Educator
Tim O'Leary	Lyon-Lincoln Electric Cooperative, Inc.	General Manager
Chris Fenske	Lakeview Schools	Superintendent
Heather Anderson	Minneota Public Schools	Principal
Scott Monson	Minneota Public Schools	Superintendent
Les Engler	Minneota Public Schools	Facilities Manager
Tricia Stelter	Marshall Public Schools	Director of Operations
Jeremy Williams	Marshall Public Schools	Superintendent
Lori Grant	Coon Creek Township	Clerk
Deb Johnson	Nordland township	Clerk
Pat VanKeulen	Grandview Township	Treasurer
Donald Schmidt	Clifton Township	Clerk
Carl Nyquist	Murray County	Emergency Management Director
Casey Sievert	Pipestone County	Director of EMS & EM
Casey Namken	Yellow Medicine Sheriff's Office	Investigator/EM Director

2.2 Review of Existing Plans, Capabilities & Vulnerabilities

Lyon County and its local communities utilized a variety of planning documents to direct plan development. These documents included a Comprehensive/Master Plan, Emergency Operations Plan, Transportation Plan, etc. (see Section 5.1.3 and Appendix D). The planning process also incorporated the existing natural hazard mitigation elements from previous planning efforts. In addition, the 2024 Minnesota All-Hazard Mitigation Plan was consulted.

In the development of the Lyon 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 Lyon County emergency management director and other key county staff and local city officials to collect feedback on local mitigation capabilities and vulnerabilities that either support or hinder the ability to mitigate against natural hazards countywide and at the local level. Following is a summary of the assessment tools used to gather information on local capabilities and vulnerabilities during the planning process:

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

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

- Part A: Hazard Identification, Risk Assessment & Vulnerability Analysis
- Part B: Local Mitigation Capabilities Assessment
- Part C: Local Mitigation Projects
- Part D: Survey Participants

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

2.3 Planning Process Timeline and Steps

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

2.3.1 Lyon County Stakeholder Coordination

Two planning team meetings took place via Zoom video conference hosted by U-Spatial. Meeting participants included representatives from Lyon County, city and township governments, neighboring jurisdictions, and other key stakeholders. Appendix F provides documentation of stakeholder outreach and participation in the plan update

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

To provide the opportunity for public input, Lyon County issued two news releases announcing the plan update and inviting public review and feedback on the draft plan. The news release provided information on where to view the plan and submit comments. The County HMP website, hosted by U-Spatial, and the feedback and mitigation action ideas survey will remain available through the five-year planning period to foster public engagement. Table 2 documents dates of Hazard Mitigation update meetings and public outreach. The public feedback period for the draft plan was open from 12/3/24 to 12/17/24, for a period of 15 days. Appendix G provides documentation of the public outreach for feedback on the draft plan by Lyon County and jurisdictions.

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

Event	Date	Appendix
Kickoff Webinar	4/28/23	Appendix F, Planning Team Meetings
News Release #1	6/7/23	Appendix G, Public Outreach & Engagement Documentation
Planning Team Meeting #1	3/7/24	Appendix F, Planning Team Meetings
Planning Team Meeting #2	11/13/24	Appendix F, Planning Team Meetings
News Release #2	12/3/24	Appendix G, Public Outreach & Engagement Documentation

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

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

2.3.2 Overview of Jurisdictional Participation

Throughout the planning process, Lyon 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 Lyon 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 Lyon 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 Lyon 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 Lyon 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. Lyon County and U-Spatial were sensitive to these local challenges and worked to help these local governments to participate using the methods that worked best to accommodate them, such as phone interviews to complete local mitigation survey forms (see Appendix C).

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

Table 3. Jurisdictional participation in planning process

Jurisdiction (2022 Est. Population, Esri)	News Release #1	Planning Team Mtg. #1	Local Mitigation Survey	Mitigation Action Charts	Planning Team Mtg. #2	News Release #2 & Plan Review
Supporting Documentation	App. G	App. F	App. C	Sec. 5.3 App. H	App. F	App. G
Lyon County (25,119)	X	X	X	X	X	X
City of Balaton (686)	X	X	X	X		X
City of Cottonwood (1,119)	X	X	X	X	X	X
City of Florence (28)*	X					
City of Garvin (120)	X		X	X		X
City of Ghent (365)	X	X	X	X	X	X
City of Lynd (424)	X	X	X	X	X	X
City of Marshall (13,500)	X	X	X	X	X	X
City of Minneota (1,412)	X	X	X	X	X	X
City of Russell (338)	X	X	X	X		X
City of Taunton (149)	X		X	X		X
City of Tracy (2,068)	X		X	X	X	X
Neighboring Jurisdictions:						
Yellow Medicine County		X				
Redwood County						
Murray County		X				
Pipestone County		X				
Lincoln County						
Upper Sioux Community						

*The City of Florence is not included in this plan as a participating jurisdiction.

Section 3 – Risk Assessment and Vulnerability Analysis

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

The risk assessments in this plan are based on widely accepted tools and databases 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.

3.1 Natural Hazard Identification

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

[See a list of all natural hazards covered in the 2024 HMP](#)

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

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

3.1.1 Hazard Prioritization

As part of the plan update process, the planning team reviewed, updated, and prioritized the hazards faced by residents of Lyon County, updated the existing mitigation actions published in the 2017 HMP, and proposed new mitigation actions.

The team examined the hazards identified in the 2017 HMP and adjusted them to reflect the definitions of natural hazards used in the 2024 Minnesota State Hazard Mitigation Plan.

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

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

Table 4. Prioritization of hazards for 2024 Lyon County HMP Update

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

3.1.2 FEMA- and Minnesota-Declared Disasters and Assistance

Another historical perspective is derived from FEMA-declared disasters. Between 1957 and July 2024, 14 federal disasters and four federal emergencies were declared in Lyon County; see details on the [Lyon 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). Lyon County has been included in three State Disaster Declarations.

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

Table 5. Historical hazard mitigation funding awarded in Lyon County

Project Identifier	Sub-Grantee	Project Type	Project Total	Federal Share
DR-1175-0053-R	Lyon Soil and Water Conservation District	300.3: Vegetation Management - Wind	\$379,065	\$271,864

Project Identifier	Sub-Grantee	Project Type	Project Total	Federal Share
DR-1151-0004-R	MN Valley Co-Op Light & Power Assoc.	400.1: Utility Protective Measures (Electric, Gas, etc.)	\$179,700	\$134,775
DR-1151-0003-R	Marshall	400.1: Utility Protective Measures (Electric, Gas, etc.)	\$68,257	\$51,192
DR-1569-0008-R	Lyon-Lincoln Electric Cooperative, Inc.	400.1: Utility Protective Measures (Electric, Gas, etc.)	\$574,696	\$431,022
DR-1175-0055-R	City Of Marshall	300.3: Vegetation Management - Wind	\$12,000	\$9,000
DR-4131-0004-P	Lyon County	91.1: Local Multihazard Mitigation Plan	\$7,724	\$5,336
DR-0993-0014-R	Lyon County	405.1: Other Minor Flood Control	\$379,065	\$271,864

SOURCE: (FEMA, 2023c)

3.2 Community Vulnerability

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

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

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

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

3.3 Climate Change

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

Rising global temperatures and the resulting increases in atmospheric moisture from evaporation of ocean waters have allowed Minnesota to become warmer, wetter, and more humid during the past several decades. The ten combined warmest and wettest years between 1895 and 2022 all occurred

since 1998. Nights have warmed faster than days since 1970, and winter has warmed several times faster than summer. Even with the drought conditions of the early 2020s in Minnesota, heavy precipitation continues to show long-term increases, with damaging rain and snowfall events reported somewhere in the state each year of the decade through 2023. Despite no increase in the highest temperatures of summer, maximum annual heat index values (one measure of how hot it feels) have been rising across the state because of increased humidity during heat waves.

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

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

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

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

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

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

Confidence	Hazard	Recent & Current Observations
Highest	Extreme cold	Rapid decline in severity & frequency
	Extreme rainfall and heavy snowfall	Becoming larger and more frequent
Moderately High	Humid heat waves	Some increase in maximum dew point and Heat Index values since 1980
Moderately Low	Tornadoes, hail, thunderstorm winds	Intensity and frequency unchanged, but seasons expanding aggressively
Low	Drought and dry spells	Intense & major episodes in early 2020s but no long-term trend
Lowest	Summer high temperature extremes	Highest temperatures still well within historical ranges, and number of hot days increasing only slightly in isolated locations

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

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

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

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

3.3.1 Climate Change Impacts and Resilience Planning

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

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

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

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

3.3.2 Health Impacts of Climate Change in Minnesota

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

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

Heat

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

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

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

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

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

Air Pollution

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

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

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

There are three pollen seasons in Minnesota: trees, grasses, and weeds. Trees are the first to release pollen, typically starting in early April, grasses usually ramp up pollen release in early June, and weeds

typically begin releasing pollen in mid-June and continue until the first hard frost. Research shows that the growing season for ragweed pollen, which is highly allergenic, has increased by 15 to 25 days in and around Minnesota. The lengthening pollen season is strongly related to climate change characteristics, such as lengthening of the frost-free season and later timing of the first fall frost.

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

Those most at risk include:

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

Extreme Precipitation, Floods, Drought

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

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

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

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

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

Localized flash flooding can also be a problem where our infrastructure is undersized, and people get caught off guard by flooded roads. This is an important public health safety concern as almost half of

flash flood fatalities occur in vehicles. It takes as little as six inches of fast-moving water to knock over and carry away an adult, and as little as 12 inches can carry away a small car.

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

Zoonotic Diseases

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

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

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

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

Harmful Algal Blooms

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

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

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

Mental Health

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

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

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

3.3.3 Climate Change Adaptation

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

3.3.4 Climate Change Data and Tools in Minnesota

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

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

3.4 Jurisdictional Change in Risk or Vulnerability Assessment

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

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

3.4.1 Jurisdictional Responses

As part of the Local Mitigation Survey form, Lyon County Emergency Management and each city jurisdiction were asked to provide a vulnerability assessment that described what structures, systems,

populations, or other community assets were susceptible to damage and loss from specific hazard events. This information was used to help tie local vulnerability back to the exposure of people, buildings, infrastructure, and the environment to the natural hazards listed in Table 4 and to assist local governments in the development of related local mitigation actions to reduce risk.

The following is a compilation of common responses taken directly from jurisdictional representatives as preserved in Appendix C: Part A. Responses here are edited only for clarity.

Lyon County

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

Flooding: Lyon County has experienced significant flooding. Our township roads are washed out every spring with the increased run off. There are also culverts that need to be increased in size to accommodate these run offs. People living in these affected areas as well a rural businesses, and other structures are all at risk.

Ice Storms, Blizzards: Lyon County has experienced multiple blizzard events and potential for severe ice storms over the last 5 years. Much of the county's municipal and rural electric cooperative consists of overhead power lines and electrical poles. In past winter storms, we have experienced electrical outages and damage to poles and lines. This makes Lyon County's Administration Building vulnerable. It makes our major manufacturers, without adequate generators, susceptible to loss, assisted living facilities and hospitals located in Lyon County are also vulnerable to loss of power. This also creates vulnerability for residents, especially seniors, children and anyone who relies on powered medical devices.

Windstorms, Tornadoes: All schools, nursing homes, hospitals, assisted living, government buildings, mobile home parks, campgrounds and RV Parks, city and county parks, lakes, roads, bridges, culverts, utilities, and water treatment systems are vulnerable to tornadoes. People and structures across Lyon County are especially vulnerable to impacts from tornado touchdowns because of a gap in the National Weather Service radar. The county is served by the National Weather Service in Sioux Falls, SD but is on the border of the National Weather Service in Chanhassen. The county and our neighboring counties have met to discuss this gap which is currently being met only by storm spotters. The county is limited in how much advance notice can be given during certain tornadic activity.

The county also has gaps in its outdoor warning siren coverage. Sirens are owned and maintained by cities and townships. Not all cities and townships are willing or able to fund new or updated sirens. This puts residents and visitors in those areas in higher risk of injury or death. In addition, most newly constructed townhomes, and many individual homes are being built on slabs with no basements putting occupants at higher risk. In addition, the county has licensed a large wedding venue with no shelter. Those occupants are all at higher risk.

Extreme Cold: We have a high population of senior citizens and low-income residents who are more vulnerable during periods of extreme cold with power outages. In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold. Lyon County has also experienced damages to roads from spring frost heaves, frozen culverts that cause localized flooding.

City of Balaton

All Hazards: We need to obtain a portable generator for our City Hall and Community Center that serves as our local shelter if people are displaced from a severe storm event or extended power outage. We also have a large population of senior citizens that do not use cell phones to receive emergency notifications. We currently use the Balaton Fire Hall for Civil Defense purposes.

Flooding: We have a city lift station that is prone to flooding during high rain events. The city park (Knudson Bosely) is vulnerable to flooding. We need to upsize several culverts to better handle high rain events. Upgrading the storm sewer culvert under County Road 5 is a high priority.

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. Also have to run back up power to water and sewer during power outages.

Windstorms, Tornadoes: Our municipal campground is active during summer and fall months with RVs and campers and does not have a storm shelter. We have experienced power outages from strong wind events that brought down power lines.

Extreme Cold: We have a high population of senior citizens and low-income residents who are more vulnerable during periods of extreme cold with power outages. In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold. The city has experienced damages to roads from spring frost heaves, frozen culverts that cause localized flooding.

City of Cottonwood

All Hazards: We need to install generators at our City Hall and Community Center that serves as our local shelter if people are displaced from a severe storm event or extended power outage. We also have a large population of senior citizens that do not use cell phones to receive emergency notifications. We need to work on ways to educate the citizens of the community on the different hazards and how to better prepare their homes.

Flooding: We have sanitary inflow and infiltration issues in the city that, in large rain events, cause sanitary sewer back up in homes and out of manholes. This also results in the need for the city to perform emergency discharging out of lift stations to relieve the system of overflow.

There are also storm sewers in town that need to be replaced due to under sizing or aging that flood streets during large rain events.

Winter Storms, Blizzards: A large portion of the electricity provided to the city by Xcel Energy consists of overhead power lines and electrical poles. Those overhead lines and power poles are prone to failure during blizzards and high winds that may bring down trees, branches, overhead power lines, and electrical poles.

Windstorms, Tornadoes: We have 1 mobile home park within the city that does not have a storm shelter and other homes in the city without basement shelters, leaving residents vulnerable to high wind and tornado events. The city has also experienced power outages from strong wind events that has brought trees and branches onto overhead power lines.

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

Drought: We are currently entering a 4th year of low moisture and anticipating drought conditions. The community is in a large farming region, the city has a large school with an extensive sprinkler system, and a golf course. The community could benefit from education on water management and smart watering practices.

City of Florence

No local vulnerabilities to report.

City of Garvin

No local vulnerabilities to report.

City of Ghent

All Hazards: The City of Ghent is concerned about its lack of water storage. We contract with Lincoln-Pipestone rural water as our only water source. If a line is broken due to freezing conditions, line maintenance/repairs, if their system would be tampered with, etc., the city does not have a backup water source or any water storage. Water storage would also assist with fire protection services within the city. Providing us with enough water pressure to use our fire hydrants for effectively while fighting fire.

Flooding: The City of Ghent has experienced increased flooding in past years. There is a need to construct a flood protection berm on the South edge of town to protect our Bluebird Addition and our lift station located there. We also need to construct a flood protection wall around our main lift station, or lift the entire site to above flood elevation, to protect our main lift station from inundation by flood waters. We have a temporary berm in place and sandbagging is necessary during each flood event.

Tornado, Wind Storm, Blizzard: The City of Ghent does not have a tornado/storm shelter with backup generator to allow residents or travelers to shelter in place during a tornado/ wind storm/ blizzard. Our newly remodeled Fire Department Meeting room, located in the basement of the city hall, could be used to meet this need if a backup generator was added as well as shelter equipment. The City of Ghent does not have a backup generator to run our lift stations during power outages.

City of Lynd

All Hazards: We need to obtain a portable generator for our City Hall and Community Center that serves as our local shelter if people are displaced from a severe storm event or extended power outage. We also have a large population of senior citizens that do not use cell phones to receive emergency notifications.

Flooding: We have a city lift station, North River St., that be an area of concern with flooding during high rain events. Additionally, many residents live along the river bottom and could be susceptible to damage and major erosion issues, if the waters rise significantly.

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

Windstorms, Tornadoes: We have 1 mobile home park within the city that does have a storm shelter, however it is not large enough to accommodate the number of residents that might need it. These residents are vulnerable to high wind and tornado events. Our municipal fire department does not have back up power to their facility and in the event of power loss, significant impact to emergency response is likely.

Extreme Cold: We have a high population of senior citizens and low-income residents who are more vulnerable during periods of extreme cold with power outages. In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold. The city has experienced damages to roads from spring frost heaves, frozen culverts that cause localized flooding.

Extreme Heat: We have a high population of senior citizens and low-income residents who are more vulnerable during periods of extreme heat with power outages. We routinely see a need to water restrictions as summer drought leads to lack of abundance.

Wildfire: We are located in a valley with limited roads to exit town, located in and near Camden State Park. If the right/wrong conditions arose and a wildfire started there would be a high risk to the residents of Lynd and their property.

City of Marshall

All Hazards: We need to obtain a portable generator for our Emergency Operations Center that operates the entire facility (MERIT Center). We need to continue to encourage citizens to monitor pending weather conditions that have been identified as a threat to our community.

Flooding: The major concern for the City of Marshall is that the levee or weir is not compromised. During a significant flooding event, monitoring and maintenance of the river embankments and weir is important. The wastewater treatment plant monitors waterflow rates through their system to maintain manageable levels to prevent water backup in residential properties. The public works department maintains the curb/catch basins to ensure water flows freely in the storm water system.

Ice Storms, Blizzards: The City of Marshall attempts to keep roadways open and safe to maneuver on during ice events. Much of the city's municipal electrical service is underground and poses little risk. Wind, snow and ice can bring down trees and branches during this time.

Windstorms, Tornadoes: The City of Marshall has 1 mobile home park within the city that has a storm shelter. Providing the community with information through social media, radio communication and siren activation is important.

City of Minneota

Flooding: The City's Riverside Park, including the picnic shelter and camping spots are prone to flooding. They have been damaged during past flood events and the riverbank has also experienced significant erosion in this area during flood events. There are a small number of homes along the south side of E. Lyon Street that can experience flooding due to an existing drainageway that is located behind these properties and localized flooding can also occur in various parts of Minneota during large rain events and has caused damage.

Ice Storms, Blizzards: There are numerous overhead power lines in Minneota which are owned by Ottertail Power Co. Ice storms have caused power outages in the past due to damaged power lines and poles. Some of the power outages have been caused by trees and branches being blown into the electric system infrastructure.

Windstorms, Tornadoes: The city has 1 mobile home park and camp sites at Riverside Park which are vulnerable to windstorms and tornadoes. The Riverside Park campground does not have a storm shelter.

Extreme Cold: The city has experienced freezing water service lines during periods of extreme cold weather and the city has purchased equipment used to thaw frozen water lines. The city has also experienced excessive damage to roads (potholes, heaving, cracking, etc.) during extreme cold weather. As in other cities, senior citizens and low-income residents remain the most vulnerable during periods of extreme cold weather.

Dam/Levee Failure: The city maintains a levee system that protects a large portion of the west side of the city from flood impacts. Damage or failure of the levee system would greatly increase the probability of flooding for many houses and properties in Minneota.

City of Russell

All Hazards: The city needs to put a plan in place in the event that we need to use the fire hall or community center as a shelter due to a severe storm. Possibly consider a generator, cots or blankets.

City of Taunton

All Hazards: The city has experienced damages to streets from spring frost heaves, and lots of spring rain.

City of Tracy

Flooding: Our sanitary sewer system has a large amount of I&I, that poses a repeated threat to residents on the Northeast area of town during heavy rainfall.

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

Windstorms, Tornadoes: We have 1 mobile home park within the city that does not have a storm shelter and residents are vulnerable to high wind and tornado events. Our municipal campground is active during summer and fall months with RVs and campers and does not have a storm shelter. We have experienced power outages from strong wind events that brought down power lines.

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

Extreme Heat: We have a high population of senior citizens and low-income residents who are more vulnerable during periods of extreme heat with power outages. In past we have experienced elderly needing assistance with overheating and issues related to not having power for their home oxygen systems.

3.4.2 Future Development

Because Lyon 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. Lyon 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 Lyon County HMP update, jurisdictions were asked to describe if there were any factors related to population growth, zoning, or development they felt have increased their community's vulnerability to future severe weather or disaster events. The following is a compilation of common responses taken directly from jurisdictional representatives as preserved in Appendix C: Part A. Responses here are edited only for clarity.

Lyon County

Lyon County has seen an increase in development. Private homes, an event center, additions to campgrounds. This greatly increases the vulnerability for widespread injury and death in the event of a strong and long duration tornado or system of straight-line winds. Many of these developments are build slab-on-grade and have no storm shelter available. This development also increases the risk for stormwater runoff as more surfaces once able to absorb water naturally become impervious.

City of Balaton

Between 2019 and 2023 we had multiple homes in Eastbay Addition that were constructed in the city, which has increased our population and potential for damage to new structures. Many homes have been built slab-on-grade, so residents do not have a basement for safety during high wind or tornado events. With an increase in population and construction of more homes and commercial properties, we have also witnessed more storm water discharging to our stormwater system. We feel this is due to more impermeable surface which has increased stormwater runoff and the amount of precipitation seems to have increased per rain event. With the construction of a new assisted living facility, there is also a large concentration of senior residents in one location that will need assistance during a disaster event.

City of Cottonwood

The City of Cottonwood has been and will continue to be in a state of growth, in large part because of the school district which is also in a constant state of growth. This adds more connections to the water and sewer system, as well as the increased construction of slab-on-grade homes, leaving residents without basements to shelter in during windstorms and tornadoes.

City of Florence

Nothing to report.

City of Garvin

Nothing to report.

City of Ghent

The threat of flooding is our primary concern. In 2001, the Bluebird Addition was added to the city. 55 new homes were constructed as well as a second lift station to service these homes. The city has constructed an emergency/temporary flood berm along the south edge of our walking trail to protect these homes from flood waters. A permanent flood protection berm is necessary to protect these homes and this lift station during flood events. If flood waters were to reach this lift station, the entire city's sewer system would be overcome and affect all residents.

City of Lynd

The east part of town, Affinity Hills and the golf course were annexed into the city less than twenty years ago and there is room for many more houses to be built. This is a flat plain area of town above the valley line overlooking the river valley. This development does pose an increase in vulnerability for severe weather and storms. New home construction has added to the strain on our lift stations and pond system. Our entire stormwater system is more vulnerable during heavy rain seasons.

City of Marshall

In the 1990s the last segment of the federal flood control project (FFCP) was constructed in Marshall, these included the earthen levees and Redwood River Diversion channel. The FFCP around the city greatly reduced the potential from the flooding of the Redwood River. The Federal Flood Control project was designed to be a 115-year storm event back in approximately 1998, and the rainfall intensity and duration information has increased significantly since that time, and it does not provide that level of protection any longer. Such a large portion of Marshall is located in an area that receives protection from our flood control project that it will always remain a large vulnerability. The city is also studying the storm water in the community and looking for opportunities to improve our collection and pond system to reduce the localized flooding in the community.

City of Minneota

The city constructed a new residential development 5 years ago and there have been 2 new homes constructed within the development. One of the homes was built slab-on grade and because of this, the residents do not have a basement for safety during high wind or tornado events. When/if slab-on grade homes are built, the owners are encouraged to allow for interior shelter.

City of Russell

Nothing to report.

City of Taunton

Nothing to report.

City of Tracy

Nothing to report.

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

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

Section 4 – Hazards

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

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

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

4.1 Flooding

Flooding is the most significant and costly natural hazard in Minnesota. Flooding was the primary hazard in seven of the 18 federal disaster declarations in Lyon County.

During the 2019 planting season, heavy rains caused prolonged flooding in Florence, resulting in an estimated \$28 million in crop loss per the U.S. Department of Agriculture. This event demonstrates the substantial cost that floods in Lyon County can have.

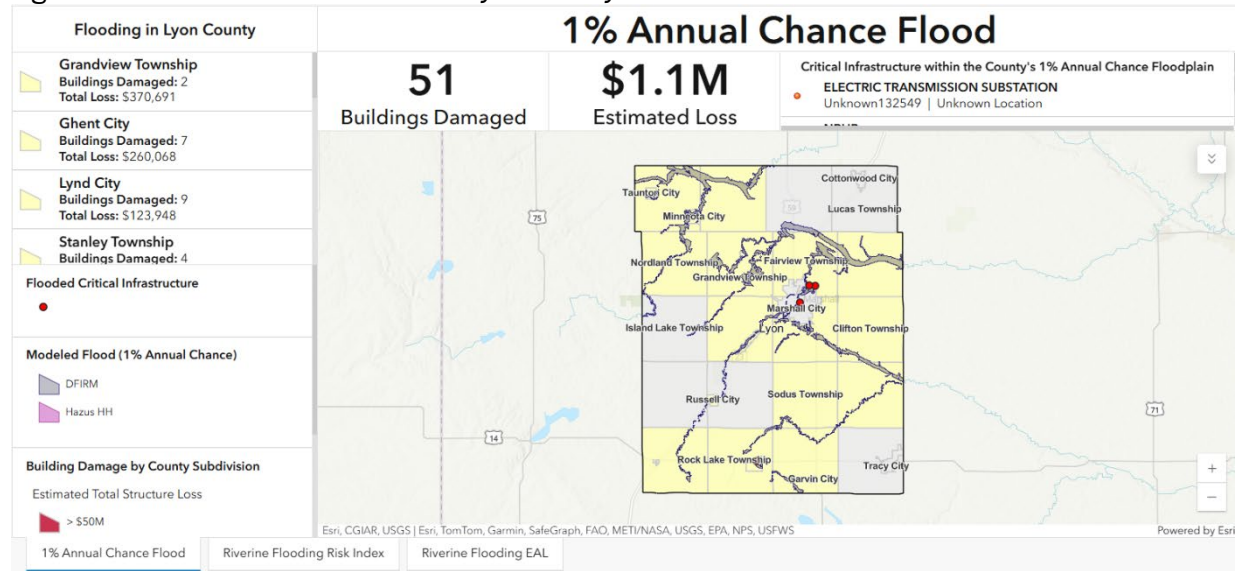
4.1.1 Probability of Occurrence

From 1997 through June 2024, the NCEI Storm Events Database has recorded 57 flood and flash flood events. Lyon County has experienced one flash flood event every 1.4 years and at least one riverine flood event every year on average during this period

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

Minnesota HSEM has encouraged a potential risk and economic loss analysis for a 1% annual chance flood using the FEMA tool, Hazus for ArcGIS. A Digital Flood Insurance Rate Map (DFIRM) defined the 1% annual chance flood boundary. Where available, stream base flow elevation and cross-section data were used to generate a depth grid with a 10-meter horizontal resolution. The resulting Hazus 1% annual chance floodplain is shown in the Flood Vulnerability dashboard on the Lyon County HMP website (Figure 1), where it is available in an interactive form.

Figure 1. 1% Annual chance flood in Lyon County



4.1.2 Vulnerability

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

Hazus reports the percent damage of each building in the floodplain, defined by the centroid of each building footprint. After formatting the tax and spatial data, 13,757 points were input to Hazus to represent buildings, with a total estimated building plus contents value exceeding \$1.8 billion. Approximately 51% of the buildings (and 51% of the building value) are associated with residential housing.

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

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

General Occupancy	County Total Buildings	County Building and Contents Value	Floodplain Total Buildings	Floodplain Building + Contents Value	Buildings with damage	Building + Contents Loss
Residential	6,959	\$936,349,806	94	\$15,064,350	22	\$401,189
Commercial	528	\$94,565,408	10	\$1,355,200	10	\$123,801
Other	6,270	\$801,083,450	83	\$11,799,000	19	\$558,909
Totals	13,757	\$1,831,998,664	187	\$28,218,550	51	\$1,083,899

SOURCE: (FEMA, 2023A)

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

Hazus Critical Infrastructure Loss Analysis

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

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

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

It is important to identify any critical infrastructure within the 1% annual chance floodplain, given the higher risk of the facility or infrastructure being incapacitated or destroyed during a flood. In Lyon County, four examples of critical infrastructure were found to be at risk in the 1% annual chance flood: the Sandford Tracy Balaton Clinic, Bridge No. 5083 in Marshall, and, in Fairview Township, an electric transmission substation and Cliff Viessman, Inc., which is a treatment storage or disposal facility. This infrastructure is mapped in the [Lyon County HMP website](#).

Community Vulnerability

Potential economic losses were estimated by Census Minor Civil Division. Grandview Township would suffer significant estimated losses in the 1% annual chance flood. The cities of Ghent and Lynd also have significant estimated losses. All jurisdictions with buildings identified in the 1% annual chance flood zone can also be viewed on the Lyon County HMP website.

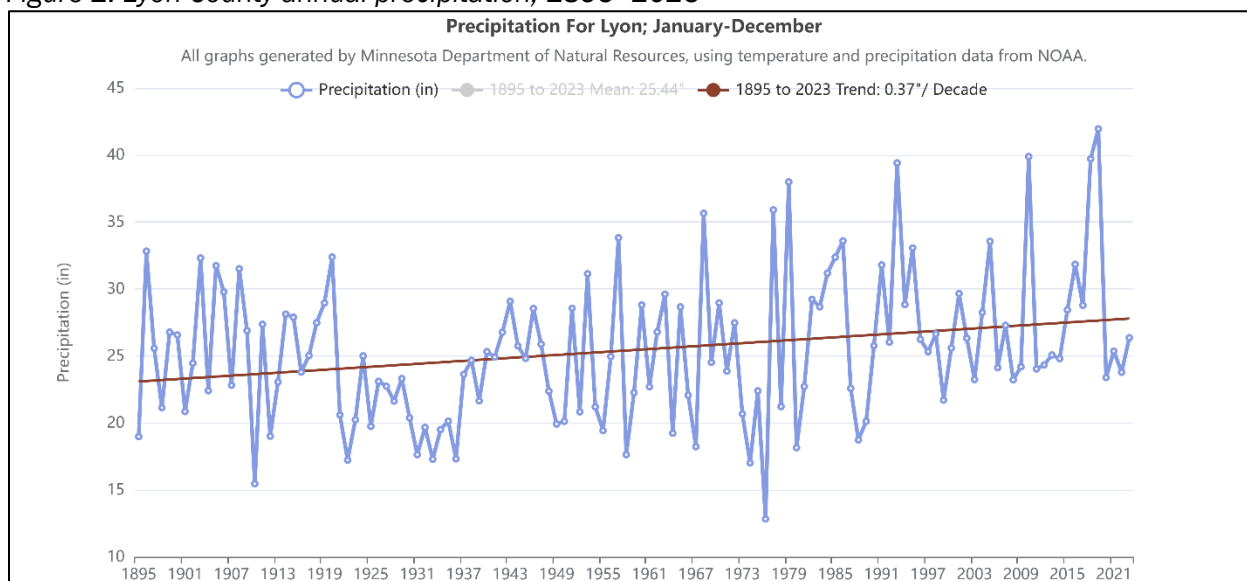
The status of jurisdictional participation in the National Flood Insurance Program and any repetitive loss properties are detailed in Section 5.1.1. National Flood Insurance Program (NFIP).

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

4.1.3 Flooding and Climate Change

Higher temperatures globally have evaporated more surface and ocean water into the atmosphere, which, in turn, has provided more potential moisture for precipitating weather systems. In Minnesota, the result has been increased precipitation, with annual totals increasing at an average rate of just over a quarter inch per decade statewide since 1895 (see Figure 2).

Figure 2. Lyon County annual precipitation, 1895–2023



SOURCE:(MN DNR, 2024b)

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

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

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

4.1.4 Program Gaps and Deficiencies

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

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

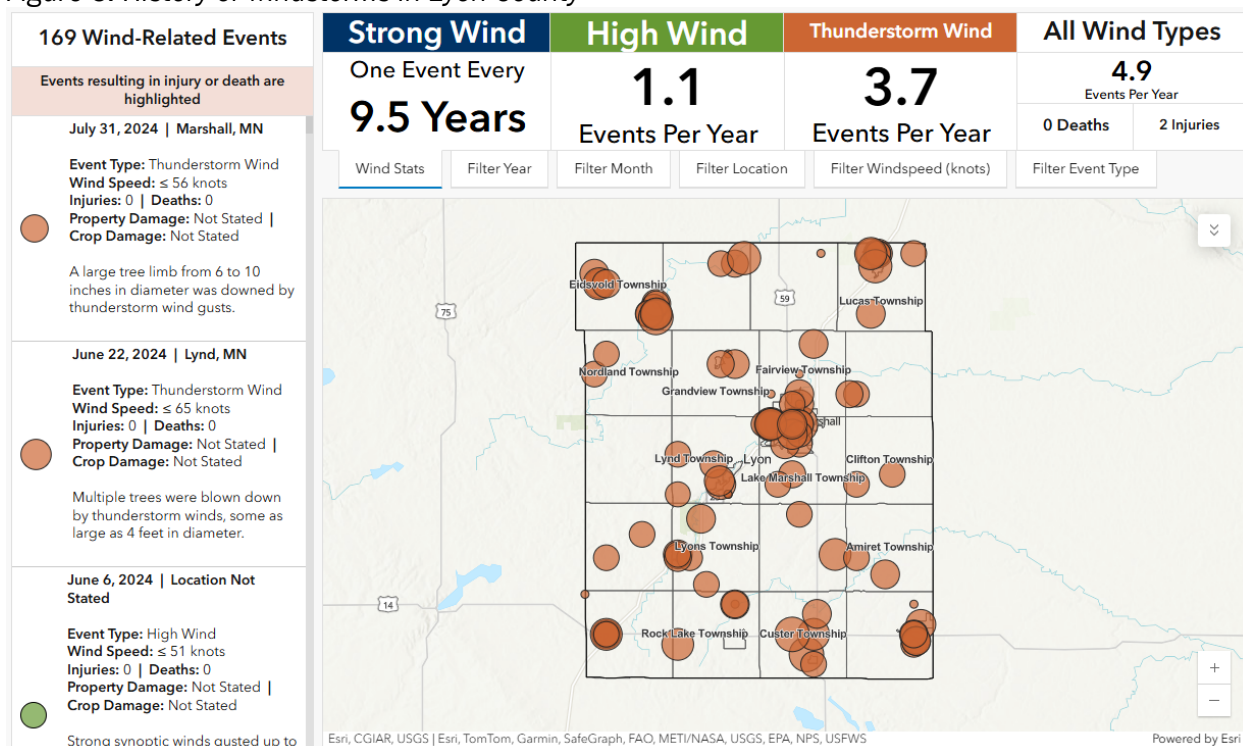
Funding: The county needs funding assistance to improve roads and culverts that experience repetitive flooding. Significant State and Federal funding is needed to construct infrastructure projects to prevent, reduce, and mitigate the impacts of high rain events and flooding.

4.2 Windstorms

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

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

Figure 3. History of windstorms in Lyon County



4.2.1 Probability of Occurrence

To determine the probability of future wind-related events in Lyon County, records of previous wind-related events (strong wind, high wind, and thunderstorm wind) in Lyon County were examined since 1996, the period of record all wind events have in common. The relative frequency of all wind-related events from January 1996 to February 2024 is 4.9 per year. These relative frequencies can be used to infer the probability of these events occurring in the future.

4.2.2 Vulnerability

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

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

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

4.2.3 Windstorms and Climate Change

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

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

4.2.4 Program Gaps and Deficiencies

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

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

Public Education: Ongoing public education is needed during tornado season to inform the public on what is a tornado watch/warning and what to do when outdoor warning sirens are activated. Lyon

County and local jurisdictions also need to continue to encourage residents to be aware of and ready for severe storm events that can lead to long-term power outages.

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

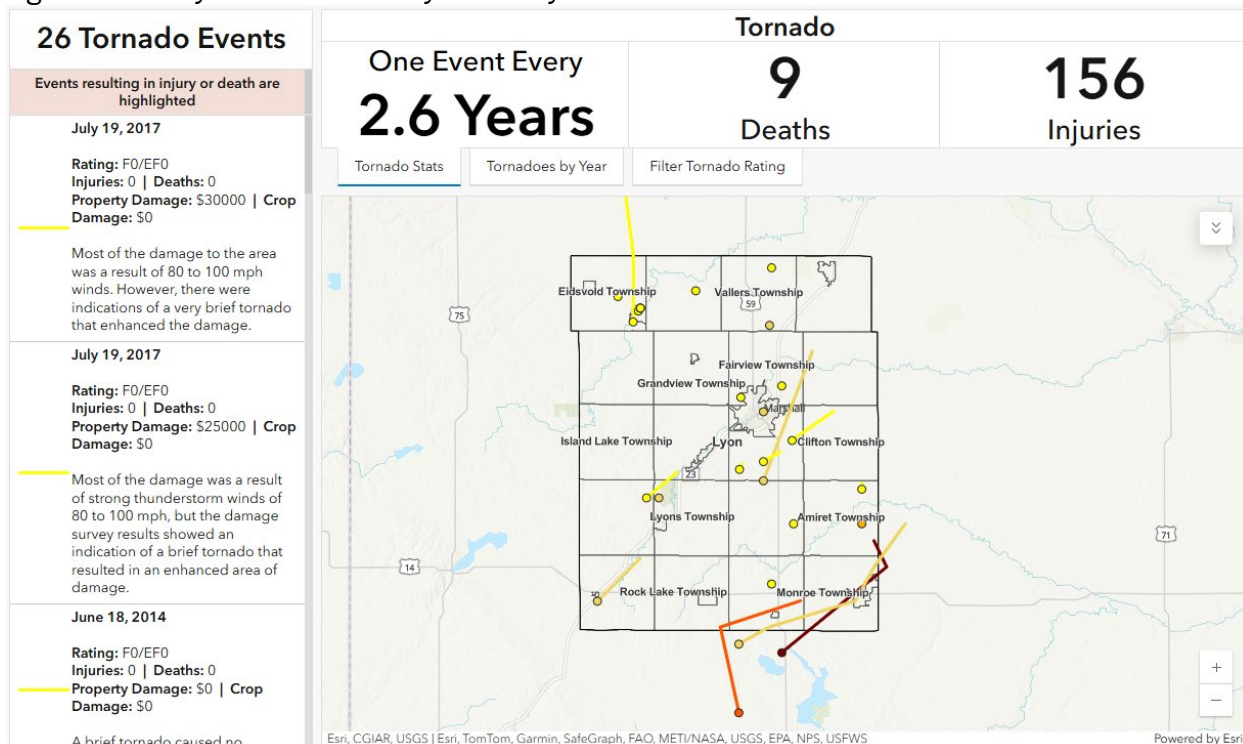
Outdoor Warning Sirens: The existing warning at Garvin County Park is not working and needs to be replaced. Twin Lakes Park also does not have a warning siren and should have one installed.

4.3 Tornadoes

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

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

Figure 4. History of tornadoes in Lyon County



4.3.1 Probability of Occurrence

Estimating the probability of future tornadoes in Lyon County was done using two methods. The first method summed the total number of tornadoes that either touched down in or traveled through the county. This sum was divided by the number of years tornado data was recorded, resulting in the annual relative frequency of tornado occurrences in the county. Based on records in the NCEI Storm Events Database through January 2024, there has been one tornado every 2.6 years in Lyon County. These 26 tornadic events occurred in 17 of the 72 years on record.

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

For any location in Lyon County, there was an annual frequency of 2.1–4.0 tornadoes within a 50-mile radius. The historical frequency was only slightly higher in the west than the east of the county. These relative frequencies can be used to infer the probability of these events occurring in the future.

4.3.2 Vulnerability

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

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

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

4.3.3 Tornadoes and Climate Change

Minnesota's climate is undergoing distinct changes, but as reported by the MN DNR State Climatology Office, these changes are only weakly connected to increases in tornadoes or severe convective storms. Minnesota, like all parts of the U.S., has seen increases in the weakest class of tornadoes

(rated F-0 or EF-0), but these increases are known to be linked to improved spotting, detection, and verification procedures within the National Weather Service.

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

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

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

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

4.3.4 Program Gaps and Deficiencies

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

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

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

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

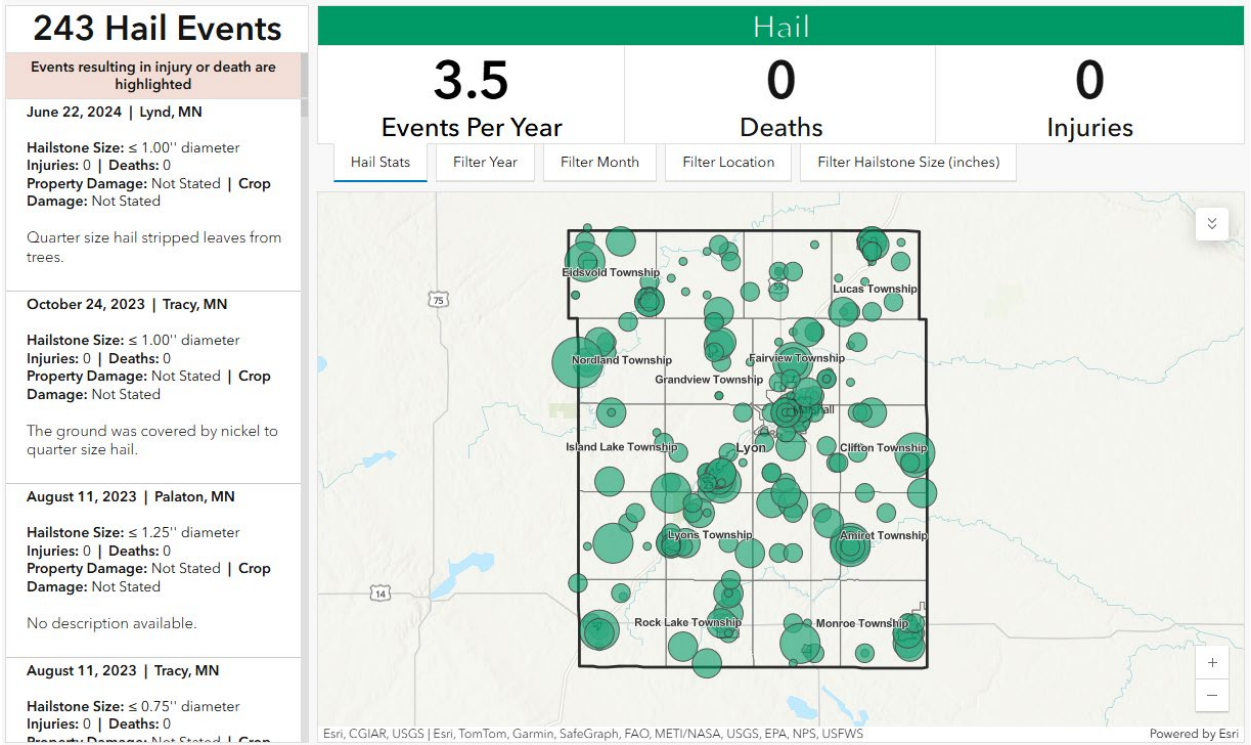
Outdoor Warning Sirens: The existing warning at Garvin County Park is not working and needs to be replaced. Twin Lakes Park also does not have a warning siren and should have one installed.

4.4 Hail

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

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

Figure 5. History of hail in Lyon County



4.4.1 Probability of Occurrence

To determine the probability of future hailstorms in Lyon County, records of previous hail events in the county were examined for the period of record. From January 1955 through June 2024, the relative frequency of hail events was 3.5 per year. This relative frequency can be used to infer the probability of hail events occurring in the future. Please note that public reports of hail are often secondary to those of thunderstorm winds or tornadoes because if either damaging winds or tornadoes occur, the damaging wind and/or tornado are more important to the reporter and may result in underreporting of hail events.

4.4.2 Vulnerability

Lyon County's agricultural lands and structures are vulnerable to hail damage and its residents to injury and possibly death. Data from the Spatial Hazard Events and Losses Database for the United States (SHELDUS) was examined to identify the county's monetary losses due to hail damage to crops, property, injury, and death. From 1960 through 2022, Lyon County reported \$12,234,148 in hail damages (2021 ADJ), ranking 31st among Minnesota counties in total hail damages. Lyon County's losses are primarily due to crop damage reported at \$11,683,945, followed by \$550,203 in property damages. Crop indemnity payments due to hail totaled \$36,680,723 (2021 ADJ) for the period of record spanning 1989–2022, placing it as the 2nd-highest paid county in Minnesota (CEMHS, 2023).

Within Lyon County, the vulnerability of jurisdictions to hailstorms does not vary geographically. As with all summer storms, those who work outdoors or do not have permanent housing are at greater risk during hailstorms.

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

4.4.3 Hail and Climate Change

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

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

4.4.4 Program Gaps and Deficiencies

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

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

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

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

Outdoor Warning Sirens: The existing warning at Garvin County Park is not working and needs to be replaced. Twin Lakes Park also does not have a warning siren and should have one installed.

4.5 Winter Storms

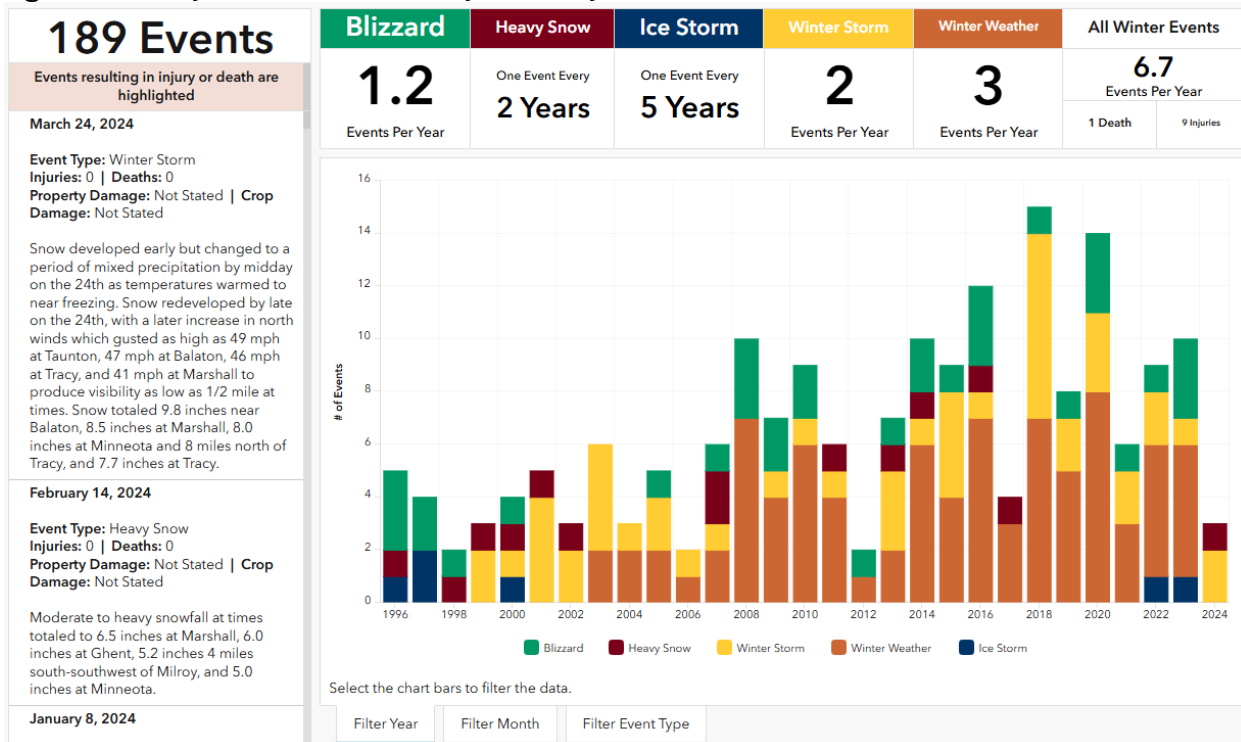
Winter storms encompass a number of winter weather events which the National Weather Service (NWS) organizes into the following categories: blizzard, heavy snow, ice storm, winter storm, and winter weather. Winter weather events are common in Minnesota and can be costly. According to the Spatial Hazard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

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

4.5.1 Probability of Occurrence

To determine the probability of future winter-related storm events in Lyon County, records of previous events (blizzards, heavy snows, ice storms, winter storms, and winter weather) were summed and divided by the dataset's period of record, resulting in the annual relative frequency of winter-related storms. Based on records in the NCEI Storm Events Database through March 2024, the relative frequency of winter-related storm events in Lyon County is 6.7 per year. This relative frequency can infer the probability of these events occurring in the future.

Figure 6. History of winter storms in Lyon County



4.5.2 Vulnerability

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

4.5.3 Winter Storms and Climate Change

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

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

4.5.4 Program Gaps and Deficiencies

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

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

4.6.1 Probability of Occurrence

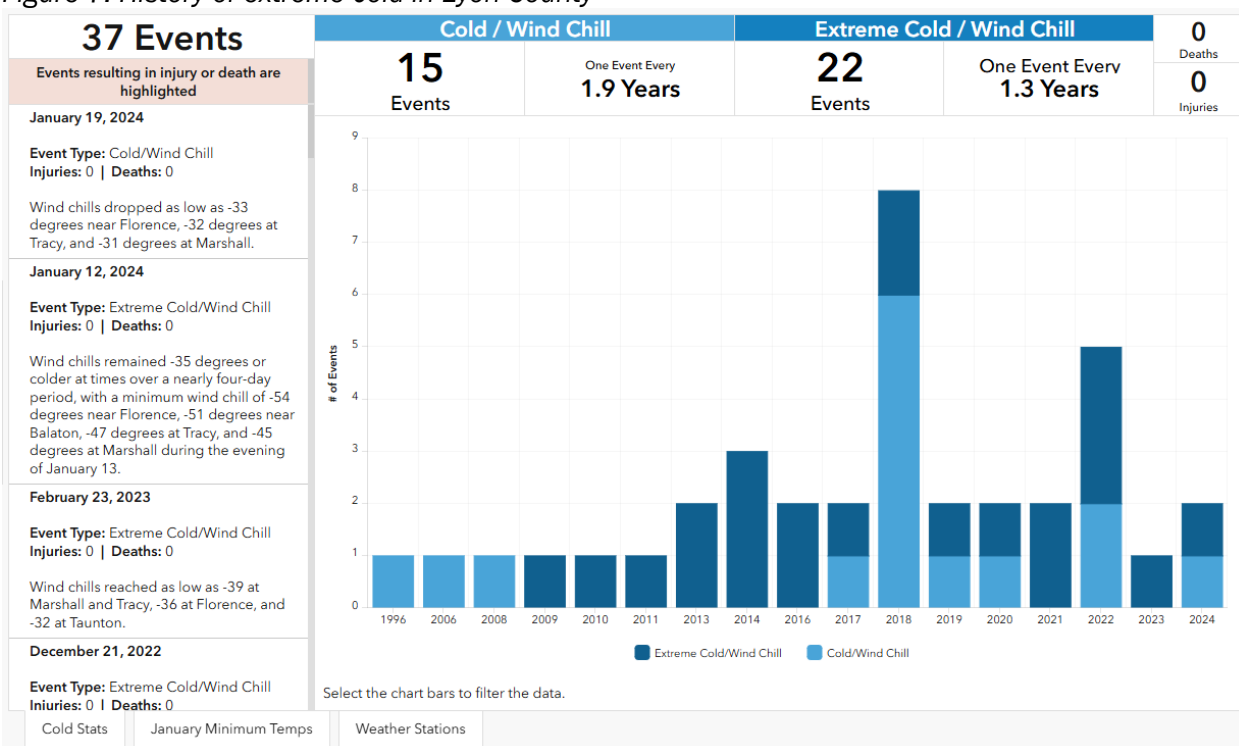
To determine the probability of future cold-related events in Lyon County, records of previous cold/wind chill and extreme cold/wind chill events were summed and divided by the dataset's period of record, resulting in the annual relative frequency. Based on records in the NCEI Storm Events Database through January 2024, the relative frequency of extreme cold/wind chill events in Lyon County is one every 1.3 years. (NCEI, 2023). This relative frequency can be used to infer the probability of these events occurring in the future.

4.6.2 Vulnerability

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

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

Figure 7. History of extreme cold in Lyon County



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

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

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

4.6.3 Extreme Cold and Climate Change

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

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

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

4.6.4 Program Gaps and Deficiencies

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

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

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

4.7 Extreme Heat

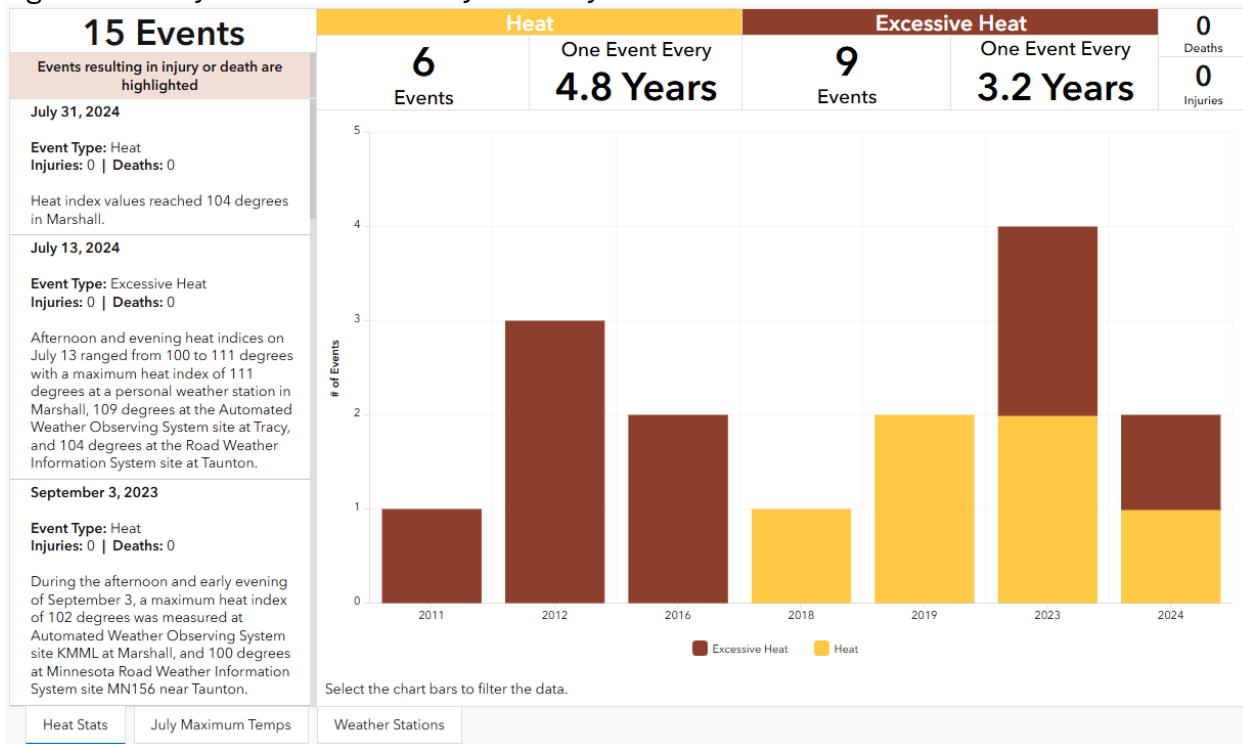
Extreme heat is the combination of very high temperatures and exceptionally humid conditions. Lyon County's agricultural lands and structures are vulnerable to heat damage and its residents to injury, exacerbation of pre-existing chronic conditions, and even death (Moss, 2017). Medical costs related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

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

Data from the Spatial Hazard Events and Losses Database (SHELDUS) for the United States was examined to identify the county's monetary losses due to heat damage to crops. Ranking 33rd among Minnesota counties in crop indemnity payments, heat-related losses for Lyon County totaled over \$1,648,440.87 (2021 ADJ) for the period of record spanning 1989 to 2022 (CEMHS, 2023).

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

Figure 8. History of extreme heat in Lyon County



4.7.1 Probability of Occurrence

To determine the probability of future heat-related events in Lyon County records of previous heat and excessive heat events were summed and divided by the dataset's period of record, resulting in the annual relative frequency of heat-related events. Based on records in the NCEI Storm Events Database through January 2024, the relative frequency of extreme heat events in the county is one event every 3.2 years. This relative frequency can infer the probability of these events occurring in the future. The Marshall Weather Station in Lyon County reported daily maximum temperatures above 90 °F a total of 628 times, which is an average of 20 days per year.

4.7.2 Vulnerability

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

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

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

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

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

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

4.7.3 Extreme Heat and Climate Change

Minnesota's annual average temperature has increased more than 3 °F since record keeping began in 1895, and nine of Minnesota's hottest 16 years on record have occurred since the year 2000 (MCAP, 2024).

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

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

On average, by mid-century (2040–2059), under a high emissions (SSP 585) scenario, Lyon County may reach 17.81 days/year of temperature greater than 95 °F, an increase in 9.02 more days to the historical (1995–2014) simulations average of 8.79 days/year (Liess, S. et al., 2023).

Greenhouse gas concentrations will continue rising through the century, and the air's ability to trap heat from the earth's surface will increase accordingly. Warming of the atmosphere will evaporate

even more water into the air, further limiting the amount of cooling Minnesota will be able to achieve at night and during the winter. As warmer winters and warmer baseline conditions transition into summer, it will be much easier to attain extreme heat (ICAT, 2017).

4.7.4 Program Gaps and Deficiencies

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

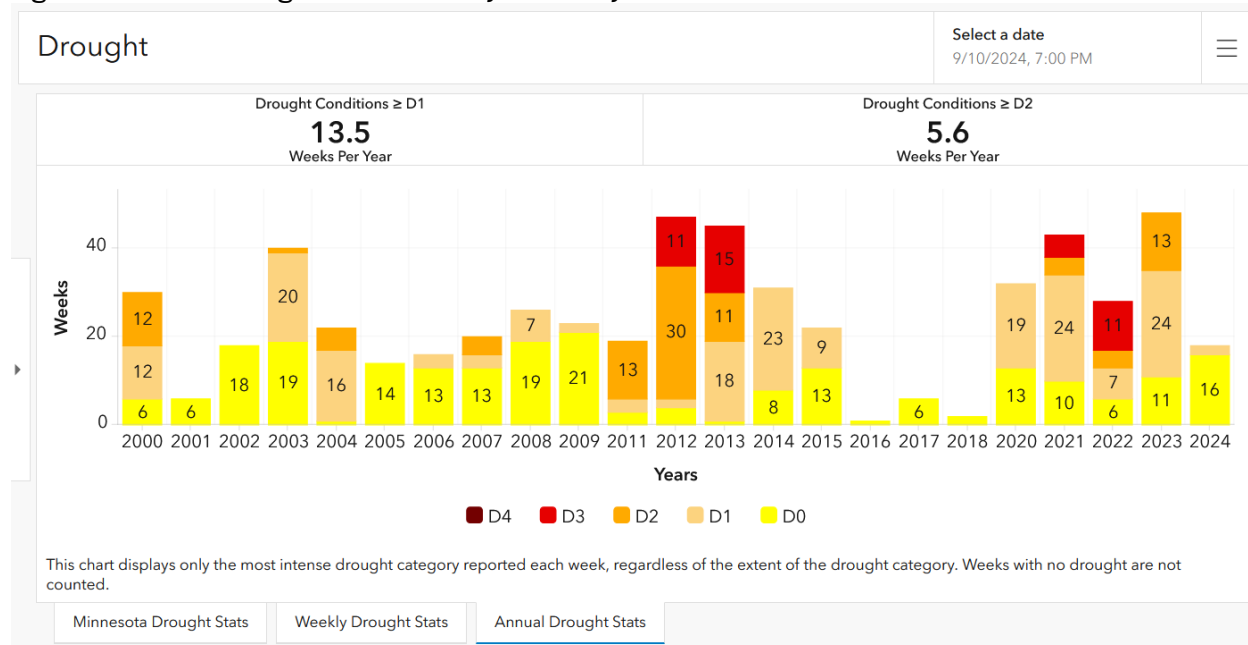
Generators for Backup Power to Critical Facilities & Shelters: Not all healthcare and other critical facilities utilized for the care of residents & visitors, including designated severe weather/emergency shelters (schools, churches, etc.) have backup power to run cooling systems in the event of a power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

4.8 Drought

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

[See interactive information about drought, including history and the USDM Dashboard, on the Lyon County HMP website](#)

Figure 9. Annual drought statistics in Lyon County since 2000



4.8.1 Probability of Occurrence

To determine the probability of future droughts in Lyon County, records of previous droughts were summed and divided by the dataset's period of record, resulting in the annual relative frequency of droughts. The USDM database was examined from January 2000–September 10, 2024 for any occurrence of drought \geq D1 in Lyon County, regardless of the duration of the drought. According to the weekly reported data, the relative frequency of the county experiencing drought conditions \geq D1 is 13.5 weeks per year, and the relative frequency of drought conditions \geq D2 is 5.6 weeks per year (NDMC, 2024). The relative frequency of past droughts can be used to infer the probability of similar droughts occurring in the future.

4.8.2 Vulnerability

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

According to the DIR, Lyon County's agriculture sector has been impacted by drought more than once. With 81% of Lyon County's land devoted to cultivated crops, the county's agriculture community is also vulnerable to the economic impact a drought may have on crops. From 1989–2022, Lyon County received \$61,528,223 (2021 ADJ) in crop indemnity payments due to drought, placing it as the 6th-highest-paid county in Minnesota (CEMHS, 2023).

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

4.8.3 Drought and Climate Change

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

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

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

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

4.8.4 Program Gaps and Deficiencies

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

4.9 Dam Failure

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

Dam Inventory: The National Dam Inventory reports that there are 70 dams in Lyon County. Dams are mapped on the [MN State 2024 HMP website](#). Lyon County had no dams classified as High Hazard Dams, three dams classified as Significant Hazard Dams, and 67 dams classified as Low Hazard Dams. No dams have been removed.

4.9.1 Probability of Occurrence

Extreme precipitation is only one factor contributing to dam failure, and the possibility of failure is dam-specific, relating to both environmental and structural conditions. There are two noted dam incidents in Lyon County, both at Brawner Lake. In 2015, the site's reservoir drained due to a poor connection of the conduit and riser. The reservoir drained again in 2017. This was a dam of Low Hazard Potential. Total dam failures are extremely unlikely if the dam is maintained in compliance with Minnesota's Dam Safety Program. The likelihood of failure in Lyon County is 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 9 provides an overview of the main criteria agencies consider when determining a dam’s downstream hazard potential. This classification system does not imply that the dam is unsafe, but rather categorizes dams based on the probable loss of human life and the impacts on economic, environmental, and lifeline interests (FEMA, 2004).

Table 9. Downstream hazard potential classification criteria

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

SOURCE: (USACE, 2008)

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

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

4.9.3 Dam Failure and Climate Change

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

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

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

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

4.9.4 Program Gaps and Deficiencies

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

Section 5 – Mitigation Strategy

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

5.1 Community Capability Assessments

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

- Appendix D: Lists the plans and programs in place in Lyon County as related to hazard mitigation.
- Appendix C: As part of the Lyon 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 Lyon 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 Lyon County

FEMA Plan Requirements Plan Review Tool, Section C2		Description
Name of Community	Lyon County	
Participation in the NFIP	Participating – Entry date 05/15/1985	
FEMA Map	FEMA-mapped high-risk areas	
Current Effective Map Date	11/26/2010	
Potential Buildings Damaged in Floodplain (including all townships and cities)	51	
1. Adoption of NFIP minimum floodplain management criteria via local regulation	Adoption of current floodplain ordinance: 7/19/2022	
2. Adoption of the latest effective Flood Insurance Rate Map (FIRM), if applicable	7/19/2022	
3. Implementation and enforcement of local floodplain management regulations to regulate and permit development in SFHAs	Lyon County enforces requirements of the NFIP through the county's floodplain ordinance (Lyon County Zoning Ordinance, Article 6, Floodplain Ordinance), adopted 7/19/2022 and published publicly 7/27/22. This ordinance establishes the floodplain district and zoning regulations and conditional uses permitted within the floodway, flood fringe, and general floodplain districts of Lyon County. The Lyon County Planning & Zoning Department maintains and enforces the floodplain management ordinance for the county.	
4. Appointment of a designee or agency to implement the addressed commitments and requirements of the NFIP	Floodplain Administrator: John Biren, Lyon County Planning & Zoning Administrator	
5. Description of how participant implements the substantial improvement / substantial damage provisions of their floodplain management regulations after an event.	Following a flood event, the county would work with the MN DNR to use a form to track cumulative improvements and repetitive losses in the floodplain. The county would also review the MN DNR Minnesota Post-Flood Substantial Damage Playbook for Local Officials.	
Name of Community	City of Balaton	
Participation in the NFIP	Participating – Entry date 08/19/1985	
FEMA Map	FEMA-mapped high-risk areas	
Current Effective Map Date	11/26/2010	
Potential Buildings Damaged in Floodplain	4	

FEMA Plan Requirements Plan Review Tool, Section C2		Description
Name of Community		Lyon County
1.	Adoption of NFIP minimum floodplain management criteria via local regulation	Adoption of current floodplain ordinance: 10/11/2010
2.	Adoption of the latest effective Flood Insurance Rate Map (FIRM), if applicable	10/11/2010
3.	Implementation and enforcement of local floodplain management regulations to regulate and permit development in SFHAs	The city of Balaton enforces requirements of the NFIP through the city's current floodplain ordinance, adopted 10/11/2010 and made effective 10/13/2010 (date of publication). This ordinance regulates development in the flood hazard areas of the city.
4.	Appointment of a designee or agency to implement the addressed commitments and requirements of the NFIP	Floodplain Administrator: Stacy Chandler, City Clerk-Treasurer
5.	Description of how participant implements the substantial improvement / substantial damage provisions of their floodplain management regulations after an event.	Following a flood event, the city would work with the MN DNR to use a form to track cumulative improvements and repetitive losses in the floodplain. The city would also review the MN DNR Minnesota Post-Flood Substantial Damage Playbook for Local Officials.
Name of Community		City of Cottonwood
Participation in the NFIP		Participating – Entry date 03/21/1997
FEMA Map		FEMA-mapped high-risk areas
Current Effective Map Date		NSFHA – 11/26/2010
Potential Buildings Damaged in Floodplain		0
1.	Adoption of NFIP minimum floodplain management criteria via local regulation	Adoption of current floodplain ordinance: 10/19/2010
2.	Adoption of the latest effective Flood Insurance Rate Map (FIRM), if applicable	N/A Community adopted state "No Map" model ordinance (i.e., no FIRM or no mapped SFHA), and in this case didn't adopt any FIRM panels.
3.	Implementation and enforcement of local floodplain management regulations to regulate and permit development in SFHAs	The city of Cottonwood enforces requirements of the NFIP through the city's current floodplain ordinance, adopted 10/19/2010 and made effective 10/27/2010 (date of publication). This ordinance regulates development in the flood hazard areas of the city.
4.	Appointment of a designee or agency to implement the addressed commitments and requirements of the NFIP	Floodplain Administrator: Teather Bliss, City Clerk-Administrator

FEMA Plan Requirements Plan Review Tool, Section C2		Description
Name of Community		Lyon County
5. Description of how participant implements the substantial improvement / substantial damage provisions of their floodplain management regulations after an event.	N/A	
Name of Community		City of Ghent
Participation in the NFIP	Participating – Entry date 06/08/1984	
FEMA Map	FEMA-mapped high-risk areas	
Current Effective Map Date	11/26/2010	
Potential Buildings Damaged in Floodplain	7	
1. Adoption of NFIP minimum floodplain management criteria via local regulation	Adoption of current floodplain ordinance: 11/10/2010	
2. Adoption of the latest effective Flood Insurance Rate Map (FIRM), if applicable	11/10/2010	
3. Implementation and enforcement of local floodplain management regulations to regulate and permit development in SFHAs	The city of Ghent enforces requirements of the NFIP through the city's current floodplain ordinance, adopted 11/10/2010 and made effective 11/18/2010 (date of publication). This ordinance regulates development in the flood hazard areas of the city.	
4. Appointment of a designee or agency to implement the addressed commitments and requirements of the NFIP	Floodplain Administrator: Dawn Vlaininck, City Administrator-Clerk	
5. Description of how participant implements the substantial improvement / substantial damage provisions of their floodplain management regulations after an event.	Following a flood event, the city would work with the MN DNR to use a form to track cumulative improvements and repetitive losses in the floodplain. The city would also review the MN DNR Minnesota Post-Flood Substantial Damage Playbook for Local Officials.	
Name of Community		City of Lynd
Participation in the NFIP	Participating – Entry date 08/19/1985	
FEMA Map	FEMA-mapped high-risk areas	
Current Effective Map Date	11/26/2010	
Potential Buildings Damaged in Floodplain	9	

FEMA Plan Requirements Plan Review Tool, Section C2		Description
Name of Community	Lyon County	
1. Adoption of NFIP minimum floodplain management criteria via local regulation	Adoption of current floodplain ordinance: 1/17/2023	
2. Adoption of the latest effective Flood Insurance Rate Map (FIRM), if applicable	1/17/2023	
3. Implementation and enforcement of local floodplain management regulations to regulate and permit development in SFHAs	The city of Lynd enforces requirements of the NFIP through the city's current floodplain ordinance, adopted 1/17/2023 and made effective 2/1/2023 (date of publication). This ordinance regulates development in the flood hazard areas of the city.	
4. Appointment of a designee or agency to implement the addressed commitments and requirements of the NFIP	Floodplain Administrator: Sue Paradis, City Clerk-Treasurer	
5. Description of how participant implements the substantial improvement / substantial damage provisions of their floodplain management regulations after an event.	Following a flood event, the city would work with the MN DNR to use a form to track cumulative improvements and repetitive losses in the floodplain. The city would also review the MN DNR Minnesota Post-Flood Substantial Damage Playbook for Local Officials.	
Name of Community	City of Marshall	
Participation in the NFIP	Participating – Entry date 09/30/1977	
FEMA Map	FEMA-mapped high-risk areas	
Current Effective Map Date	11/26/2010	
Potential Buildings Damaged in Floodplain	0	
1. Adoption of NFIP minimum floodplain management criteria via local regulation	Adoption of current floodplain ordinance: 12/13/2022	
2. Adoption of the latest effective Flood Insurance Rate Map (FIRM), if applicable	8/23/2022 *(Entire ordinance amended and FIRM adopted 8/23/22, later 12/13/22 amendment only updated a few sections (not including FIRM).	
3. Implementation and enforcement of local floodplain management regulations to regulate and permit development in SFHAs	The city of Marshall enforces requirements of the NFIP through the city's current floodplain ordinance, adopted 12/13/2022 and made effective 12/23/2022 (date of publication). This ordinance regulates development in the flood hazard areas of the city.	
4. Appointment of a designee or agency to implement the addressed commitments and requirements of the NFIP	Floodplain Administrator: Sharon Hanson, City Administrator	

FEMA Plan Requirements Plan Review Tool, Section C2		Description
Name of Community		Lyon County
5. Description of how participant implements the substantial improvement / substantial damage provisions of their floodplain management regulations after an event.	Following a flood event, the city would work with the MN DNR to use a form to track cumulative improvements and repetitive losses in the floodplain. The city would also review the MN DNR Minnesota Post-Flood Substantial Damage Playbook for Local Officials.	
Name of Community		City of Minneota
Participation in the NFIP	Participating – Entry date 04/06/2000	
FEMA Map	FEMA-mapped high-risk areas	
Current Effective Map Date	11/26/2010	
Potential Buildings Damaged in Floodplain	7	
1. Adoption of NFIP minimum floodplain management criteria via local regulation	Adoption of current floodplain ordinance: 8/8/2022	
2. Adoption of the latest effective Flood Insurance Rate Map (FIRM), if applicable	8/8/2022	
3. Implementation and enforcement of local floodplain management regulations to regulate and permit development in SFHAs	The city of Minneota enforces requirements of the NFIP through the city's current floodplain ordinance, adopted 8/8/2022 and made effective 9/8/2022 (date of publication). This ordinance regulates development in the flood hazard areas of the city.	
4. Appointment of a designee or agency to implement the addressed commitments and requirements of the NFIP	Floodplain Administrator: Robert Vidoloff, City Administrator	
5. Description of how participant implements the substantial improvement / substantial damage provisions of their floodplain management regulations after an event.	Following a flood event, the city would work with the MN DNR to use a form to track cumulative improvements and repetitive losses in the floodplain. The city would also review the MN DNR Minnesota Post-Flood Substantial Damage Playbook for Local Officials.	
Name of Community		City of Russell
Participation in the NFIP	Participating – Entry date 07/06/1984	
FEMA Map	FEMA-mapped high-risk areas	
Current Effective Map Date	11/26/2010	
Potential Buildings Damaged in Floodplain	1	

FEMA Plan Requirements Plan Review Tool, Section C2		Description
Name of Community		Lyon County
1.	Adoption of NFIP minimum floodplain management criteria via local regulation	Adoption of current floodplain ordinance: 11/9/2010
2.	Adoption of the latest effective Flood Insurance Rate Map (FIRM), if applicable	11/9/2010
3.	Implementation and enforcement of local floodplain management regulations to regulate and permit development in SFHAs	The city of Russell enforces requirements of the NFIP through the city's current floodplain ordinance, adopted 11/9/2010 and made effective 11/17/2010 (date of publication). This ordinance regulates development in the flood hazard areas of the city.
4.	Appointment of a designee or agency to implement the addressed commitments and requirements of the NFIP	Floodplain Administrator: Marie Grant, City Clerk-Treasurer
5.	Description of how participant implements the substantial improvement / substantial damage provisions of their floodplain management regulations after an event.	Following a flood event, the city would work with the MN DNR to use a form to track cumulative improvements and repetitive losses in the floodplain. The city would also review the MN DNR Minnesota Post-Flood Substantial Damage Playbook for Local Officials.
Name of Community		City of Taunton
Participation in the NFIP		Participating – Entry date 1/24/2011
FEMA Map		FEMA-mapped high-risk areas
Current Effective Map Date		11/26/2010
Potential Buildings Damaged in Floodplain		0
1.	Adoption of NFIP minimum floodplain management criteria via local regulation	Adoption of current floodplain ordinance: 10/4/2010
2.	Adoption of the latest effective Flood Insurance Rate Map (FIRM), if applicable	10/4/2010
3.	Implementation and enforcement of local floodplain management regulations to regulate and permit development in SFHAs	The city of Taunton enforces requirements of the NFIP through the city's current floodplain ordinance, adopted 10/4/2010 and made effective 11/3/2010 (date of publication). This ordinance regulates development in the flood hazard areas of the city.
4.	Appointment of a designee or agency to implement the addressed commitments and requirements of the NFIP	Floodplain Administrator: Rebecca Jurrens, City Clerk

FEMA Plan Requirements Plan Review Tool, Section C2	Description
Name of Community	Lyon County
5. Description of how participant implements the substantial improvement / substantial damage provisions of their floodplain management regulations after an event.	Following a flood event, the city would work with the MN DNR to use a form to track cumulative improvements and repetitive losses in the floodplain. The city would also review the MN DNR Minnesota Post-Flood Substantial Damage Playbook for Local Officials.
Name of Community	City of Tracy
Participation in the NFIP	Participating – Entry date 11/26/2010
FEMA Map	No FEMA-mapped high-risk areas
Current Effective Map Date	11/26/2010
Potential Buildings Damaged in Floodplain	0
1. Adoption of NFIP minimum floodplain management criteria via local regulation	Adoption of current floodplain ordinance: N/A Community participates in the NFIP but does not have a floodplain ordinance.
2. Adoption of the latest effective Flood Insurance Rate Map (FIRM), if applicable	N/A Not a mapped community (i.e., no FIRM or no mapped SFHA).
3. Implementation and enforcement of local floodplain management regulations to regulate and permit development in SFHAs	N/A Community participates in the NFIP but does not have a floodplain ordinance.
4. Appointment of a designee or agency to implement the addressed commitments and requirements of the NFIP	Floodplain Administrator: Jeff Carpenter, City Administrator
5. Description of how participant implements the substantial improvement / substantial damage provisions of their floodplain management regulations after an event.	Following a flood event, the city would work with the MN DNR to use a form to track cumulative improvements and repetitive losses in the floodplain. The city would also review the MN DNR Minnesota Post-Flood Substantial Damage Playbook for Local Officials.
Name of Community	City of Florence
Participation in the NFIP	NOT Participating
FEMA Map	No FEMA-mapped high-risk areas 11/26/2010 NSFHA (No Special Flood Hazard Area)
Name of Community	City of Garvin
Participation in the NFIP	NOT Participating

FEMA Plan Requirements Plan Review Tool, Section C2	Description
Name of Community	Lyon County
FEMA Map	No FEMA-mapped high-risk areas 11/26/2010 NSFHA (No Special Flood Hazard Area)

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

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

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

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

Lyon County has two RL properties and no SRL properties. Both are single-family residences with first loss dates in 1993 and 2018.

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

5.1.2 Plans and Ordinances

Lyon 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

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

All Hazards

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

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

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

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

Mass Care Sheltering: In the event of a disaster where temporary sheltering is needed, Lyon County Emergency Management works in coordination with Southwest Health & Human Services, the American Red Cross, and local governments/Fire & EMS to provide mass care services as needed. The county EOP includes plans, procedures, and resources available for mass care sheltering.

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

Weather-Ready Nation Ambassador/StormReady Community: Lyon County Emergency Management is a registered NOAA and NWS Weather-Ready Nation (WRN) Ambassador and designated StormReady Community, supporting initiatives to improve readiness, responsiveness, and overall resilience to weather, water, and climate events. As an WRN 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: Lyon County works to ensure the continuity of operations of county government services and critical infrastructure in the event of an extended power outage. County facilities with backup generators include the Government Center and landfill.

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

Regional Collaboration: Lyon County Emergency Management works closely with the MN HSEM Region 5 regional program coordinator and neighboring county emergency managers on a range of planning, training, and exercises to support all-hazards preparedness, mitigation, response, and recovery capabilities.

Severe Winter Storms

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

Winter Hazard Awareness Week: Lyon County participates in the Winter Hazard Awareness Week campaign sponsored by MN HSEM and the NWS each November. The week-long effort provides specific information each day covering the topics of winter weather, outdoor winter safety, indoor winter safety, and winter driving safety. Lyon County Emergency Management promotes and shares information during the week via social media with communities, schools, churches or other civic programs are encouraged to share locally.

Snow Removal & Ice Control: The Lyon County Highway Department conducts winter road maintenance on county roads in accordance with the Lyon County Snow Removal & Ice Control Policy, effective date: 11/18/2003. Other road jurisdictions conduct winter road maintenance on their respective road systems in accordance with each of their established policy and/or practice.

Severe Summer Storms

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

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

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

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

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

Extreme Cold

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

Extreme Cold Safety Awareness: Lyon County Emergency Management and Southwest Health and Human Services-Public Health promote public awareness of personal safety measure to take during periods of extreme cold, such as sharing information via Facebook posts.

Emergency Sheltering: In the event of an extended power outage coupled with a period of extreme cold, Lyon County Emergency Management will work with Southwest Health and

Human Services-Public Health and local Fire or EMS agencies as needed to assist vulnerable residents such as the elderly who may need temporary sheltering.

Extreme Heat

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

Public Education and Awareness: Lyon County Emergency Management and Southwest Health and Human Services-Public Health to promote public awareness of personal safety measure to take during periods of extreme heat, such as sharing information via Facebook posts.

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

Drought

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

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

Flooding

National Flood Insurance Program (NFIP): Lyon County has FEMA-mapped high-risk areas and participates in the NFIP. Initial entry date into the program was 06/01/1998.

Floodplain Administrator: The Lyon County Planning & Zoning Administrator is the county's designated Floodplain Administrator, who is responsible to implement the requirements of the NFIP.

Floodplain Ordinance: Lyon County Floodplain Ordinance, Article 6 in the Lyon County Zoning Ordinance establishes the flood plain district and zoning regulations and conditional uses permitted within the floodway, flood fringe, and general floodplain districts. The Lyon County Planning & Zoning Office maintains and enforces the floodplain management ordinance for the county. The ordinance is adopted to comply with the rules and regulations of the National Flood Insurance Program codified as 44 Code of Federal Regulations Parts 59 -78, as amended, so as to maintain the community's eligibility in the National Flood Insurance Program.

Floodplain Mapping: Lyon County's current effective FEMA flood map date is 11/26/2010. The county's Planning & Zoning Office is the repository for the floodplain maps for the county. The P&Z Office assists county residents in determining whether their property is affected by an officially mapped flood area.

Shoreland Ordinance: Lyon County Zoning Ordinance, Article 17, Shoreland Standards establishes allowable uses and development standards in shoreland areas designated within the county. In addition to establishing setback requirements, the ordinance specifies that local shoreland controls must regulate placement of structures in relation to high water elevation for flood protection.

Subdivision Ordinance: Lyon County Zoning Ordinance, Article 14 "PUD" Planned Unit Development District is established to regulate the subdividing of land in Lyon County.

Transportation Plan: The Lyon County Highway Department maintains update of annual transportation planning and schedules projects for implementation.

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

One-Watershed One Plan (1w1P): Lyon County has participated in the Yellow Medicine River 1W1P and Des Moines River 1W1P. Both plans address regional watershed planning which include measures for flood mitigation.

Dam/Levee Failure

No noted plans or programs in place.

5.2 Mitigation Goals

The goals and strategies for natural hazards in the 2024 Minnesota State Hazard Mitigation Plan were adopted for use in the Lyon County Plan. This framework, as outlined below, will allow for integration of the mitigation actions that are listed by Lyon 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.

Local leaders work together with the Lyon 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 Lyon 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).

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"> • Comprehensive plans • Land use ordinances • Planning and zoning • Building codes and enforcement • Floodplain ordinances • NFIP Community Rating System • Capital improvement programs • Open space preservation • Shoreline codes • Stormwater management regulations and master plans
Structure and Infrastructure Projects	<p>These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure.</p> <p>This type of action also involves projects to construct manmade structures to reduce the impact of hazards.</p> <p>Many of these types of actions are projects eligible for funding through the FEMA Hazard Mitigation Assistance program.</p>	<ul style="list-style-type: none"> • Acquisitions and elevations of structures in flood prone areas • Utility undergrounding • Structural retrofits • Floodwalls and retaining walls • Detention and retention structures • Culverts • Safe rooms
Natural Systems Protection	These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.	<ul style="list-style-type: none"> • Sediment and erosion control • Stream corridor restoration • Forest management • Conservation easements • Wetland restoration and preservation
Education and Awareness Programs	<p>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.</p> <p>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.</p>	<ul style="list-style-type: none"> • Radio or television spots • Websites with maps and information • Real estate disclosure • Presentations to school groups or neighborhood organizations • Mailings to residents in hazard-prone areas. • StormReady Certification • Firewise Communities

Mitigation Strategy	Description	Example Mitigation Actions
Mitigation Preparedness and Response	This is a State of Minnesota mitigation strategy with the intent of covering preparation and actions that protect life and property during a natural disaster.	<ul style="list-style-type: none"> • Emergency operations plan • Flood fight plans and preparedness • Dam emergency action plans • Warning • Backup power • Emergency capabilities

The Lyon 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 Balaton, Cottonwood, Florence, Garvin, Ghent, Lynd, Marshall, Minneota, Russell, Taunton, and Tracy.

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

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

Number (#)

Each mitigation action is identified by a number.

Hazard

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

Mitigation Strategy

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

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

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

Mitigation Action

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

Status

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

- New – New actions that have been identified since the last plan.

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

Mitigation actions that have been completed or deleted from the 2017 Lyon County Hazard Mitigation Plan are identified and reported on in Appendix H. Completed and deleted mitigation actions are not carried over into the updated mitigation action chart.

Priority

In the review and discussion of selected mitigation strategies and actions, the planning team ranked mitigation actions by priority for implementation. Table 12 provides criteria that were taken into consideration in the process.

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.

Table 12. Criteria for Mitigation Action Priority Ranking

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

Responsibility

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

Comments on Implementation & Integration

Each mitigation action provides a description of how the jurisdiction will work to implement the mitigation action and incorporate the activity into other existing planning mechanisms. As part of the plan update process, communities were asked to describe how they will integrate the mitigation actions listed into other planning mechanisms since the last plan update. This can include description of methods for public outreach, enforcement of policies, development of plans, and coordination of key staff and partnership efforts.

Possible Funding

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

5.3.1 Lyon County Mitigation Action Chart

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

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

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

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	CODERED EMERGENCY NOTIFICATION Encourage all county residents to sign-up for the county's CodeRED Emergency Notification System.	Existing High Ongoing	Lyon County Emergency Management (LCEM)	Lyon County maintains the CodeRED Emergency Notification System which allows residents and visitors to sign up ("opt-in") to receive severe weather alerts targeted to their location, along with other local emergency alerts. A link to sign up for the system is located on the Lyon County Emergency Management website page.	State Grant Funding and County Funding
2	All-Hazards	Education & Awareness Programs	PUBLIC AWARENESS & EDUCATION Conduct outreach to the public to increase awareness and preparedness for severe weather events, periods of extreme temperatures, and extended power outages.	Existing High Ongoing	LCEM in coord with Southwest Health & Human Services	Lyon County Emergency Management utilizes the Lyon County website, Lyon County Facebook page, and local news media to communicate with residents, visitors, schools, and long-term care facilities on emergency preparedness, severe weather, and other hazard conditions throughout the year. Lyon County participates in the NWS Severed Weather Awareness Weeks held in April and November of each year. Lyon County also provides annual SkyWarn training on an annual basis. LCEM promotes the use of NOAA Weather Radios by residents, businesses, schools, long term care facilities, government buildings, faith communities, and other places of common gathering.	State Grant Funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
3	All-Hazards	Mitigation Preparedness & Response Support	EOP PLANNING Ensure the county's Emergency Operations Plan (EOP) is updated and addresses policies & procedures needed to support EM functions prior to, during, and following a disaster.	Existing High Ongoing	LCEM	Lyon County maintains an all-hazards Emergency Operations Plan (EOP) which lays out concepts and operating guidelines for all incident management and support functions that may be needed to ensure life safety, incident stabilization, and property preservation during an incident and the transition to recovery.	State Grant Funding
4	All Hazards	Local Planning & Regulations	FUTURE DEVELOPMENT Incorporate mitigation strategies across county and local government plans and policies that address future growth and new development.	Existing High 2025-2030	LC Planning & Zoning, LC Environmental Office	Lyon County continues to address planning for increased growth and development that will affect emergency response services as well as an increase in vulnerable systems and infrastructure. Lyon County uses its Comprehensive Land Use Plan, Transportation Plan, Shoreland Ordinance, Floodplain Ordinance, and Subdivision Ordinance to address long-term planning for future development.	County Funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
5	All-Hazards	Mitigation Preparedness & Response Support	VULNERABLE POPULATIONS Work with county departments, partner agencies, facilities, and local jurisdictions to address planning and outreach efforts for those considered to be more vulnerable to severe weather events.	Existing High Ongoing	LCEM in coord with Southwest Health & Human Services	LCEM and Southwest HHS continue to provide outreach to and assistance as needed to facilities such as schools, long-term care facilities, and directly to individuals. The county works in coordination with agencies such as the Red Cross and Salvation Army. Lyon County works to maintain information on the location of key facilities such as hospitals, nursing homes, and day cares. Lyon County coordinates with local school districts as needed on related emergency planning and preparedness, including support for specific trainings, exercises, equipment, and relay of county-level emergency notifications.	County Funding other agencies & organizations
6	All-Hazards	Mitigation Preparedness & Response Support	GENERATOR BACKUP POWER Install generators at key county facilities to ensure continuity of operations and services in the event of loss of power.	Existing High Ongoing	LCEM in coord with Hwy. Dept	Lyon County has generators and uninterruptable power supplies to support critical county facilities and infrastructure (County Courthouse, MMU, and many of the confinement hog operations). Additional generators will be obtained if deemed necessary. Lyon County encourages local jurisdictions to evaluate and address where backup power is needed.	County Funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
7	All-Hazards	Mitigation Preparedness & Response Support	MASS CARE SHELTERING Ensure that plans and designated facilities are in place in order to provide temporary sheltering due to a severe weather or other disaster event.	Existing High 2025-2030	LCEM in coord with SWHHS and local governments	In the event of a disaster where temporary sheltering is needed, Lyon County will work in coordination with Southwest Health & Human Services, the American Red Cross, and local governments / Fire & EMS to provide mass care services as needed. The county EOP includes plans, procedures, and resources available for mass care sheltering.	County Funding, SWHHS
8	Extreme Temps (Cold/Heat)	Education & Awareness Programs	EXTREME TEMPS PUBLIC OUTREACH Provide outreach and education to the public on personal safety measures to take during periods of extreme cold or heat.	In-Progress High 2025-2030	LCEM in coord with SWHHS	Lyon County and SWHHS work to share information received from the Sioux Falls, ND National Weather Service (NWS) Forecast Office when periods of extreme temperatures are forecast and occurring. Public education regarding extreme heat or cold safety also occurs during the NWS Winter Weather Awareness week that occurs in April and November each year.	County Funding, SWHHS
9	Extreme Temps (Cold/Heat)	Mitigation Preparedness & Response Support	WARMING/COOLING CENTERS Work with local communities to develop plans for operating warming or cooling centers for those who are vulnerable during extreme temperatures events.	New High 2025-2030	LCEM in coord with SWHHS and local governments	Lyon County and SWHHS work together with local communities to have plans in place for a local facility (i.e., school, church, community center, Fire Hall) to be designated to operate for temporary sheltering and prepared with backup power and other supplies. Lyon County and SWHHS are available to assist communities in this planning as needed.	County and Local Gov't Funding, SWHHS

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
10	Severe Winter Storms	Local Planning & Regulations	SNOW & ICE CONTROL Implement snow removal and ice control to ensure the safety of county roads impacted by winter storms.	Existing High 2025-2030	Lyon County Hwy. Dept.	The Lyon County Highway Department conducts winter road maintenance on county roads in accordance with the Lyon County Snow Removal & Ice Control Policy, effective date: 11/18/2003. Other road jurisdictions conduct winter road maintenance on their respective road systems in accordance with each of their established policy and/or practice.	County Funding
11	Severe Summer Storms	Education & Awareness Programs	SKYWARN TRAINING Work with the National Weather Service (NWS) to provide SkyWarn training and develop a network of trained Storm Spotters throughout the county.	Existing High 2025-2030	LCEM in coord with NWS	Lyon County works with the Sioux Falls, ND NWS Office to offer this training on an annual basis to local fire and law enforcement departments and local residents that wish to be trained as spotters.	National Weather Service
12	Severe Summer Storms	Mitigation Preparedness & Response Support	OUTDOOR WARNING SIRENS Install new outdoor warning sirens in the county where needed.	In-Progress High 2025-2030	LCEM in coord with local jurisdictions	In November, 2024 Lyon County is working to install warning sirens at Garvin County Park and Twin Lakes Park. LCEM will work with local jurisdictions that are seeking to upgrade their existing warning sirens or to purchase a new one. FEMA 5% Initiative Grant Funding may be a possible source for communities seeking to apply for grant funding for a warning siren.	County Funding & local jurisdictions, FEMA 5% Initiative Grant Funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
13	Severe Summer Storms	Structure & Infrastructure Projects	STORM SHELTERS / TORNADO SAFE ROOMS Address the need for the construction of storm shelters or tornado safe rooms in areas where residents or visitors are vulnerable to high wind events, such as mobile home parks and campgrounds.	Existing High 2025-2030	LCEM in coord with local gov'ts	LCEM will assist any mobile home park or community in their effort to assess and address the need for construction of a storm shelter or tornado safe room. Grant funding may be available for tornado safe rooms from FEMA Hazard Mitigation grant program funding, based on funding availability and application approval.	County Funding, Local Gov't, FEMA BRIC grant funding
14	Severe Winter & Summer Storms	Structure & Infrastructure Projects	POWERLINE RETROFITS Work to convert overhead powerlines to underground in areas where there are vulnerable overhead lines.	Existing High 2025-2030	LCEM in coord with electric utility providers	Some specific areas of desired retrofit projects include the Lyon County Fairgrounds, Garvin Park, and the landfill. Lyon County will work with the utility companies that serve the county (Otter Tail Power Co, Xcel Energy, Marshall Municipal, and Lyon-Lincoln Electric Coop) and local governments on powerline retrofit projects efforts as needed. FEMA HMA grant funding may be a source for powerline infrastructure retrofits.	Electric Coop funding, FEMA BRIC grant funding
15	Severe Winter & Summer Storms	Local Planning & Regulations	BUILDING SAFETY Encourage new development projects to follow state building codes in order to withstand the impacts of severe weather events, including roof collapse from heavy snow or damages from high wind events.	Existing Moderate 2025-2030	LC Planning & Zoning	The Lyon County Planning & Zoning Office oversees building and land use permits for new development in areas under its jurisdiction. Currently Lyon County is not a code-enforcing county. Local jurisdictions enforce their own building permits respectively.	County Funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
16	Severe Winter & Summer Storms	Natural Systems Protection	VEGETATION MANAGEMENT Manage trees and other vegetation along roads from severe storm events to reduce risk to powerlines and passing motorists.	Existing Moderate 2025-2030	Lyon County Highway Dept., Local Utility Providers	The Lyon County Highway Department conducts vegetation management along county roads to reduce the risk of downed trees or branches resulting from severe spring and summer storm events. The county will make considerations for tree varieties when replanting, as Emerald Ash Borer has created issues leading to downed trees. Local utility providers also work to manage vegetation near power lines to reduce the risk of downed lines and power outages.	County Funding, Utility Coops
17	Local Planning & Regulations	Local Planning & Regulations	FLOODPLAIN ORDINANCE Continue participation in the National Flood Insurance Program and enforce the county's floodplain ordinance.	Existing Moderate 2025-2030	LC Planning & Zoning Office	Lyon County Floodplain Ordinance, Article 6 in the Lyon County Zoning Ordinance establishes floodplain districts and zoning regulations including conditional uses permitted within the floodway, flood fringe, and general floodplain districts. The Lyon County Planning & Zoning Office maintains and enforces the floodplain management ordinance for the county. The ordinance is adopted to comply with the rules and regulations of the National Flood Insurance Program codified as 44 Code of Federal Regulations Parts 59 - 78, as amended, so as to maintain the community's eligibility in the National Flood Insurance Program.	County Funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
18	Flooding	Local Planning & Regulations	SHORELAND ORDINANCE Implement the county's Shoreland Ordinance to reduce potential impacts of high rain events to adjacent structures.	Existing High 2025-2030	LC Planning & Zoning Office	Lyon County Zoning Ordinance, Article 17, Shoreland Standards establishes allowable uses and development standards in shoreland areas designated within the county. In addition to establishing setback requirements, the ordinance specifies that local shoreland controls must regulate placement of structures in relation to high water elevation for flood protection.	County Funding
19	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	LOCALIZED FLOOD RISK REDUCTION Plan for and implement measures to address localized flood reduction projects for roads, bridges, and culverts throughout the county.	Existing High 2025-2030	LC Highway Dept.	The Lyon County Highway Department maintains update of annual transportation planning and schedules projects for implementation. The county needs funding assistance to improve roads and culverts that experience repetitive flooding. Significant State and Federal funding is needed to construct infrastructure projects to prevent, reduce, and mitigate the impacts of high rain events and flooding.	County Funding, State / Federal grant programs
20	Flooding	Local Planning & Regulations	WATERSHED PLANNING Continue to work with the Lyon Soil and Water Conservation District on plans and projects that address risk reduction for localized flooding and erosion.	Existing Moderate 2025-2030	Lyon SWCD in coord with Lyon Environmental, area Watershed Districts, MN DNR	Lyon County has ongoing participation in regional watershed planning. The SWCD has been a part of the Yellow Medicine River 1W1P and Des Moines River 1W1P. The Redwood and Cottonwood 1W1P are in-process. These plans address regional watershed planning which include measures for flood mitigation.	SWCD, Watershed District funding, MN DNR

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
21	Landslides	Local Planning & Regulations	PROPERTY ACQUISITION Provide grant writing support to local jurisdictions to conduct property buyouts of homes that repetitively flood.	New Low 2025-2030	LC Planning & Zoning in coord with SWCD and local jurisdictions	There are currently no potential property buyout projects identified by Lyon County or local jurisdictions. The county will continue to evaluate and assist with potential future property acquisition projects and application to FEMA or MN DNR for grant funding to conduct buyouts.	Lyon County, Possible MN DNR FHM and/or FEMA BRIC Grant Funding
22	Drought	Education & Awareness Programs	DROUGHT OUTREACH & EDUCATION Provide outreach and education to residents to be aware of watering restrictions, water conservation tips, and fire safety during periods of severe drought.	Existing High 2025-2030	LCEM, SWCD	Lyon County continues to provide public outreach during periods of severe drought. Lyon County encourages city and townships to enforce local water use restrictions and promote drought awareness to local residents. The SWCD also does outreach during periods of drought. Southwest Health & Human Services has interest in coordinating with local master gardeners in the area to highlight drought/heat resistant plants and or gardens to help reduce water usage.	Lyon County Funding, SWCD Program funding, SWHHS
23	Drought	Local Planning & Regulations	WATERING RESTRICTIONS Implement watering restrictions during periods of drought as per MN DNR guidance.	Existing High 2025-2030	MN DNR and local jurisdictions	Local jurisdictions may establish watering restrictions as per MN DNR guidelines during periods of severe drought.	Local Gov'ts

Section 6 – Plan Maintenance

6.1 Monitoring, Evaluation, and Updating the Plan

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

The Lyon 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 Lyon County EMD will work with an emergency managers group to help monitor, review, evaluate, and update the HMP. The group will include township representatives and designated city emergency managers from the cities of Balaton, Cottonwood, Florence, Garvin, Ghent, Lynd, Marshall, Minneota, Russell, Taunton, and Tracy, and include other city elected officials or staff as needed. Representatives from agencies or organizations that are involved with related mitigation work in the county as well as those that work with underserved communities or socially vulnerable populations will also be invited to participate in the group. The Lyon 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 Lyon 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 Lyon 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 Lyon County. In addition, state and federal policies will be reviewed to ensure they are addressing current and expected conditions. The group will also review the risk assessment portion of the plan to determine if this information should be updated or modified. The parties responsible for the various implementation actions will report on the status of their projects, and will include which implementation processes worked well, any difficulties encountered, how coordination efforts are proceeding, and which strategies should be revised.

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

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

6.2 Implementation

Lyon County and its included municipalities share a common HMP and work together closely to develop, revise, and implement it. This HMP provides a comprehensive chart of mitigation actions for Lyon County and its jurisdictions (see Appendix H and Section 5.3). The cities of Balaton, Cottonwood, Florence, Garvin, Ghent, Lynd, Marshall, Minneota, Russell, Taunton, and Tracy participated in the HMP planning process and identified the specific mitigation strategies that they would seek to implement in their communities during the five-year planning cycle. These mitigation actions are provided in Appendix H.

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

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

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

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

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

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

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

6.3 Continued Public Involvement

Continued public involvement is critical to the successful implementation of the Hazard Mitigation Plan. The Lyon 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.

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

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

- The Lyon County HMP website link will be posted on the Lyon County Emergency Management website. The website provides a PDF of the plan for download and an interactive experience for the public to understand the planning process, where county-specific vulnerabilities lie, national best practices, as well as a chance to submit feedback. Collected feedback will be reviewed during the five-year plan cycle and will be noted for future update of the plan or addressed as necessary.
- Following any major storms or natural disasters, Lyon County Emergency Management will seek to gather concerns and new ideas for mitigation from local residents to include in the next update of the plan. This may be done through public meetings, outreach via social media, or news releases via local media.
- Each community participating in the plan will be responsible for keeping their local government, schools, and community members updated and engaged in the implementation of their respective mitigation action charts (see Appendix H or the Lyon County HMP website). Each respective jurisdiction will be required to report on the status of mitigation actions in their charts to the Lyon County EMD.
- Lyon County and its jurisdictions will use numerous means of public outreach to engage new public stakeholders in providing input on mitigation concerns, including those from underserved communities or socially vulnerable populations. Outreach methods may include presentations at city council or township board meetings, sharing information at special events, working with local schools and partner organizations, and posting information in areas that are used to communicate with the public (bulletin boards, websites, social media, and local media sources that communities use to inform and engage the public). As mitigation projects are implemented, jurisdictions will work to keep the public updated and engaged in those local efforts.

Appendices

Appendix A – References

Appendix B – Adopting Resolutions

Appendix C – Local Mitigation Survey Report

Appendix E – Past Mitigation Action Review Status Report

Appendix F – Planning Team Meetings

Appendix G – Public Outreach & Engagement Documentation

Appendix H – Mitigation Actions by Jurisdiction

Appendix A – References

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Appendix B – Adopting Resolutions

Appendix C – Local Mitigation Survey Report



Lyon County

Local Mitigation Survey Report

Overview

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

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

LMS Forms

Lyon County	Yes
City of Balaton	Yes
City of Cottonwood	Yes
City of Florence	No
City of Garvin	Yes
City of Ghent	Yes
City of Lynd	Yes
City of Marshall	Yes
City of Minneota	Yes
City of Russell	Yes
City of Taunton	Yes
City of Tracy	Yes

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

Lyon County

LOCAL MITIGATION SURVEY

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

Name of Jurisdiction: LYON COUNTY

Point of Contact:

Name: Emily Coequyt
Job Title: Emergency Management Director
Phone: 507-706-1276
Email: emilycoequyt@co.lyon.mn.us

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. HAZARD IDENTIFICATION

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

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

2. RECENT HAZARD EVENTS

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

In April 2023, Lyon County experienced significant flooding in some of their townships. Due to rapid and warm temperatures Lyon County experienced rapid snowmelt, run off, and rivers rising across the county. Many small township's gravel roads were washed out and culverts damaged with the rapid run

off from fields and from water moving from field to field, and rivers rising surpassing road grade levels. A declaration for State of Emergency was declared.

In May 2022, Lyon County experienced a high wind storm/derecho causing a lot of damage to communities and townships across Lyon County. A declaration for State of Emergency was declared.

3. LOCAL VULNERABILITIES

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

Natural Hazard (please list)	Vulnerability Assessment Describe <u>specific</u> community assets (infrastructure, systems, or populations) that are susceptible to damage or loss from hazard events.
All Hazards	We need to obtain a portable generator for our City Hall and Community Center that serves as our local shelter if people are displaced from a severe storm event or extended power outage. We also have a large population of senior citizens that do not use cell phones to receive emergency notifications.
Flooding	Lyon County has experienced significant flooding. Our township roads are washed out every spring with the increased run off. There are also culverts that need to be increased in size to accommodate these run offs. People living in these affected areas as well a rural businesses, and other structures are all at risk.
Ice Storms, Blizzards	Lyon County has experienced multiple blizzard events and potential for severe ice storms over the last 5 years. Much of the county's municipal and rural electric cooperative consists of overhead power lines and electrical poles. In past winter storms, we have experienced electrical outages and damage to poles and lines. This makes Lyon County's Administration Building vulnerable. It makes our major manufacturers, without adequate generators, susceptible to loss, assisted living facilities and hospitals located in Lyon County are also vulnerable to loss of power. This also creates vulnerability for residents, especially seniors, children and anyone who relies on powered medical devices.
Windstorms and Tornadoes	<p>All schools, nursing homes, hospitals, assisted living, government buildings, mobile home parks, campgrounds and RV Parks, city and county parks, lakes, roads, bridges, culverts, utilities, and water treatment systems are vulnerable to tornadoes. People and structures across Lyon County are especially vulnerable to impacts from tornado touchdowns because of a gap in the National Weather Service radar. The county is served by the National Weather Service in Sioux Falls, SD but is on the border of the National Weather Service in Chanhassen. The county and our neighboring counties have met to discuss this gap which is currently being met only by storm spotters. The county is limited in how much advance notice can be given during certain tornadic activity.</p> <p>The county also has gaps in its outdoor warning siren coverage. Sirens are owned and maintained by cities and townships. Not all cities and townships are willing or able to fund new or updated sirens. This puts residents and</p>

	visitors in those areas in higher risk of injury or death. In addition, most newly constructed townhomes, and many individual homes are being built on slabs with no basements putting occupants at higher risk. In addition, the county has licensed a large wedding venue with no shelter. Those occupants are all at higher risk.
Extreme Cold	We have a high population of senior citizens and low-income residents who are more vulnerable during periods of extreme cold with power outages. In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold. Lyon County has also experienced damages to roads from spring frost heaves, frozen culverts that cause localized flooding.

4. REDUCTION IN VULNERABILITY

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

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

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

5. INCREASE IN VULNERABILITY

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

Lyon County has seen an increase in development. Private homes, an event center, additions to campgrounds. This greatly increases the vulnerability for widespread injury and death in the event of a strong and long duration tornado or system of straight-line winds. Many of these developments are build slab on grade and have no storm shelter available.

This development also increases the risk for stormwater runoff as more surfaces once able to absorb water naturally become impervious.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. PUBLIC OUTREACH

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

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

County Emergency Management website page provides emergency preparedness information and resource links for the public.

2. EMERGENCY NOTIFICATION SYSTEM

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

Lyon County maintains the CodeRED Emergency Notification System which allows residents and visitors to sign up ("opt-in") to receive severe weather alerts targeted to their location, along with other local emergency alerts. A link to sign up for the system is located on the Lyon County Emergency Management website page.

3. LOCAL PLANS & POLICIES

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

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

Mass Care Sheltering: In the event of a disaster where temporary sheltering is needed, Lyon County Emergency Management works in coordination with Southwest Health & Human Services, the American Red Cross, and local governments/Fire & EMS to provide mass care services as needed. The county EOP includes plans, procedures, and resources available for mass care sheltering.

Snow Removal & Ice Control: The Lyon County Highway Department conducts winter road maintenance on county roads in accordance with the Lyon County Snow Removal & Ice Control Policy, effective date: 11/18/2003.

Shoreland Ordinance: Lyon County Zoning Ordinance, Article 17, Shoreland Standards establishes allowable uses and development standards in shoreland areas designated within the county. In addition to establishing setback requirements, the ordinance specifies that local shoreland controls must regulate placement of structures in relation to high water elevation for flood protection.

Floodplain Ordinance: Lyon County Floodplain Ordinance, Article 6 in the Lyon County Zoning Ordinance establishes the flood plain district and zoning regulations and conditional uses permitted within the floodway, flood fringe, and general floodplain districts. The Lyon County Planning & Zoning Office maintains and enforces the floodplain management ordinance for the county. The ordinance is adopted to comply with the rules and regulations of the National Flood Insurance Program codified as 44 Code of Federal Regulations Parts 59 -78, as amended, so as to maintain the community's eligibility in the National Flood Insurance Program.

Subdivision Ordinance: Lyon County Zoning Ordinance, Article 14 "PUD" Planned Unit Development District is established to regulate the subdividing of land in Lyon County.

Transportation Plan: The Lyon County Highway Department maintains update of annual transportation planning and schedules projects for implementation.

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

One-Watershed One Plan (1w1P): Lyon County has participated in the Yellow Medicine River 1W1P and Des Moines River 1W1P. Both plans address regional watershed planning which include measures for flood mitigation.

4. STAFF & PARTNERSHIPS

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

Lyon County departments work together to accomplish mitigation goals through integrated policies and programs. Key departments include Lyon County Emergency Management, Lyon County Sheriff's Office, Lyon County Highway Department, Lyon County Planning & Zoning, Southwest Health & Human Services, Lyon County Environmental/Parks Department, Lyon County Administration, and Lyon Soil and Water Conservation District.

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

Lyon County Emergency Management works closely with the MN HSEM Region 5 regional program coordinator and neighboring county emergency managers on an annual basis for joint planning, training, and exercises.

Lyon County Emergency Management coordinates with local school districts as needed on related emergency planning and preparedness, including support for specific trainings, exercises, equipment, and relay of county-level emergency notifications.

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

5. PROGRAMS IN PLACE

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

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

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

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

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

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

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

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

6. FUNDING & OTHER RESOURCES

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

Lyon County relies on their own budget and grant funding to address and fund mitigation projects.

In 2023, select Lyon County Townships did receive state funds at 75% to help with fixing roads and culverts due to spring flooding, after a State of Emergency was declared.

PART C: LOCAL MITIGATION PROJECTS

1. LOCAL MITIGATION PROJECTS

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

Windstorms/Tornadoes - The existing outdoor warning siren at Garvin County Park is not working and needs to be replaced. Twin Lakes Park also does not have a warning siren and should have one installed.

Flooding – Culverts have been replaced and roads have been rebuilt to help handle excess water.

Severe Winter/ Summer Storms – Encourage residents to sign up for the county’s emergency notification system. Lyon County participates in the National Weather Service’s Severe Weather Awareness Weeks and holds a Skywarn Class for residents annually.

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

2. GAPS OR DEFICIENCIES

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

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

PART D: SURVEY PARTICIPANTS

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

Emily Coequyt, Lyon County Emergency Management
Beth Wilms, Southwest Health and Human Services, Director

Lyon County

LOCAL MITIGATION SURVEY

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

Name of Jurisdiction: CITY OF BALATON

Point of Contact:

Name: Josh Torgeson
Job Title: Public Works Superintendent
Phone: 507-829-4693
Email: balatonmn@gmail.com

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. HAZARD IDENTIFICATION

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

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

2. RECENT HAZARD EVENTS

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

July 3, 2018 – The city of Balaton received seven (7) plus inches over night causing major flooding damage to resident homes and city lift station and public roads. The water ran over Highway 14 and

took out master lift station. Again on May 11, 2022, Highway 14 flooded with 4.1 inches of rain within one hour. Upgrading the storm sewer culvert under County Road 5 is a high priority.

3. LOCAL VULNERABILITIES

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

Natural Hazard	Vulnerability Assessment Describe <u>specific</u> community assets (infrastructure, systems, or populations) that are susceptible to damage or loss from hazard events.
All Hazards	We need to obtain a portable generator for our City Hall and Community Center that serves as our local shelter if people are displaced from a severe storm event or extended power outage. We also have a large population of senior citizens that do not use cell phones to receive emergency notifications. Currently using the Balaton Fire Hall for Civil Defense purposes.
Flooding	We have a city lift station that is prone to flooding during high rain events. The city park (Knudson Bosely) is vulnerable to flooding. We need to upsize several culverts to better handle high rain events. Upgrading the storm sewer culvert under County Road 5 is a high priority.
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. Also have to run back up power to water and sewer during power outages.
Windstorms and Tornadoes	Our municipal campground is active during summer and fall months with RVs and campers and does not have a storm shelter. We have experienced power outages from strong wind events that brought down power lines.
Extreme Cold	We have a high population of senior citizens and also low-income residents who are more vulnerable during periods of extreme cold with power outages. In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold. The city has experienced damages to roads from spring frost heaves, frozen culverts that cause localized flooding.

4. REDUCTION IN VULNERABILITY

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

Backup power has been installed to both lift stations and Balaton Fire Hall. Backup power to community center and city hall is on the project list.

5. INCREASE IN VULNERABILITY

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

Between 2019 and 2023 we had multiple homes in Eastbay Addition that were constructed in the city, which has increased our population and potential for damage to new structures. Many homes have been built slab-on-grade, so residents do not have a basement for safety during high wind or tornado events. With an increase in population and construction of more homes and commercial properties, we have also witnessed more storm water discharging to our stormwater system. We feel this is due to more impermeable surface which has increased stormwater runoff and the amount of precipitation seems to have increased per rain event. With the construction of a new assisted living facility, there is also a large concentration of senior residents in one location that will need assistance during a disaster event.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. PUBLIC OUTREACH

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

We post information on the Facebook page. WE also post information on bulletin boards at the community center, liquor store, gas station and post office. Balaton also sends out spring and fall newsletters.

2. EMERGENCY NOTIFICATION SYSTEM

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

The City of Balaton is a member of MNWARN. The fire department keeps people trained on storm watching and the city can post notifications of the National Weather Service out of Sioux Falls SD. <https://www.weather.gov/fsd>

3. LOCAL PLANS & POLICIES

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

The City of Balaton has zoning codes, no building codes. We also have nuisance property codes/ordinances.

4. STAFF & PARTNERSHIPS

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

Our Fire Chief is the city's designated Emergency Manager as well as our Public Works Superintendent. We have a city engineer and public works director that addresses road maintenance issues for flooding.

5. PROGRAMS IN PLACE

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

Our city works with the county to participate in the National Weather Service's annual Severe Winter/Spring Weather Awareness Week by posting severe weather awareness information out on our city Facebook page. Each spring and fall we do outreach to homeowners to remind them to clear leafy and woody debris from roadside gutters to prevent clogging and over the road flooding in these areas. Each spring and winter we do outreach to encourage residents to maintain their sump pumps to reduce the chances of basement flooding. The city has a program to manage vegetation near powerlines to reduce risk of power outages during storms.

6. FUNDING & OTHER RESOURCES

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

The city of Balaton has made efforts in recent years to utilize grants and alternative funding to ensure the city's infrastructure is up to date and able to handle hazards as they come; ensuring backup generators power to major infrastructure.

PART C: LOCAL MITIGATION PROJECTS

1. LOCAL MITIGATION PROJECTS

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

Windstorms/Tornadoes - Work with the local mobile home park owner to construct a storm shelter or tornado safe room. We need to develop an evacuation and sheltering plan for our Assisted Living Facility.

Flooding – Work with the MN DNR to enroll in the NFIP and establish a floodplain ordinance. Implement new storm sewer upgrades as construction projects and purchase additional pumps in the event of flooding. Work with the city and county engineer on local flood reduction measures. Enforce the city's sump pump ordinance to minimize impacts to the city's stormwater system. We are continuously repairing storm drains to ensure they can handle significant rainfall amounts. Upgrading the storm sewer culvert under County Road 5 is a high priority.

Drought – Establish and enforce watering use restrictions when in periods of severe drought. We recently developed a new lawn irrigation ordinance.

Severe Winter / Summer Storms –Participate in the National Weather Service’s – Severe Weather Awareness Weeks. Portable generator needed for community center/city hall. Backup power to community center and city hall is on the project list.

Extreme Cold – Encourage residents to be prepared for periods of extreme cold and potential power outages. Balaton Fire Department Hall is our civil defense building. We need a portable generator for community center/city hall.

Wildfire: Work to increase public awareness of creating defensible space in woodland areas that are experiencing new development. Work with our fire department to address the need for water resources outside of the municipal water system. Work with county burn bans and other restricted times to burn.

2. GAPS OR DEFICIENCIES

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

The City of Balaton is a small and aging community with a population of 583. There is one city clerk, one deputy clerk, two public works employees and then the city council. There are many roles for each individual.

PART D: SURVEY PARTICIPANTS

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

Kimberly Wall, City Clerk
Alexus Birt, City Deputy Clerk
Lonnie Lambertus, Mayor
Josh Torgeson, Public Works Superintendent
Mitchell Hurst, Public Works
Kasey Holm, City Emergency Manager/Fire Chief
Greg Erickson, Scott Wood, Dylan Fricke, Curt Paradis – Council Members

Lyon County

LOCAL MITIGATION SURVEY

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

Name of Jurisdiction: CITY OF COTTONWOOD

Point of Contact:

Name: TEATHER BLISS
Job Title: CITY ADMINISTRATOR
Phone: 507-423-6488X3
Email: TEATHER@CITYOFCOTTONWOODMN.GOV

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. HAZARD IDENTIFICATION

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

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

2. RECENT HAZARD EVENTS

2019 - EXTREME RAIN EVENT IN MARCH LEADING TO ROAD COLLAPSE AND LIFT STATION FAILURE. TWO DAYS LATER AN ICE JAM RESULTED IN LARGE SCALE FLOODING THROUGHOUT THE SOUTHEAST SIDE OF TOWN. TRIGGERED A FEMA INCIDENT.

2019 – OIL PIPELINE TAMPERED (SHOT) THAT CROSSED OVER JUDICAL DITCH 10 RESULTING IN A HAZMAT EMERGENCY INVOLVING MN PCA, FEDERAL EPA, LOCAL FIRE & AMBULANCE, FEDERAL AND STATE AUTHORITIES, & MAGELLAN MIDSTREAM PARTNERS

2020 - COVID

2021-2022 DROUGHT YEAR. DID HAVE TO INACT WATER SUPPLY PLAN & WATERING RESTRICTIONS

2022 DERECHO EVENT IN MAY CAUSING CITY WIDE DAMAGE TO PUBLIC AND PRIVATE PROPERTY. TRIGGERED A FEMA EVENT.

3. LOCAL VULNERABILITIES

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

Natural Hazard (please list)	Vulnerability Assessment Describe <u>specific</u> community assets (infrastructure, systems, or populations) that are susceptible to damage or loss from hazard events.
All Hazards	We need to install generators at our City Hall and Community Center that serves as our local shelter if people are displaced from a severe storm event or extended power outage. We also have a large population of senior citizens that do not use cell phones to receive emergency notifications. Ways to educate the citizens of the community on the different hazards and how to better prepare their homes.
Flooding	We have sanitary inflow and infiltration issues in the City that, in large rain events, cause sanitary sewer back up in homes and out of manholes. This also results in the need for the city to perform emergency discharging out of lift stations to relieve the system of overflow. There are also storm sewers in town that need to be replaced due to under sizing or aging that flood streets during large rain events.
Winter Storms, Blizzards	A large portion of the electricity provided to the City by Xcel Energy consists of overhead power lines and electrical poles. Those overhead lines and power poles are prone to failure during blizzards and high winds that may bring down trees, branches, overhead power lines, and electrical poles.
Windstorms and Tornadoes	We have 1 mobile home park within the city that does not have a storm shelter and other homes in the city without shelters, leaving residents vulnerable to high wind and tornado events. The city has also experienced power outages from strong wind events that has brought trees and branches onto overhead power lines.
Extreme Cold	We have a population of senior citizens, low-income residents, and different language barriers that create a more vulnerable population during periods of extreme cold with power outages. In the past we have

	experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold.
Drought	We are currently entering a 4 th year of low moisture and anticipating drought conditions. The community is in a large farming region, the city has a large school with an extensive sprinkler system, and a golf course. The community could benefit from education on water management and smart watering practices.

4. REDUCTION IN VULNERABILITY

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

IN 2019 THE CITY WORKED ON GETTING RISERS PLACED ON ALL LIFT STATIONS IN THE COMMUNITY TO ENSURE THEY ARE PROTECTED FROM FLOODING. THE PUBLIC WORKS DEPARTMENT HAS BEEN WORKING ON REPLACING STORM SEWER INTAKES AND REPAIRING PORTIONS OF STORM SEWER THAT APPEAR TO HAVE COLLAPSED OR BLOCKAGE ISSUES. THE PUBLIC WORKS DEPARTMENT HAS ALSO BEEN ADDING RISERS AND SPECIAL SEALENTS IN SANITARY SEWER MANHOLES TO HELP WITH INFLOW & INFILTRATION DURING PERIODS OF FLOODING. THE CITY IS ALSO WORKING WITH ITS ENGINEERS ON A CITY-WIDE INFRASTRUCTURE PROJECT THAT WILL ADDRESS THE INFLOW AND INFILTRATION OF THE SANITARY SEWER AS WELL AS THE UNDERSIZED STORM SEWERS WITHIN THE COMMUNITY.

THE CITY WOULD ALSO LIKE TO WORK ON A CITY-WIDE EMERGENCY PLAN TO ADDRESS THE HAZARDS AND VULNERABILITIES OF THE COMMUNITY.

5. INCREASE IN VULNERABILITY

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

THE COMMUNITY HAS BEEN AND WILL CONTINUE TO BE IN A STATE OF GROWTH, IN LARGE PART BECAUSE OF THE SCHOOL DISTRICT WHICH IS ALSO IN A CONSTANT STATE OF GROWTH. THIS ADDS MORE CONNECTIONS ON TO THE WATER AND SEWER SYSTEM, AS WELL AS THE INCREASED COSTRUCTION OF SLAB ON GRADE HOMES LEAVING CITIZENS WITHOUT SHELTER DURING WINDSTORMS AND TORNADOES.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. PUBLIC OUTREACH

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

WE UTILIZE SOCIAL MEDIA AND THE CITY WEBSITE. WE ALSO UTILIZE THE COUNTY CODE RED EMERGENCY NOTIFICATION SYSTEM. WE RECENTLY ADDED A NEW ONLINE PAYMENT SYSTEM CALLED PAYA THAT ALLOWS THE CITY TO SEND EMAIL AND TEXT NOTIFICATIONS TO CITIZENS ABOUT IMPORTANT CITY EVENTS AND ALERTS. WE POST INFORMATION ON BILLBOARDS OUTSIDE OF THE CITY

OFFICE, WE PUT INFORMATION IN COUNCIL PACKETS, AND HAVE A CITY NEWSLETTER WHERE INFORMATION IS COMMUNICATED.

WE PROVIDE SEVERAL FREE MATERIALS TO NEW RESIDENTS AND ALL MEMBERS OF THE COMMUNITY INCLUDING AN EMERGENCY PREPAREDNESS GUIDE, 911 BOOKMARKS, KIDS GUIDES FOR EMERGENCIES, AND MORE.

2. EMERGENCY NOTIFICATION SYSTEM

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

YES, WE ENCOURAGE PEOPLE TO SIGN UP FOR CODE RED AND THE PAYA NOTIFICATION SYSTEM ON UTILITY BILLS, SOCIAL MEDIA, CITY WEBSITE, AND THE CITY NEWSLETTER.

3. LOCAL PLANS & POLICIES

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

THE CITY'S PLANNING AND ZONING COMMITTEE ENFORCES THE CITY ZONING REQUIREMENTS FOR DEVELOPMENTS, VARIANCES, AND SHORELAND ALTERATIONS. THE COMMITTEE ALSO ENSURES THAT IMPERVIOUS SURFACE LIMITS ARE BEING FOLLOWED SO THAT THE STORM SEWERS AND ROADS ARE NOT BEING OVERWHELMED BY RUN OFF. WE DO HAVE A 20-YEAR-OLD COMPREHENSIVE PLAN THAT IS IN NEED OF UPDATING THAT SHOWS FUTURE COMMUNITY GROWTH. WE HAVE A WATER SUPPLY PLAN THAT HELPS WITH THE MANAGEMENT OF OUR WATER SUPPLY AS WELL AS WATER CONSERVATION EFFORTS DURING DROUGHTS.

THE CITY RECENTLY ADOPTED THE MINNESOTA BASIC CODE OF ORDINANCES.

4. STAFF & PARTNERSHIPS

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

THE FIRE CHIEF HOLDS THE POSITION OF EMERGENCY MANAGEMENT COORDINATOR WHO WORKS CLOSELY WITH THE CITY ADMINISTRATOR AND COUNTY EMERGENCY MANAGER. MOST OF THE CITY STAFF AND EMERGENCY SERVICES IS NIMS AND AWAIR TRAINED. THE CITY COUNCIL INCLUDES A PUBLIC SAFETY COMMITTEE.

THE CITY IS WORKING WITH COUNTY, STATE, AND OTHER ENTITIES ON COTTONWOOD LAKE REHABILITATION THAT INCLUDES BANK STABILIZATION AND EROSION CONTROL.

5. PROGRAMS IN PLACE

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

THE CITY SPONSORS A TWO-DAY CLEAN-UP EVENT IN THE SPRING AND FALL. THE CITY PARTICIPATES IN SEVERE WEATHER AWARENESS WEEK, FIRE PREVENTION WEEK, AND EMS WEEK. THE CITY ALSO HAS AN INSPECTION CONTRACT IN PLACE WITH WEST CENTRAL COMMUNICATIONS TO ENSURE OUR EMERGENCY SIRENS ARE ALWAYS WORKING, INSPECTIONS ARE COMPLETED IN THE EARLY SPRING AND LATE FALL. THE CITY HAS A SUMP PUMP ORDINANCE AND PERMITTING PROCESS TO ENCOURAGE CITIZENS TO NOT OVERLOAD THE SANITARY SEWER WITH THEIR SUMP PUMP HOSES.

6. FUNDING & OTHER RESOURCES

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

THE CITY USES ITS OWN BUDGET TO ADDRESS MITIGATION PROJECTS. THE FIRE CHIEF IS PROACTIVE IN APPLYING FOR MN DNR GRANTS TO OBTAIN GENERATORS, PUMPS, ETC.

PART C: LOCAL MITIGATION PROJECTS

1. LOCAL MITIGATION PROJECTS

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

DROUGHT – EDUCATE CITIZENS ON WATER CONSERVATION AND SMART WATERING TECHNIQUES.

WINDSTORMS & TORNADOES – ADDITION OF GENERATORS AT THE COMMUNITY CENTER & CITY OFFICE FOR EMERGENCY SHELTERS. CONSTRUCTION OF A PUBLIC STORM SHELTER FOR THOSE WITHOUT A SAFE PLACE TO GO. INVESTMENTS OF EQUIPMENT THAT WILL THE CITY DEPARTMENTS BETTER SERVE THE COMMUNITY WITH CLEAN UP AND MITIGATION.

FLOODING – CONTINUE TO WORK WITH THE CITY ENGINEERS ON UPGRADING THE INFRASTRUCTURE. TAKE ON A STRICTER STANCE WHEN IT COMES TO SUMP PUMPS. LOOKING INTO MORE GREEN INFRASTRUCTURE OPTIONS ALONG THE COUNTY DITCH SYSTEM IN COTTONWOOD TO HELP CONTROL EROSION AND BANK DESTABILIZATION AS WELL AS UTILIZING IT FOR STORMWATER MANAGEMENT.

SEVERE STORMS – CONTINUE EDUCATING THE COMMUNITY ON BEING WEATHER AWARE AND HAVING EMERGENCY PREPAREDNESS PLANS. ENCOURAGING CITIZENS TO SIGN UP FOR THE CODERED EMERGENCY NOTIFICATION SYSTEM AND CITY PAYA NOTIFICATION SYSTEM. CONTINUE TO EXPAND AND PARTICIPATE IN SEWER WEATHER AWARENESS WEEK. START DISCUSSING OPTIONS WITH XCEL ENERGY ON CONVERTING OVERHEAD POWERLINES TO UNDERGROUND WHERE INFRASTRUCTURE PROJECTS TAKE PLACE SO TO KEEP COSTS DOWN.

EXTREME COLD – PROVIDE THE COMMUNITY WITH RESOURCES THAT WILL HELP WITH UTILITY BILLS. AS A CITY, WE TRY TO FOLLOW THE COLD WEATHER RULE WITH WATER SO THAT WE DO NOT RUN THE RISK OF FROZEN OR BROKEN PIPES.

2. GAPS OR DEFICIENCIES

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

NOT ALL CITIZENS ARE TECHNOLOGICALLY ADVANCED ENOUGH TO GET SIGNED UP FOR NOTIFICATION SYSTEMS OR ACCESS THE INTERNET TO SEE ONLINE INFORMATION. THERE IS SOME LANGUAGE BARRIERS THAT DO NOT ALLOW SOME CITIZENS TO BE ABLE TO RECEIVE SOME COMMUNICATIONS FROM THE CITY, WHICH IS ONE AREA THAT WOULD BE OF HIGH IMPORTANCE SO THAT WE CAN GET DOCUMENTS AND OTHER FORMS OF COMMUNICATIONS TRANSLATED.

PART D: SURVEY PARTICIPANTS

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

TEATHER BLISS, CITY ADMINISTRATOR
COTTONWOOD FIRE DEPARTMENT
COTTONWOOD RESIDENTS VIA ONLINE POLLING
LEEANNE BOEHNE, COTTONWOOD AMBULANCE DIRECTOR

Lyon County

LOCAL MITIGATION SURVEY

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

Name of Jurisdiction: CITY OF GARVIN

Point of Contact:

Name: Sandy Carlson
Job Title: City Clerk-Treasurer
Phone: 507-746-4459
Email: garvinmn@gmail.com

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. HAZARD IDENTIFICATION

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

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

2. RECENT HAZARD EVENTS

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

No storms with damages to report.

3. LOCAL VULNERABILITIES

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

Natural Hazard (please list)	Vulnerability Assessment Describe <u>specific</u> community assets (infrastructure, systems, or populations) that are susceptible to damage or loss from hazard events.
	No local vulnerabilities to report. We are a very small community with a population of 120.

4. REDUCTION IN VULNERABILITY

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

Nothing to report.

5. INCREASE IN VULNERABILITY

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

We have had no increase in vulnerability and no development.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. PUBLIC OUTREACH

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

We share information with residents at City Council meetings. We look to the county to do outreach.

2. EMERGENCY NOTIFICATION SYSTEM

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

We have not done this. We could provide occasional reminders at City Council meetings. We look to Lyon County to do outreach to residents to encourage them to sign up.

3. LOCAL PLANS & POLICIES

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

None to note.

4. STAFF & PARTNERSHIPS

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

City council and city clerk. We work with the county as needed.

5. PROGRAMS IN PLACE

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

None.

6. FUNDING & OTHER RESOURCES

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

We are a small city with very limited financial resources.

PART C: LOCAL MITIGATION PROJECTS

1. LOCAL MITIGATION PROJECTS

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

Nothing noted.

2. GAPS OR DEFICIENCIES

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

Nothing noted.

PART D: SURVEY PARTICIPANTS

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

Sandy Carlson, City Clerk

Lyon County

LOCAL MITIGATION SURVEY

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

Name of Jurisdiction: CITY OF GHENT

Point of Contact:

Name: Dawn Vlaminck
Job Title: Administrator/Clerk
Phone: 507-428-3214
Email: dawn@ghentmn.com

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. HAZARD IDENTIFICATION

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

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

2. RECENT HAZARD EVENTS

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

In May & August of 2022, The City of Ghent experienced 2 major windstorms which caused electrical outages, damage to structures and downed trees and branches throughout the city. The City does not

have a tornado shelter for those who are vulnerable to a tornado or wind event. Flood preparations all were necessary during this May event.

In December of 2020, The City of Ghent experienced a winter storm which stranded travelers and caused electrical outages. Ghent does not currently have a location with emergency backup generators to be used as a storm shelter. Generators are also needed to support lift stations during power outages.

In 2010, 2018, & 2019, The City of Ghent experienced a major flood events that required city staff and Ghent Fire Department to be mobilized. It was necessary to construct temporary levees, sandbag, and pump flood waters in order to prevent our sewer infrastructure from being inundated. 100% of our population would be affected if these preventative measures had not been taken.

3. LOCAL VULNERABILITIES

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

Natural Hazard (please list)	Vulnerability Assessment Describe <u>specific</u> community assets (infrastructure, systems, or populations) that are susceptible to damage or loss from hazard events.
Flooding	The City of Ghent has experienced increased flooding in past years. There is a need to construct a flood protection berm on the South edge of town to protect our Bluebird Addition and our lift station located there. We also need to construct a flood protection wall around our main lift station, or lift the entire site to above flood elevation, to protect our main lift station from inundation by flood waters. We have a temporary berm in place and sandbagging is necessary during each flood event.
All Hazards	The City of Ghent is also concerned about its lack of water storage. We contract with Lincoln-Pipestone rural water as our only water source. If a line is broken due to freezing conditions, line maintenance/repairs, if their system would be tampered with, etc., the city does not have a backup water source or any water storage. Water storage would also assist with fire protection services within the city. Providing us with enough water pressure to use our fire hydrants for effectively while fighting fire.
Tornado/ Wind Storm/Blizzard/Power outage	The City of Ghent does not have a tornado/storm shelter with backup generator to allow residents or travelers to shelter in place during a tornado/ wind storm/ blizzard. Our newly remodeled Fire Department Meeting room, located in the basement of the city hall, could be used to meet this need if a backup generator was added as well as shelter equipment.
Tornado/ Wind Storm/Blizzard/Power outage	The City of Ghent does not have a backup generator to run our lift stations during power outages.
Water Supply Contamination	The City of Ghent is also concerned about having water storage if something should happen to our water source such as a broken line, water supply contamination, etc. Water storage would also assist with fire protection services within the city.

All Hazards	The size of fire trucks keeps getting larger. We are outgrowing our current fire hall. It is necessary to store one of our trucks off site. We are looking to purchase the adjoining property and construct a new fire hall in the same location.
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4. REDUCTION IN VULNERABILITY

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

The City of Ghent recently improved the storm sewer drainage in the Bluebird Addition. As part of this improvement, a square culvert with stop blocks was installed to help keep flood waters out of the development during flood events. The stop blocks have taken the place of placing sandbags.

The City of Ghent is planning a city-wide sewer improvement project. This project hopes to address two issues: first, we plan to elevate our main lift station above floodplain levels to prevent future inundation of flood waters. Second, this project includes the replacement of all sewer lines in the city as well as relining our current sewer ponds and adding a third pond for additional storage. This will help with ground water protection by reducing our I & I considerably. The additional pond will be necessary when the current ponds no longer leak. This project will commence in 2025.

The City of Ghent has applied for a FEMA grant to purchase a backup generator for our lift stations. It has not been successful to date.

The City of Ghent has applied for PFA funding to construct a 50,000 – 100,000 gallon water tower. We hope to receive this funding and start construction in 2027.

The City of Ghent has done research to investigate upstream storage sites that could lower our floodplain and assist in slowing down flood waters during flood events.

5. INCREASE IN VULNERABILITY

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

The threat of flooding is our primary concern. In 2001, the Bluebird Addition was added to the city. 55 new homes were constructed as well as a second lift station to service these homes. The City has constructed an emergency/temporary flood berm along the south edge of our walking trail to protect these homes from flood waters. A permanent flood protection berm is necessary to protect these homes and this lift station during flood events. If flood waters were to reach this lift station, the entire city's sewer system would be overcome and affect all residents.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. PUBLIC OUTREACH

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

The City of Ghent has a city website, Facebook page, and a public alert system that can reach all water/sewer/garbage customers by text/phone/email.

2. EMERGENCY NOTIFICATION SYSTEM

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

We have encouraged this in the past, but have not made efforts recently. We would be willing to promote the county notification system.

3. LOCAL PLANS & POLICIES

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

The City of Ghent has adopted and enforces the MN State Building Code and City Zoning Ordinances that include a Floodplain ordinance. We are in the process of developing a comprehensive plan for growth.

4. STAFF & PARTNERSHIPS

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

Matt Norby is the City of Ghent emergency manager. He is supported by our entire Fire Department, Jesse Christianson our Public Works Director, and Dawn Vlaminc, City Administrator. We work together under the direction of our Mayor and City council to address public safety issues in our city. We are currently working with SWCD staff toward a flood protection berm. We are a member of MnWARN.

5. PROGRAMS IN PLACE

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

None noted.

6. FUNDING & OTHER RESOURCES

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

The City of Ghent has applied for a FEMA grant to purchase a backup generator for our lift stations. It has not been successful to date.

PART C: LOCAL MITIGATION PROJECTS

1. LOCAL MITIGATION PROJECTS

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

A permanent flood protection berm is necessary to protect the Bluebird Addition homes and this lift station during flood events. If flood waters were to reach this lift station, the entire city's sewer system would be overcome and affect all residents.

The purchase of a backup generator for our lift stations is necessary.

The construction of water storage.

The purchase of a backup generator for the city hall/ fire department to establish a tornado/storm shelter as well as a working emergency management site.

The City of Ghent has applied for a FEMA grant to purchase a backup generator for our lift stations. It has not been successful to date.

The City of Ghent is planning a city-wide sewer improvement project. This project hopes to address two issues: first, we plan to elevate our main lift station above floodplain levels to prevent future inundation of flood waters. Second, this project includes the replacement of all sewer lines in the city as well as relining our current sewer ponds and adding a third pond for additional storage. This will help with ground water protection by reducing our I & I considerably. The additional pond will be necessary when the current ponds no longer leak. This project will commence in 2025.

2. GAPS OR DEFICIENCIES

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

Being a small city with limited funding has slowed down all of our mitigation efforts.

PART D: SURVEY PARTICIPANTS

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

Dawn Vlaminck, City Administrator
Jesse Christianson, Public Works Director
Matt Norby, Emergency Manager

Lyon County

LOCAL MITIGATION SURVEY

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

Name of Jurisdiction: CITY OF LYND

Point of Contact:

Name: Justin Guggisberg
Job Title: Mayor
Phone: 507-430-3764
Email: Justin.Guggisberg2020@gmail.com

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. HAZARD IDENTIFICATION

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

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

2. RECENT HAZARD EVENTS

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

Spring of 2017, the City of Lynd experienced major flooding with damage to many residents' homes and basements. Also, there was significant load on the lift station near North River St. In May 2021 we experienced a major storm event with straight line winds that caused down trees, street closures major

damage to city buildings and residents' homes. In June 2022 we had a second storm with straight line winds, hail and heavy rain.

3. LOCAL VULNERABILITIES

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

Natural Hazard	Vulnerability Assessment Describe <u>specific</u> community assets (infrastructure, systems, or populations) that are susceptible to damage or loss from hazard events.
Hazard/Power	We need to obtain a portable generator for our City Hall and Community Center that serves as our local shelter if people are displaced from a severe storm event or extended power outage. We also have a large population of senior citizens that do not use cell phones to receive emergency notifications.
Flooding	We have a city lift station, North River St., that be an area of concern with flooding during high rain events. Additionally, many residents live along the river bottom and could be susceptible to damage and major erosion issues, if the waters rise significantly.
Ice Storms, Blizzards	More than half of the city's municipal electrical service consists of overhead power lines and electrical poles. Those overhead lines and power poles are prone to failure in ice storms and blizzards with heavy snowfall and high winds that may bring down trees and branches.
Windstorms and Tornadoes	We have 1 mobile home park within the city that does have a storm shelter, however it is not large enough to accommodate the number of residents that might need it. These residents are vulnerable to high wind and tornado events. Our municipal fire department does not have back up power to their facility and in the event of power loss, significant impact to emergency response is likely.
Extreme Cold	We have a high population of senior citizens and low-income residents who are more vulnerable during periods of extreme cold with power outages. In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold. The city has experienced damages to roads from spring frost heaves, frozen culverts that cause localized flooding.
Extreme Heat	We have a high population of senior citizens and low-income residents who are more vulnerable during periods of extreme heat with power outages. We routinely see a need to water restrictions as summer drought leads to lack of abundance.
Wildfire	We are located in a valley with limited roads to exit town, located in and near Camden State Park. If the right/wrong conditions arose and a wildfire started there would be a high risk to the residents of Lynd and their property.
Railroad	There is a busy railroad system that passes through town regularly. This could be a potential hazard if a derailment occurred carrying significant chemicals. It is important to note that the railroad passes through Camden State Park with very hilly terrain and winding tracks.

4. REDUCTION IN VULNERABILITY

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

There was an effort to reinforce the city buildings that were damaged in the straight-line winds in 2021 which should be more effective in the event of another storm. An additional weather alert siren has been installed on the east end of town in the Affinity hills section to ensure notification of severe weather is properly announced. Backup power has been installed in both lift stations and the community center and firehall are next on the project list for backup power. In 2023 the city of Lynd installed back up power generator for lift stations and added a weather siren for Affinity Hills.

5. INCREASE IN VULNERABILITY

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

The east part of town, Affinity Hills and the golf course were annexed into the city less than twenty years ago and there is room for many more houses to be built. This is a flat plain area of town above the valley line overlooking the river valley. This development does pose an increase vulnerability for severe weather and storms. New home construction has added to the strain on our lift stations and pond system. Entire system is more vulnerable during heavy rain seasons.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. PUBLIC OUTREACH

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

We use a city website to distribute information along with a school circular and the city office bulletin board. If other information is needed to be handed out in a timely manner, we use the US Postal system and do a bulk mailing.

2. EMERGENCY NOTIFICATION SYSTEM

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

The city of Lynd is a member of the MNWARN system since 2017. The Fire department keeps people training on storm watching and actively informs residents to use the National Weather Service website out of Sioux Falls, SD. <https://www.weather.gov/fsd/>

3. LOCAL PLANS & POLICIES

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

The city of Lynd enforces MN State Building Code and utilizes local County building inspectors as needed. We have a comprehensive plan for steady state growth and development, currently.

4. STAFF & PARTNERSHIPS

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

The Fire Chief along with the Mayor work together to ensure Emergency Management of the town is carefully planned and prepared for. The city of Lynd utilizes an engineering firm to ensure plans and progress for roads and waterways are safe and secure for public use. We actively work with our county emergency manager to ensure our city is prepared for future hazards and emergencies.

5. PROGRAMS IN PLACE

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

City of Lynd Fire Department participate in the National Weather Service, severe weather training and stay up to date on awareness and storm watching.

6. FUNDING & OTHER RESOURCES

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

The city of Lynd has made great strides in recent years to utilize grants and alternate funding to ensure the city infrastructure is up to date and ready to handle hazards as they come. The city has worked with FEMA in the past to gain assistance in hardening structures for future bad weather. Lastly, ensuring backup generator power to major infrastructure has been the focus of our prevention.

PART C: LOCAL MITIGATION PROJECTS

1. LOCAL MITIGATION PROJECTS

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

Windstorms/Tornadoes – The city could use an upgrade to our current siren/warning system. We work with the local sheriff's department to keep up to date.

Flooding – We can work with MN DNR to ensure we are up to date on our flood plain ordinances. We are currently seeking an upgrade to two of our storm drains to ensure they can handle large amounts of rain fall.

Drought – Establishing backup generator power, to the community center and fire hall would ensure emergency response times do not change and offer a safe place for residents to go in case of an emergency or disaster.

Wildfire – Working with local DNR and State Park officials to inform residents of burn bans and other restricted times to have a fire.

Railroad – Working with BNSF’s online training program to help local fire departments gain knowledge on train derailment issues and how to assist in hazmat mitigation.

2. GAPS OR DEFICIENCIES

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

The city of Lynd is small with a population under 500. There is one city clerk, one public works department employee and then the city council. We are an aging community with many people in more than one significant role for the town.

PART D: SURVEY PARTICIPANTS

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

Dillon Schultz, Public Works Director/Fire Chief
Sue Paradis, City Clerk
Justin Guggisberg, Mayor/Fire Department

Lyon County

LOCAL MITIGATION SURVEY

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

Name of Jurisdiction: CITY OF MARSHALL

Point of Contact:

Name: James Marshall
Job Title: Director of Public Safety
Phone: (507) 929-6300
Email: jim.marshall@ci.marshall.mn.us

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. HAZARD IDENTIFICATION

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

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

2. RECENT HAZARD EVENTS

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

In March 2019 the City of Marshall experienced a major water event that was caused by rain and quick thaw of snow pack within our area which created record water levels in the Redwood River. Ice jams within the Redwood River causing backup was the major concern during the thaw period. High moisture

content of the snow and added rains caused street flooding and basement flooding for some residential properties. The fixed base weir located at Victory Park began to overflow as designed. A local Declaration of a State of Emergency was declared on March 24th, 2019.

The City of Marshall has also had other high wind events that have resulted in damage to trees, vehicles and homes. In May 2023 a storm classified as a “derecho” moved through Marshall causing minor damage.

3. LOCAL VULNERABILITIES

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

Natural Hazard (please list)	Vulnerability Assessment Describe <u>specific</u> community assets (infrastructure, systems, or populations) that are susceptible to damage or loss from hazard events.
All Hazards	We need to obtain a portable generator for our Emergency Operations Center that operates the entire facility (MERIT Center). We need to continue to encourage citizens to monitor pending weather conditions that have been identified as a threat to our community
Flooding	The major concern for the City of Marshall is that the levee or weir is not compromised. During a significant flooding event, monitoring and maintenance of the river embankments and weir is important. The wastewater treatment plant monitors waterflow rates through their system to maintain manageable levels to prevent water backup in residential properties. The public works department maintains the curb/catch basins to ensure water flows freely in the storm water system.
Ice Storms, Blizzards	The City of Marshall attempts to keep roadways open and safe to maneuver on during ice events. Much of the city’s municipal electrical service is underground and poses little risk. Wind, snow and ice can bring down trees and branches during this time.
Windstorms and Tornadoes	The City of Marshall has 1 mobile home park within the city that has a storm shelter. Providing the community with information through social media, radio communication and siren activation is important.
Power Outages	The prediction of power outages “black-outs” is a growing concern and more probable as we rely on alternative forms of energy. Hospitals and medical care facilities can be impacted if not prepared. Traffic signals, sump pumps and business or homes that require refrigeration and power may need alternative plans. Communication from utility companies is critical.

4. REDUCTION IN VULNERABILITY

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

In 1997, the City of Marshall began removing sediment from the diversion channel. The diversion channel and Redwood River underwent major upstream and downstream improvements that were completed in 2000. Since those improvements were made, the unseasonable high amounts of moisture

during certain years have remained within the banks through the City of Marshall. Engineering and Public Works continues to make improvements to the storm sewer and catch basins. Our municipal utility company has worked to convert nearly all overhead powerlines to underground.

5. INCREASE IN VULNERABILITY

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

In the 1990s the last segment of the federal flood control project (FFCP) was constructed in Marshall, these included earthen levees and Redwood River Diversion channel. The FFCP around the city greatly reduced the potential from the flooding of the Redwood River. The Federal Flood Control project was designed to be a 115-year storm event back in 1998 (or so), and the rainfall intensity and duration information has increased significantly since that time, and it does not provide that level of protection any longer. Such a large portion of Marshall is located in an area that receives protection from our flood control project that it will always remain a large vulnerability. The city is also studying the storm water in the community and looking for opportunities to improve our collection and pond system to reduce the localized flooding in the community.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. PUBLIC OUTREACH

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

The City of Marshall will post information on our city website and Facebook page. We release short videos on social media providing information to our community. Local area radio shows and group presentations are used to educate our community on topics related to public safety and promote the use of Code Red Emergency Notification System.

2. EMERGENCY NOTIFICATION SYSTEM

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

Yes. We have a place on our city website with a link to the sign-up page. During Weather Awareness Week, we promote the Code Red Alert System and encourage sign-up.

3. LOCAL PLANS & POLICIES

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

The city's Community Planning department enforces the MN State Building Code and the City Code zoning requirements for new development. The city also has a 5-year capital Improvement Program (CIP) to identify infrastructure that needs maintenance, updating, reconstruction and proactively

completes studies and reports to identify additional new improvement projects for the communities. These projects include storm water projects to improve conveyance and pond construction to minimize localized flooding from storm events.

4. STAFF & PARTNERSHIPS

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

The Director of Public Safety 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 power outages. We are a member of MnWARN.

5. PROGRAMS IN PLACE

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

The City of Marshall promotes the National Weather Service's annual Severe Winter/Spring Weather Awareness Week by posting severe weather awareness information out on our city Facebook page. Our local school practices tornado drills on an annual basis. Each spring and winter we do outreach to encourage residents to maintain their sump pumps and discharge them into the storm water basins to reduce the chances of basement flooding.

6. FUNDING & OTHER RESOURCES

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

The city primarily used its own budget (storm water fund) to address mitigation projects like storm sewer replacement during reconstruction projects and larger projects like pond and swale construction. The city will request grant funding to construct mitigation projects if they qualify. The city routinely works with consultants to assess where our system needs improvement.

PART C: LOCAL MITIGATION PROJECTS

1. LOCAL MITIGATION PROJECTS

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

Windstorms/Tornadoes – The City of Marshall continues to work with Front-Line Warning System to ensure our siren warning system (12 sirens) are operating at high level. The city has focused on the capabilities of our Emergency Operations Center (MERIT Center) and we use facility to monitor pending weather concerns.

Flooding – Implement new storm sewer upgrades as construction projects and purchase additional pumps in the event of flooding. Work with the city engineers on local flood reduction measures. Enforce the city’s sump pump ordinance to minimize impacts to the city’s stormwater system.

Severe Winter / Summer Storms – Post information on the city’s website to encourage residents to sign up for the Code Red Emergency Notification System. Participate in the National Weather Service’s – Severe Weather Awareness Weeks.

Extreme Cold – Encourage residents to be prepared for periods of extreme cold and potential power outages. Ensure emergency crews are able to respond to 911 calls and roads leading to the hospital are passable.

Power Outage – The city continues to work close with municipal utility company to develop plan on Manual Load Shedding Stages during power outage conditions.

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 Code Red Emergency notification system. Securing available funding to continue to make improvements, maintenance to the Redwood River and the Channel Parkway Diversion Channel to ensure water flows freely as designed.

PART D: SURVEY PARTICIPANTS

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

James Marshall, Director of Public Safety
Eric R Hanson, Assistant City Engineer

Lyon County

LOCAL MITIGATION SURVEY

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

Name of Jurisdiction: CITY OF MINNEOTA

Point of Contact:

Name: Shirley Teigland
Job Title: City Administrator
Phone: (507) 872-6144
Email: shirley.teigland@ci.minneota.mn.us

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. HAZARD IDENTIFICATION

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

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

2. RECENT HAZARD EVENTS

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

In March/April of 2019, the City of Minneota experienced a severe winter storm, straight-line winds, and flooding. There was damage to many homes, businesses, and City Infrastructure – especially the streets, which experienced many more potholes than would be typical. In May 2022 Minneota experienced a

major storm event with straight-line winds that caused downed trees, street closures, and major damage to various buildings and homes.

3. LOCAL VULNERABILITIES

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

Natural Hazard (please list)	Vulnerability Assessment Describe <u>specific</u> community assets (infrastructure, systems, or populations) that are susceptible to damage or loss from hazard events.
All Hazards	
Flooding	The City's Riverside Park, including the picnic shelter and camping spots are prone to flooding. They have been damaged during past flood events and the riverbank has also experienced significant erosion in this area during flood events. There are a small number of homes along the south side of E. Lyon Street that can experience flooding due to an existing drainageway that is located behind these properties and localized flooding can also occur in various parts of Minneota during large rain events and has caused damage.
Ice Storms, Blizzards	There are numerous overhead power lines in Minneota which are owned by Ottertail Power Co. Ice storms have caused power outages in the past due to damaged power lines and poles. Some of the power outages have been caused by trees and branches being blown into the electric system infrastructure.
Windstorms and Tornadoes	The City has 1 mobile home park and camp sites at Riverside Park which are vulnerable to windstorms and tornadoes. The Riverside Park campground does not have a storm shelter.
Extreme Cold	The City has experienced freezing water service lines during periods of extreme cold weather and the City has purchased equipment used to thaw frozen water lines. The City has also experienced excessive damage to roads (potholes, heaving, cracking, etc.) during extreme cold weather. As in other cities, senior citizens and low-income residents remain the most vulnerable during periods of extreme cold weather.
Dam/Levee Failure	The City maintains a levee system that protects a large portion of the west side of the City from flood impacts. Damage or failure of the levee system would greatly increase the probability of flooding for many houses and properties in Minneota.

4. REDUCTION IN VULNERABILITY

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

The City has completed various utility and street reconstruction projects over the past 25 years. These projects improved drainage systems, which reduced localized flooding issues and eliminated various interconnections between the drainage system and sanitary sewer collection system. Completion of these projects has reduced the inflow/infiltration in the system during large rain events and flooding.

This has also reduced unnecessary wear on the lift stations and wastewater treatment facility. All lift stations in town had a backup power generator installed. Ottertail Power company is also working to replace aged power poles.

5. INCREASE IN VULNERABILITY

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

The City constructed a new residential development 5 years ago and there have been 2 new homes constructed within the development. One of the homes was built slab-on grade and because of this, the residents do not have a basement for safety during high wind or tornado events. When/if slab-on grade homes are built, the owners are encouraged to allow for interior shelter.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. PUBLIC OUTREACH

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

The City posts information on the City's website and Facebook page. We also use the Nixle notification system to send out messages, considerable information is posted on the City's digital sign, as needed, on bulletin boards at the Senior Center, Library, Post Office and front window of City Hall. Announcements are also published in the local newspaper, the Minneota Mascot.

2. EMERGENCY NOTIFICATION SYSTEM

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

The City does not currently post information on the county's emergency notification system sign-ups but we would be able to place a link on the City's website and/or post flyers on the City's digital sign and other various locations around town.

3. LOCAL PLANS & POLICIES

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

The City enforces the MN State Building Code and the City's Code with zoning requirements for new development. The City works with the Maybe Estates Mobile Home Park on emergency evacuation and sheltering of residents and recently approved the Park's Severe Weather Plan.

4. STAFF & PARTNERSHIPS

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

The City reviewed, updated and approved their Emergency Operations Plan in 2023. The City's Emergency Director and Fire Chief are the designated Emergency Managers. The City is a member of MnWARN. Our City Engineer, DGR and City public works director address road maintenance, culvert and flooding issues, utility infrastructure, drainage issues and riverbank stabilization. The City has replaced all warning sirens in the past 3 years.

5. PROGRAMS IN PLACE

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

City public works staff remove debris and vegetation from gutters and stormwater drains to prevent clogging and over the road flooding. Ottertail Power trims/removes trees near powerlines. City Code and new Tree Policy regulates the type and placement of trees that can be planted to avoid issues with powerlines. Warning sirens are tested monthly and the public and catholic schools practice tornado drills annually. The City follows a regular routine maintenance plan for all city pipes and uses a sewer jet/vac truck to keep infrastructure pipes clean and clear of blockages that can cause backups and subsequent damage to buildings and residences. Fire hydrants are also flushed and tested on a regular basis.

6. FUNDING & OTHER RESOURCES

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

The City has passed a local floodplain ordinance. The City has partnered with Yellow Medicine River Watershed District in the past to mitigate drainage, culvert and river stabilization issues. The City primarily uses its own budget and staff to clean drainage ditches and clear debris from the river in an effort to keep water moving through all channels. The City has opened discussions with Ottertail Power Co. to convert powerlines to underground but the power company is not open to such a project at this time.

PART C: LOCAL MITIGATION PROJECTS

1. LOCAL MITIGATION PROJECTS

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

Windstorms/Tornadoes – Construct a storm shelter for campers in Riverside Park.

Flooding – The City has a current floodplain ordinance in place. The City enforces its sump pump ordinance to minimize impacts to the City's stormwater system. The City's CFP is updated annually, and upgrades of sewer, water, stormwater, and streets are planned as funds are available. The City will

begin Phase 1 of a multi-million dollar project for portions of E. Lyon, Grant and Wilson Street and adjacent areas to replace aging infrastructure and improvements to the City's sewer, storm drainage, drinking water, street systems along with updates to the City's Wastewater Treatment Facility and Lift Stations.

Drought – The City has established and enforces watering use restrictions when in periods of severe drought.

Severe Winter / Summer Storms – The City has purchased multiple generators for the lift stations, fire hall and city hall to ensure that there is power if winter/summer storms damage power lines. The City is considering the upgrade of bathrooms in Riverside Park while adding a storm shelter for campers.

Extreme Cold – The City publishes flyers encouraging residents to be prepared for periods of extreme cold and potential power outages. The City also notifies and educates residents of measures they can take to avoid freezing pipes during sub-zero weather. The City does have equipment to unfreeze frozen pipes and takes action as needed to mitigate issues that may arise in City pipes.

Wildfire: The City has 2 working wells available for use by the Fire Department for water outside the municipal water system.

2. GAPS OR DEFICIENCIES

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

The City remains vigilant and pro-active in addressing gaps or deficiencies to implementing local mitigation measures as staff and/or Engineer Consultants become aware of potential issues.

PART D: SURVEY PARTICIPANTS

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

Shirley Teigland, City Administrator
Tim DeVlaeminck, Water/Wastewater Supervisor
DGR Engineering, City Engineering Consultant

Lyon County

LOCAL MITIGATION SURVEY

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

Name of Jurisdiction: CITY OF RUSSELL

Point of Contact:

Name: Laurie Millner
Job Title: City Clerk / Treasurer
Phone: 507-823-4366
Email: ClerkCityofRussell@gmail.com

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. HAZARD IDENTIFICATION

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

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

2. RECENT HAZARD EVENTS

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

Approximately 5 years ago there was flooding in Russell. It caused street damage, storm sewer backup, river bank erosion and damage to trees and picnic tables etc.

3. LOCAL VULNERABILITIES

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

Natural Hazard (please list)	Vulnerability Assessment Describe <u>specific</u> community assets (infrastructure, systems, or populations) that are susceptible to damage or loss from hazard events.
All hazards	The city needs to put a plan in place in the event that we need to use the fire hall or community center as a shelter due to a severe storm. Possibly consider a generator, cots or blankets.

4. REDUCTION IN VULNERABILITY

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

We are starting an infrastructure project that will improve our streets as well as doing work on the lift stations.

5. INCREASE IN VULNERABILITY

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

We have had not had any increase in vulnerability to note.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. PUBLIC OUTREACH

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

We post notices on Facebook as well as sending broadcast messages via, text, email or voice alert. We also have a community newsletter where we can post information for our citizens.

2. EMERGENCY NOTIFICATION SYSTEM

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

We periodically remind our residents that we have the public alert system and if they aren't signed up to please contact the city office to get added to the list.

3. LOCAL PLANS & POLICIES

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

None to note

4. STAFF & PARTNERSHIPS

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

We have a city clerk and city council. We work with the county as needed.

5. PROGRAMS IN PLACE

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

We post information on the city Facebook page and in our city newsletter.

6. FUNDING & OTHER RESOURCES

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

City funding. We also work with the county as needed.

PART C: LOCAL MITIGATION PROJECTS

1. LOCAL MITIGATION PROJECTS

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

All Hazards - The City needs to put a plan in place in the event that we need to use the fire hall or community center as a shelter due to a severe storm.

Flooding - We are starting an infrastructure project that will improve our streets as well as doing work on the lift stations.

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 staff and financial resources.

PART D: SURVEY PARTICIPANTS

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

Laurie Millner, City Clerk

Hilary Buchert, Mayor

Jason Alberts, Public Works Director

Lyon County

LOCAL MITIGATION SURVEY

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

Name of Jurisdiction: CITY OF TAUNTON

Point of Contact:

Name: Rebecca Jerzak
Job Title: City Clerk
Phone: 507/872/5950 Office
Email: cityoftaunton@centurytel.net

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. HAZARD IDENTIFICATION

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

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

2. RECENT HAZARD EVENTS

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

In the spring of 2018 with a harsh winter and lots of spring rain we had some damage to some of our city streets. We also have had a couple wind storms that have taken down some trees.

3. LOCAL VULNERABILITIES

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

Natural Hazard (please list)	Vulnerability Assessment Describe <u>specific</u> community assets (infrastructure, systems, or populations) that are susceptible to damage or loss from hazard events.
All Hazards	The city has experienced damages to streets from spring frost heaves, and lots of spring rain.

4. REDUCTION IN VULNERABILITY

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

The city purchased a portable generator to use if needed.

5. INCREASE IN VULNERABILITY

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

I don't feel that we have changes. Our lift station is older but we maintain it and make sure that everything is running smoothly.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. PUBLIC OUTREACH

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

We post notices at the State Bank of Taunton, and the post office and if need be we do a bulk mailing to all our residents.

2. EMERGENCY NOTIFICATION SYSTEM

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

I am unsure of this answer. Again we could post at the bank, and post office and do a mailing.

3. LOCAL PLANS & POLICIES

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

The city of Taunton enforces MN State Building Code and utilizes local county building inspectors as needed.

4. STAFF & PARTNERSHIPS

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

Our Civil Defense Director for the city is our first responder's director. Our Civil Defense Director will work with the city council, mayor, fire chief, and city clerk for planning.

5. PROGRAMS IN PLACE

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

The City of Taunton participates in the National Weather Service, severe weather training and stays up to date on awareness and storm watching.

6. FUNDING & OTHER RESOURCES

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

The city primarily uses its own budget.

PART C: LOCAL MITIGATION PROJECTS

1. LOCAL MITIGATION PROJECTS

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

I am unsure of an answer for this.

2. GAPS OR DEFICIENCIES

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

I am unsure of an answer for this.

PART D: SURVEY PARTICIPANTS

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

Rebecca Jerzak, City Clerk

Mike Breyfogle, Mayor

Bob Polejewski, City Councilor/ Fire Chief

Lyon County

LOCAL MITIGATION SURVEY

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

Name of Jurisdiction: CITY OF TRACY

Point of Contact:

Name: Jeff Carpenter
Job Title: City Administrator
Phone: 507-629-5528
Email: jcarpenter@tracymn.org

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

1. HAZARD IDENTIFICATION

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

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

2. RECENT HAZARD EVENTS

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

In July, 2018 we experienced a major rain event that caused street flooding, damage to culverts, and basement flooding/ structural damage for many residential properties. We received 10 inches of rain in

a matter of a few hours and our infrastructure could not handle the pressure. The sanitary sewer took the path of least resistance into people's homes.

3. LOCAL VULNERABILITIES

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

Natural Hazard (please list)	Vulnerability Assessment Describe <u>specific</u> community assets (infrastructure, systems, or populations) that are susceptible to damage or loss from hazard events.
Flooding	Our sanitary sewer system has a large amount of I&I, that poses a repeated threat to residents on the Northeast area of town during heavy rainfall.
Ice Storms, Blizzards	Much of the city's municipal electrical service consists of overhead power lines and electrical poles. Those overhead lines and power poles are prone to failure in ice storms and blizzards with heavy snowfall and high winds that may bring down trees and branches.
Windstorms and Tornadoes	We have 1 mobile home park within the city that does not have a storm shelter and residents are vulnerable to high wind and tornado events. Our municipal campground is active during summer and fall months with RVs and campers and does not have a storm shelter. We have experienced power outages from strong wind events that brought down power lines.
Extreme Cold	We have a high population of senior citizens and also low-income residents who are more vulnerable during periods of extreme cold with power outages. In the past we have experienced frozen water services and some residential homes experienced burst pipes from extended extreme cold.
Extreme Heat	We have a high population of senior citizens and also low-income residents who are more vulnerable during periods of extreme heat with power outages. In past we have experienced elderly needing assistance with overheating and issues related to not having power for their home oxygen systems

4. REDUCTION IN VULNERABILITY

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

In 2016, we started a major Infrastructure reconstruction project to start with the ongoing I&I problem with the sanitary sewer and under-capacity of the storm sewer system. The first phases of this project were finished at the end of 2023 with about 60 blocks of reconstruct completed. After the flood of 2018, the city obtained a 2200 gpm pto pump and a 4-inch diesel transfer pump to respond as initial response to future flooding emergencies. Our city has done multiple phases of storm sewer upgrades since 2018. We have also worked with our mobile home park, municipal campground, and the Tracy Police Department to establish notification of inclement weather and opening of our VMC building for shelter.

The city has DNR Pumps to assist with flooding overflow and has increased the number of pumps the city has. The city has also recognized certain areas that need to be monitored closely during rain events in order to stay ahead of potential flooding.

5. INCREASE IN VULNERABILITY

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

There haven't been any major changes that would have increased our vulnerability.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. PUBLIC OUTREACH

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

We post information on our city website, Tracy Channel, Facebook page, local radio, CodeRed, and Nixle. We also post information on bulletin boards at the City Hall. We also have our own local newspaper. We make announcements at City Council meetings and post flyers on our community bulletin board outside of City Hall. The City of Tracy and the Tracy Police Department work together to get information out to the public.

2. EMERGENCY NOTIFICATION SYSTEM

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

Yes. We have a place on the police tab of our city website and on the Tracy Channel. We also publish the sign-up information in the local newspaper a couple times a year. When it comes to storms we use Nixle, Facebook, Code Red, outdoor warning systems, and any means necessary to alert the public.

3. LOCAL PLANS & POLICIES

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

The city's planning and zoning department enforces the MN State Building Code and the City Code zoning requirements for new development. We have a 20-year Comprehensive Plan that is designed to plan for the future physical growth of the city and appropriate land uses.

4. STAFF & PARTNERSHIPS

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

Our Police Chief is the city's designated Emergency Manager. We have a contracted city engineer and a public works director that address road maintenance issues for flooding (culverts, repetitive flooding). We are a member of MnWARN.

5. PROGRAMS IN PLACE

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

Our city works with the county to participate in the National Weather Service's annual Severe Winter/Spring Weather Awareness Week by posting severe weather awareness information out on our city Facebook page. 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. We have 4 functioning outdoor sirens in town. 2 are battery backup. We do Facebook and local paper information adds to keep people educated about upcoming hazards.

6. FUNDING & OTHER RESOURCES

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

The city uses its own budget, and partnerships with MN PFA and USDA to address mitigation projects.

PART C: LOCAL MITIGATION PROJECTS

1. LOCAL MITIGATION PROJECTS

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

Windstorms/Tornadoes – Our City warning system is operational with adequate coverage, along with Nixle, Facebook, and notification in the campground and trailer park is done via emergency responders.

Flooding – Implement storm sewer upgrades as construction projects are completed and purchase additional pumps in the event of flooding. Enforcement of the City's sump pump ordinance.

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

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

Extreme Cold – Encourage residents to be prepared for periods of extreme cold and potential power outages. Use our city website and Facebook to notify residents to avoid freezing pipes during sub-zero weather. Work with the local nursing home and hospital to be prepared with emergency plans for extended power outages. This city offers the City Hall/VMC building for a warm shelter.

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

PART D: SURVEY PARTICIPANTS

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

Jeff Carpenter, City Administrator
Shane Daniels, Public Works Director
Jason Lichty, Emergency Manager, Police Chief
Dale Johnson III, Fire Chief

Appendix D – Plans & Programs in Place

Lyon County

HMP Plans & Programs in Place Form

EMERGENCY PLANNING CAPABILITIES	Yes/No	Comments
Emergency Mass Notification System	Yes	CodeRED
Outdoor Warning Sirens (#'s and location)	Yes	Balaton – 1 Cottonwood – 5 Florence – 0 Garvin – 2 Ghent – 1 Lynd – 3 Marshall – 12 Minneota – 3 Russell – 1 Taunton – 1 Tracy – 2 wired to back up battery
Emergency Operations Plan (EOP)	Yes	County EOP is typically updated annually
Mass Care Sheltering Plan / List of Shelter Facilities	Yes	Addressed in EOP and in coordination with local jurisdictions
Tornado Safe Rooms / Storm Shelters	No	Addressed in coordination with schools & local jurisdictions with local vulnerabilities
NWS Weather Ready Nation / StormReady Certification	Yes	Lyon County Emergency Management is a designated WRN Ambassador. Lyon County is also registered as a StormReady Community by the NWS.
Coordination with Schools	Yes	Tornado Drills, other trainings
Coordination with Neighboring County/Tribal Jurisdictions	Yes	Annual regional planning and training; statewide AMEM conference
Coordination with Local / Regional Agencies involved in mitigation	Yes	SWCD, MN DNR, MnDOT, Rural and

		Municipal Electric Cooperatives, Watershed Districts
Coordination with organizations or agencies addressing disaster related issues and vulnerable populations, emergency preparedness, access and functional needs populations	Yes	Public Health, American Red Cross, Salvation Army
Hazard data and information	Yes	Damage information is kept on file from past storm events and disaster declarations
<i>Other (please describe)</i>	Yes	Southwest Health & Human Services has preparedness plans in place

PLANNING & REGULATORY CAPABILITIES	Yes/No	Comments
Comprehensive/Land Use Plan	Yes	Lyon County Comprehensive Plan, July 2002
Capital Improvements Plan	No	Capital improvements integrated into other plans
Economic Development Plan	No	
Climate Adaptation Plan	No	
Continuity of Operations Plan (COOP)	Yes	Developed by Lyon County EM in coordination with other county departments
Transportation Plan (Roads, Bridges, Culverts, Ditches)	Yes	Lyon County Highway Department annual planning
Stormwater Management Plan / Drainage Plan	Yes	Lyon County Ordinance, Section 15.16, Stormwater Management Lyon County Planning & Zoning provides maintenance for the County Ditch System
Burning Permits/Restrictions (Sheriff's Office or MN DNR)	Yes	MN DNR
Comprehensive Local Water Management Plan	Yes	Lyon County Local Comprehensive Water

		Management Plan, extension to 2027
Watershed Plan (One Watershed, One Plan)	Yes	Yellow Medicine River 1W1P and Des Moines River 1W1P.
Wellhead Protection Plan		Municipal level plans are done in coordination with MDH
Forest Management Plan	No	
Community Wildfire Protection Plan (CWPP)	No	
Participation in MN DNR Firewise Program	No	
Database of Dry Hydrants/Well Access	No	
<i>Other (please describe)</i>		

LOCAL POLICY / PROGRAM CAPABILITIES	Yes/No	Comments
Land Use, Planning, & Zoning Ordinance	Yes	Lyon County Zoning Ordinance, effective 04/01/2015
Subdivision Ordinance	Yes	Lyon County Zoning Ordinance, Article 14 "PUD" Planned Unit Development District
Building Codes	No	
National Flood Insurance Program (NFIP)	Yes	Lyon County NFIP entry date 06/01/98
Flood insurance rate maps	Yes	Current effective map date 11/26/2010. Lyon County DFIRM maps are available on the P&Z website.
Floodplain Ordinance	Yes	Lyon County Floodplain Ordinance, adopted 07/19/2022; effective date 07/27/2022. Article 6 in Lyon County Zoning Ordinance.
Shoreland Ordinance	Yes	Lyon County Zoning Ordinance, Article 17, Shoreland Standards
Minnesota Buffer Law / Soil Erosion Ordinance	Yes	Lyon SWCD oversees Buffer Law compliance
Home Buyouts for flood or erosion mitigation	Yes	Lyon County did purchase a property in 2013 due to flooding.

Other natural hazard specific ordinance (i.e., stormwater, steep slope, wildfire)	No	
Maintenance programs to reduce risk	Yes	Highway Dept. ROW maintenance and drainage systems. Lyon SWCD has a volunteer Rain Gauge Monitoring Program in cooperation with the Minnesota Climatology office to record rainfall and snowfall in Lyon County.
Other (please describe)	Yes	Lyon County Highway Department – Snow and Ice Control Policy, adopted 11/18/2003. Lyon County Ordinance, Section 6.9 Manufactured Home Parks, Section B1 addresses anchoring requirements for mobile homes.

ADMINISTRATIVE/TECHNICAL CAPABILITIES	Yes/No	Comments
Emergency Management Director	Yes	Lyon County Emergency Management Director
Sheriff/Police Department	Yes	Lyon County Sheriff's Office
Floodplain Administrator	Yes	Lyon County Planning & Zoning Administrator
Chief Building Official	Yes	Lyon County Planning & Zoning Administrator
County Engineer	Yes	Lyon County Highway Department – County Engineer
Mapping Specialist (GIS)	Yes	Lyon County I.T. Department
Public Health Coordinator/Department	Yes	Southwest Health & Human Services serves Lyon County

Planning Commission	Yes	Lyon County Planning & Zoning Board Meetings
Soil and Water Conservation District	Yes	Lyon SWCD and NRCS
Minnesota Department of Natural Resources	Yes	
Mitigation Planning Committee	Yes	2023 HMP Update Planning Team
Mutual Aid Agreements	Yes	Regional
<i>Other (please describe)</i>		

EDUCATION & OUTREACH CAPABILITIES	Yes/No	Comments
SKYWARN Program Training with NWS	Yes	Annual event
Severe Weather Awareness Week (HSEM/NWS)	Yes	Annual event
Winter Weather Awareness Week (HSEM/NWS)	Yes	Annual event
Promotion of NOAA Weather Radios	Yes	During NWS Severe Weather Weeks and Ongoing
<i>Other (please describe)</i>	Yes	The Lyon County Emergency Management website page provides information and website links for the public on emergency preparedness.

Appendix E – Past Mitigation Action Review Status Report

Lyon County

Past Mitigation Action Review Status Report

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

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Severe Storms & Extreme Temps	Encourage all residents to have and use NOAA All Hazards Public Alert weather radios and sign up to receive alerts through the Lyon County CodeRED System.	Lyon County & All Cities	Ongoing	Lyon County Emergency Management (LCEM) provides leadership in promoting residents to have NOAA weather radios and to sign up for CodeRED. Local jurisdictions also share this information with local residents.
Severe Storms & Extreme Temps	Identify critical county and city buildings that should be equipped with a quick connect system for a generator / equipped with a generator.	Lyon County & All Cities	Ongoing	Lyon County and local jurisdictions continue to identify and address where backup generators are needed.
Severe Storms & Extreme Temps	Conduct a countywide assessment of the availability of emergency shelters and basements, including shelter capacity, and transportation routes to emergency shelters.	Lyon County & All Cities	Ongoing	Revise – Lyon County and local jurisdictions continue to identify where safe rooms may be needed for high wind events. We do not do an assessment of basements. Emergency transportation routes are covered under the Lyon County EOP in coordination with local fire departments as needed.
Severe Storms & Extreme Temps	Advocate for safe room construction when new public facilities projects are undertaken. / Pursue funding for safe room construction.	Lyon County & All Cities	Ongoing	Ongoing by LCEM and local jurisdictions.
Severe Storms & Extreme Temps	Have all cities in Lyon County become Storm Ready Communities and Weather-Ready Nation Ambassadors	Lyon County & All Cities	Ongoing	Lyon County Emergency Management is recognized as a NWS Weather Ready Nation Ambassador. Local jurisdictions are not, but will be encouraged to do so.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Severe Storms & Extreme Temps	Work with cities to adopt the Minnesota State Building Code.	Lyon County & All Cities	Ongoing	Communities vary in size and either have adopted the code or defer to Lyon County Planning & Zoning for building permit requirements for new development.
Severe Storms & Extreme Temps	Work with communities to review and/or complete Continuity of Operations Planning, and encourage private businesses and families to prepare for all-hazard events.	Lyon County & All Cities	Delete	Not a necessary mitigation action.
Severe Storms & Extreme Temps	Ensure Spotter training is available in Lyon County.	Lyon County & All Cities	Ongoing	Lyon County works with the NWS to offer Storm Spotter training on an annual basis to local law enforcement, fire departments, and local residents who wish to be trained as spotters.
Severe Storms & Extreme Temps	Educate local schools, nursing homes, hospitals, etc. on the importance of participating in “Severe Weather Awareness Week” activities.	Lyon County & All Cities	Ongoing	LCEM provides leadership in doing outreach to residents and special facilities such as schools, nursing homes, hospitals, etc. during the NWS severe weather awareness weeks in April and November. Local jurisdictions are encouraged to share this information as well.
Severe Storms & Extreme Temps	Warning Systems are regularly tested and all sirens have a back-up power source.	Lyon County & All Cities	Ongoing	Outdoor warning sirens are tested on a monthly basis to ensure functionality.
Severe Storms & Extreme Temps	Work with local entities to ensure proper warning siren coverage in Lyon County.	Lyon County & All Cities	Ongoing	LCEM will continue to work with communities to identify if there is a need for any new warning sirens or upgrades to existing sirens.
Drought	Develop watering ban ordinances for the cities of Balaton, Florence, Garvin, Lynd, Russell, and Taunton that do not have watering ban ordinances. / Enforce existing watering ban ordinances.	Lyon County & All Cities	Ongoing	Lyon County and local governments will follow the guidance of the MN DNR in setting and enforcing watering restrictions during periods of extreme drought.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Drought	Educate the public on the importance of water conservation in times of low rainfall.	Lyon County & All Cities	Ongoing	Public awareness on water conservation and watering restrictions will take place as needed during periods of extreme drought.
Wildfire	Establish fire breaks. / Reduce fuel loading in areas that may be susceptible to wildfires.	Lyon County & All Cities	Delete	Wildfire is deemed a low-risk hazard for Lyon County and will not be profiled in the Lyon County HMP update 2023.
Wildfire	Participate in the nationally coordinated "Firewise" program to increase resident education.	Lyon County & All Cities	Delete	Same as above.
Wildfire	Create an awareness program for burn permits and enforce fines for noncompliance.	Lyon County & All Cities	Delete	Same as above.
Wildfire	Educate property owners on the proper use of controlled burns and firebreaks and coordination of efforts.	Lyon County & All Cities	Delete	Same as above.
Wildfire	Install dry hydrants in the cities of Balaton and Russell.	Lyon County & All Cities	Delete	Same as above.
Flooding	Continuation of flood plain mapping and zoning in the official land use maps and zoning ordinances.	Lyon County & All Cities	Ongoing	Lyon County current effective map date is 09/15/22. The county and cities that participate in the NFIP enforce local floodplain ordinances.
Flooding	Update ordinances to ensure ordinances reflect best practices to minimize risk.	Lyon County & All Cities	Ongoing	Same as above.
Flooding	Lyon County communities with flood hazards are encouraged to work with DNR and FEMA to modernize the floodplain maps.	Lyon County & All Cities	Completed	MN DNR completed updated floodplain maps for Lyon County in 2022.
Flooding	Work with cities to implement best practices in regards to inflow and infiltration.	Lyon County & All Cities	Ongoing	The county and local cities continue to address stormwater system improvements as deemed necessary.
Flooding	Promote the use of storm water retention and detention systems.	Lyon County & All Cities	Ongoing	Same as above.

Hazard	Mitigation Action	Jurisdiction	Status	Comments
Flooding	Encourage all cities in Lyon County to participate in the MN Warn System.	Lyon County & All Cities	Ongoing	Cities are encouraged to participate in MnWARN if they do not do so already.
Flooding	Work with Eidsvold Township to pursue mitigation funding for addressing repetitive flooding sites in Eidsvold Township, in accordance with the existing plan.	Eidsvold Township / Lyon County	Ongoing	Once our Mitigation Plan is completed we will be looking into this, we do not qualify for FEMA mitigation funding until our mitigation plan is completed. We will then work on obtaining funding and addressing the recurring flooding in Eidsvold Township, using concrete or tar for spillways versus gravel that has been washing out and causing reoccurring flooding.
Severe Storms (Utility Failure)	Work with SWHHS and Medicare to maintain a list of vulnerable populations to check on in times of extreme heat and cold events.	Lyon County & All Cities	Ongoing	SWHHS and LCEM work collaboratively in having data on the locations of facilities that house vulnerable populations (hospitals, nursing homes, daycare, etc). Local jurisdictions are expected to maintain this information as well. No special outreach is conducted during periods of extreme heat or cold unless it is under a response situation (i.e., assistance or evacuation due to power outage coupled with extreme temps)
Severe Storms (Utility Failure)	Encourage utility providers to bury electric lines where feasible.	Lyon County & All Cities	Ongoing	Municipal and rural electric coop providers have authority in addressing mitigation measures for powerlines that may be vulnerable.

Appendix F – Planning Team Meetings

Lyon County HMP Update

Appendix F – Kickoff Meeting Documentation

Overview:

On 4/28/23 U-Spatial@UMD hosted a kickoff meeting online that was attended by the Lyon County Emergency Manager. The webinar included a project overview, U-Spatial@UMD's background, the roles and responsibilities of the Emergency Manager, the contents of the Hazard Mitigation Plan, the planning process, and the projected timeline of the project.

Attached Documentation:

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

Minnesota 2023-2024 Hazard Mitigation Plan Update Project Overview

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

Participating Jurisdictions

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

Overview of Update Process

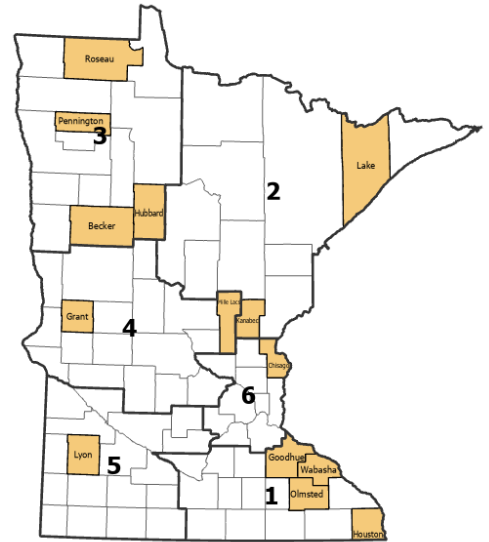
The U-Spatial@UMD team will coordinate with each Emergency Manager throughout the plan update process to engage participating jurisdictions and other stakeholders in the planning process. Following is an overview of key tasks that the U-Spatial@UMD team will facilitate to meet FEMA requirements in the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

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

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

Contact

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



Overview of the HMP Update Process

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

Stage 1 Tasks (4-5 months)

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

Stage 2 Tasks (5-7 months)

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

Stage 3 Tasks (2-3 months)

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

Stage 4 Tasks (2-3 months)

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

Ongoing - Quarterly 25% Local Match Tracking Quarterly to HSEM

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

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

U-SPATIAL
UNIVERSITY OF MINNESOTA DULUTH
Driven to Discover

Webinar Purpose & Goals

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

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

Stacey Stark

Introductions

U-Spatial@UMD Project Team



Stacey Stark
Project Manager
U-Spatial@UMD



Bonnie Hundrieser
Emergency Management Planning Consultant
Hundrieser Consulting LLC



Zach Vavra
GIS Specialist and Researcher
U-Spatial@UMD



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



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

Emergency Managers:

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

Minnesota HSEM:

Jennifer Davis, MN HSEM
State Hazard Mitigation Officer

Project Overview

14 Counties:

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



Why U-Spatial@UMD?

➤ Proven experience

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

➤ Advanced Capabilities

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

➤ Ability to Expedite

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

➤ Planning Team

Our project team includes advanced GIS students and Hundrieser Consulting.

Purpose

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

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

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

MHMP's must be updated every 5 years.

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

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

Overview of MHMP Update Process

Bonnie Hundrieser

U-Spatial@UMD Team Roles & Responsibilities

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

EM Roles & Responsibilities

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

Local 25% Match

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

Notes:

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

MHMP Planning Team

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

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

Key Tasks

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

Public Outreach

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

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

Key Tasks

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

Hazard Risk Assessment and Vulnerability Analysis

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

Key Tasks

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

Key Task Assignments

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

Key Tasks

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

Mitigation Action Charts

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

Key Tasks

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

Draft Plan Review

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

Key Tasks

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

Plan Submission

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

Key Steps

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

Plan Adoption

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

Notes

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

Plan format and delivery

“Next Gen” – MN Hazard Mitigation Plans

PDF document

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

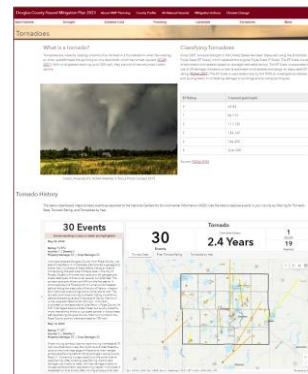
ArcGIS Hub (website) companion

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

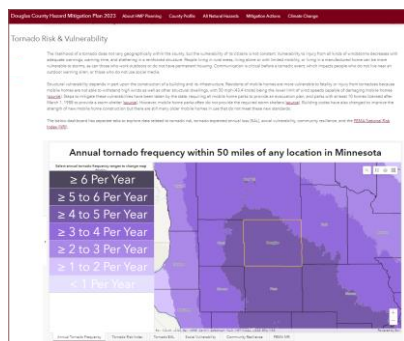
Stacey Stark



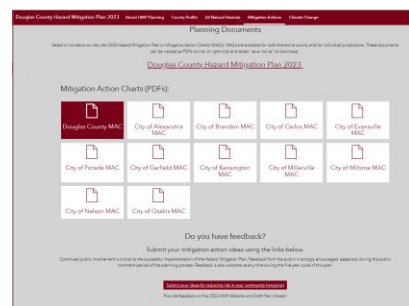
Example Web Site



Example Web Site



Example Web Site



Example Web Site

Timeline Overview

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

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

Next Steps

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

Notes:

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

Questions?

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

Contact Information

Stacey Stark, MS, GISP
U-Spatial@UMD
slstark@d.umn.edu
218-726-7438

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

Lyon County HMP Update

JURISDICTIONAL CONTACT LIST

COUNTY CONTACTS

Name	Title	Phone	Email
Emily Coequyt	Emergency Management Director	(507) 706-1276	emilycoequyt@co.lyon.mn.us
Eric Wallen	County Sheriff	(507) 537-7666	EricWallen@co.lyon.mn.us
Loren Stomberg	County Administrator	(507) 537-6980	lorenstomberg@co.lyon.mn.us
Mark Buysse	County Assessor	(507) 537-6731	lyonassessor@co.lyon.mn.us
Aurora Heard	Lyon County Auditor/Treasurer	(507) 537-6724	auditor@co.lyon.mn.us
Roger Schroeder	Environmental/Parks Administrator	(507) 532-1306	rogerschroeder@co.lyon.mn.us
Keith Lindeman	Facilities Director	(507) 537-6049	KeithLindeman@co.lyon.mn.us
Mark Volz	GIS Coordinator	(507) 532-8218	markvolz@co.lyon.mn.us
Jason Lenz	IT Director	(507) 532-1333	JasonLenz@co.lyon.mn.us
Aaron VanMoer	Highway Engineer	(507) 532-8205	AaronVanMoer@co.lyon.mn.us
John Biren	Planning & Zoning Administrator	(507) 532-8207 ext. 3	JohnBiren@co.lyon.mn.us
Beth Wilms	Southwest Health & Human Services, Director	507-532-1248	Beth.wilms@swmhhs.com
Carol Biren	Southwest Health & Human Services, Director	507-532-4136	Carol.biren@swmhhs.com
Ann Orren	Southwest Health & Human Services, Community Public Health Supervisor	507-532-1317	Ann.Orren@swmhhs.com
Deann Holland	Southwest Health & Human Services, Public Health Educator	507-537-4075	Deann.Holland@swmhhs.com
Thomas Andries	District 1 Commissioner	(507) 828-3275	ThomasAndries@co.lyon.mn.us
Todd Draper	District 2 Commissioner		ToddDraper@co.lyon.mn.us
Paul Graupmann	District 3 Commissioner	(507) 779-5273	graupmann.paul@gmail.com
Gary Crowley	District 4 Commissioner	(507) 829-4720	GaryCrowley@co.lyon.mn.us
Rick Anderson	District 5 Commissioner	(507) 829-2608	rickanderson@co.lyon.mn.us

CITY CONTACTS

CITY OF BALATON (686)

Name	Title	Phone	Email
Kimberly Wall	Clerk	507-734-4711	balatonmn@gmail.com
Lonnie Lambertus Sr.	Mayor	507-734-4711	balatonmn@gmail.com
Kasey Holm	Fire Chief/EM	507-828-9157	kaseyholm.kh@gmail.com

CITY OF COTTONWOOD (1,119)

Name	Title	Phone	Email
Teather Bliss	Clerk-Administrator	507-423-6488	teather@cityofcottonwoodmn.gov
Corey Moseng	Mayor	507-423-6488	
Dale Louwagie	Fire Chief/ EM	507-829-1220	daledebl@mvtvwireless.com

CITY OF FLORENCE (28)

Name	Title	Phone	Email
Barb Powell	Clerk		bjpowell77@hotmail.com
Susan Johnson	Mayor		

CITY OF GARVIN (120)

Name	Title	Phone	Email
Sandy Carlson	Clerk	507-746-4459	garvinmn@gmail.com
Jim Julien	Mayor	507-746-4459	garvinmn@gmail.com
Eric Fox	Fire Chief/ EM	507-531-7851	ericfoxusarmy@gmail.com

CITY OF GHENT (365)

Name	Title	Phone	Email
Dawn Vlaminck	Clerk	507-428-3214	dawn@ghentmn.com
Doug Anderson	Mayor	507-428-3214	
Matt Norby	Fireman/ EM		Mnorby66@gmail.com

CITY OF LYND (424)

Name	Title	Phone	Email
Sue Paradis	Clerk/Treasurer	507-865-4514	cityoflynd@outlook.com
Justin Guggisberg	Mayor	507-865-4514	cityoflynd@outlook.com
Dillon Schultz	Fire Chief/ EM	507-829-8091	lyndchief@outlook.com

CITY OF MARSHALL (13,500)

Name	Title	Phone	Email
Sharon Hanson	Administrator	507-537-6760	Sharon.hanson@ci.marshall.mn.us
Steven Anderson	Clerk	507-537-6760	Steven.anderson@ci.marshall.mn.us
Jim Marshall	Chief of Police/ EM	507-929-6300	Jim.Marshall@ci.marshall.mn.us
Bob Byrnes	Mayor	507-828-2125	Robert.byrnes@ci.marshall.mn.us

CITY OF MINNEOTA (1,412)

Name	Title	Phone	Email
Rob Vidoloff	Administrator	507-872-6144	robert.vidoloff@ci.minneota.mn.us
John Rolbiecki	Mayor	507-872-6144	
Matt Boettger	Fireman/ EM		MatthewBoettger@co.lyon.mn.us

CITY OF RUSSELL (338)

Name	Title	Phone	Email
Marie Grant	Clerk	507-823-4366	cityofrussell@woodstocktel.net

Hillary Buchert	Mayor	507-823-4366	
John Wiese	Fire Chief/ EM	507-530-5250	jwiese95@gmail.com

CITY OF TAUNTON (149)

Name	Title	Phone	Email
Rebecca Jerzak	Clerk	507-872-5950	cityoftaunton@centurytel.net
Mike Breyfogle	Mayor	507-872-5950	cityoftaunton@centurytel.net
Bob Polejewski	Fireman/ EM	507-828-7598	polejewski@mtvwireless.com

CITY OF TRACY (2,068)

Name	Title	Phone	Email
Jeff Carpenter	City Administrator	507-828-0417	jcarpenter@tracymn.org
Pamela Cooreman	Mayor	507-629-5528	cityoftracy@iw.net
Jason Lichty	Chief of Police/ EM		jlichty@tracymn.org
Tyler Twistol	Finance Director	507-828-0417	twistol@tracymn.org

TOWNSHIP CONTACTS

Name of Township	Name & Title	Phone	Email
Amiret Township	Tonya Ormberg/Clerk	507-828-3120	Email not available
Clifton Township	Donald Schmidt/Clerk	507-828-2172	djschmidt@mnval.net
Coon Creek Township	Lori Grant/Clerk	507-829-9822	Lori.grant@swsc.org
Custer Township	Jennifer Towne/Clerk	507-828-5252	jennytowne@woodstocktel.net
Eidsvold Township	Eric Buysse, Supervisor	507-829-2561	eric335@hotmail.com
Fairview Township	Kenny Bossuyt/Supervisor Seat 2	507-530-3160	
Grandview Township	Dan Vandendriessche/Clerk	507-829-7536	dan@hoffmanbrobst.com
Island Lake Township	Brenda Desmedt	321-444-1297	bklonneman@hotmail.com
Lake Marshall Township	Sandy Nelson/Clerk	507-530-6088	Sandy.berre@gmail.com
Lucas Township	Allison Vandelanotte/Clerk	507-530-7123	milkmade@starpont.net
Lynd Township	Doug Kleine/Clerk	507-828-2828	dkleine@marshallareaymca.org
Lyons Township	Greg Goodmund/Clerk	507-823-4260	goodmundg@yahoo.com
Monroe Township	Steven Meyer/Clerk	507-626-0288	Scmeyer1969@gmail.com
Nordland Township	Deb Johnson/Clerk	507-872-6981	kdranch@mtvwireless.com
Rock Lake Township	Troy Wendland/Chair	507-734-2284	Wendlandfarms88@gmail.com
Shelburne Township	Pat O'Toole/Supervisor Seat 2	605-413-3515	pbotoolefarm@gmail.com
Sodus Township	Bradley Paradis/Supervisor Seat 3	507-530-3868	bdparadis@mtvwireless.com
Stanley Township	Kevin Meulebroeck/Chair	507-530-3394	meulebroeck@mtvwireless.com
Vallers Township	Leon Doom/Chair	507-829-7880	doomfarms@gmail.com
Westerheim Township	Jon Buysse/Supervisor Seat 2	507-531-0105	jonbuysse@gmail.com

OTHER STAKEHOLDER CONTACTS

LOCAL & REGIONAL AGENCIES INVOLVED IN HAZARD MITIGATION

Name of Agency / Organization	Name & Title	Phone	Email
MN Homeland Security & Emergency Management	Mark Marcy, HSEM Region 5, Regional Program Coordinator	612-619-6115	Mark.Marcy@state.mn.us
Lyon County Soil & Water Conservation District (SWCD)	John Biren, Administrator	507-532-8207 x3	johnbiren@co.lyon.mn.us
Natural Resources Conservation Service (NRCS)	Kelly Heather, District Conservationist	(507) 591-4325	kelly.heather@usda.gov
USDA Rural Development Community Programs	Jeff Van Buren, Area Specialist	320-235-5612 x126	jeff.vanburen@usda.gov
MnDOT District 8	Jon Huseby, Transportation District Engineer	320-231-5497	Jon.Huseby@state.mn.us

REPRESENTATIVES OF BUSINESSES, ACADEMIA, AND OTHER PRIVATE ORGANIZATIONS

Name of Agency / Organization	Name & Title	Phone	Email
Marshall Municipal Utilities	Tricia Stelter, Human Resources Coordinator	507-537-7005	tricias@marshallutilities.com
Lyon/Lincoln Electric Co-op	Co-op Manager	507-247-5505	email@llec.coop
Minneota Public Schools	Scott Monson, Superintendent	507-872-6532	Scott.Monson@minneotaschools.org
Lakeview Public Schools	Chris Fenske, Superintendent	507-423-5164 ext. 1305	chrisfenske@lakeview2167.com
Lynd Public School	Dr. Jerry Rasmussen, Superintendent	507-865-4404	Jerry.rasmussen@lyndschool.org
Marshall Public School	Jeremy Williams, Superintendent	507-537-6924 ext. 5002	Jeremy.williams@marshall.k12.mn.us
Tracy Public Schools	Chad Anderson, Superintendent	507-629-5500	AndersonC@tracy.k12.mn.us

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

Name of Agency / Organization	Name & Title	Phone	Email
Salvation Army Northern Division (MN/ND)	Kim Schwich, Service Representative, SW MN	507-258-3923 (office) 320- 212-8885 (Cell)	Kim.schwich@usc.salvationarmy.org
Southwest Initiative Foundation	Khou Lor, Rural Equity Specialist	(320) 583-6579	khoul@swifoundation.org
Southwest Regional Development Commission	Jayme Trusty, Executive Director	507-836-1636	execdir@swrdc.org

NEIGHBORING JURISDICTIONS

Name of Jurisdiction	Name & Title	Phone	Email
Yellow Medicine County	Casey Namken, EMD	(320) 313-3093	casey.namken@co.ym.mn.gov
Redwood County	Jim Sandgren, EMD	(507) 637-4035	jim_s@co.redwood.mn.us
Murray County	Carl Nyquist, EMD	(507) 836-1111	cnyquist@co.murray.mn.us
Pipestone County	Casey Sievert, EMD	(507) 825-1170	casey.sievert@co.pipestone.mn.us
Upper Sioux Community	Dan Desmet, EMD	(507) 829-1230	dand@uppersiouxpolice-nsn.gov
Lincoln County	Amber Scholten, EMD	(507) 694-1463	ascholten@co.lincoln.mn.us

LOCAL MEDIA CONTACTS

Name of Local Media	Media Contact	Phone	Email
Marshall Independent	Deb Gau	507-537-1551	news@marshallindependent.com
Minneota Mascot	Scott Thoma	320-894-6007	scott@thomabooks.com
Tracy Area Headlight Herald	Per Peterson	507-629-4300	per@headlightherald.com

Lyon County HMP Planning Team

Meeting #1 Presentation and Discussion

3/7/24 Meeting Summary & Documentation

Summary: On March 7, 2024 Lyon County Emergency Management convened key county, city, and township representatives, as well as neighboring jurisdictions and other stakeholders to participate in the 1st Planning Team Meeting for the update of the Lyon County Hazard Mitigation Plan (HMP). The purpose of the meeting was to formally present information about the Lyon County HMP update and to discuss key items that would inform plan development. The meeting was held via Zoom webinar video conference and was facilitated by Stacey Stark and Bonnie Hundrieser of the U-Spatial@UMD project team.

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

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

Meeting Participants: A total of **39** people attended the meeting. Representation included elected officials and departmental staff from Lyon County and the cities of Balaton, Cottonwood, Ghent, Lynd, Marshall, Minneota, Tracy, and Russell. Representatives from the cities of Florence, Garvin, and Taunton were not available to attend. Other stakeholders, including neighboring jurisdictions, participated in the meeting. A participant list is provided below:

	Name	Organization	Job Title
1	Emily Coequyt	Lyon County Emergency Management	Emergency Management Director
2	Todd Draper	Lyon County Board of Commissioners	County Commissioner
3	Loren Stomberg	Lyon County	County Administrator
4	Thomas Andries	Lyon County	County Commissioner
5	Keith Lindeman	Lyon County	Facilities Manager
6	Gary Crowley	Lyon County	Commissioner
7	Jason Lenz	Lyon County	IT Director
8	Mark Volz	Lyon County	GIS Coordinator
9	Roger Schroeder	Lyon County	Environmental Administrator
10	Eric Wallen	Lyon County Sheriff's Office	Sheriff
11	John Biren	Lyon County P&Z/SWCD	Zoning Administrator

12	Aurora Heard	Lyon County	Auditor Treasurer
13	Kimberly Wall	City of Balaton	Clerk-Treasurer
14	Teather Bliss	City of Cottonwood	City Administrator
15	Matt Norby	City of Ghent	Emergency Manager
16	SUE PARADIS	City of Lynd	Clerk-Treasurer
17	Justin Guggisberg	City of Lynd/Lynd Fire Department	Mayor
18	Steven Anderson	City of Marshall	City Clerk
19	Alex Peterson	City of Marshall Emergency Management	Communications Specialist & Emergency Manager
20	James Marshall	City of Marshall Police Department	Director of Public Safety
21	Ryan Hoffman	City of Marshall, Police Department	Captain
22	Bill Bolt	City of Minneota Police Department	Chief
23	Jeff Carpenter	City of Tracy	City Administrator
24	Jason Lichty	City of Tracy Police Dept	Chief of Police
25	Laurie Millner	City of Russell	Clerk Treasurer
26	John Wiese	City of Russell Fire Department	Chief
27	Mark Marcy	MN HSEM	RPC
28	Ann Orren	Southwest Health and Human Services	Community Public Health Supervisor
29	Deann Holland	Southwest Health and Human Services	Emergency Preparedness/Health Educator
30	Tim O'Leary	Lyon-Lincoln Electric Cooperative, Inc.	General Manager
31	Chris Fenske	Lakeview Schools	Superintendent
32	Heather Anderson	Minneota Public Schools	Principal
33	Lori Grant	Coon Creek Township	Clerk
34	Deb Johnson	Nordland township	Clerk
35	Pat VanKeulen	Grandview Township	Treasurer
36	Donald Schmidt	Clifton Township	Clerk
37	Carl Nyquist	Murray County	Emergency Management Director
38	Casey Sievert	Pipestone County	Director of EMS & EM
39	Casey Namken	Yellow Medicine Sheriff's Office	Investigator/EM Director

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

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

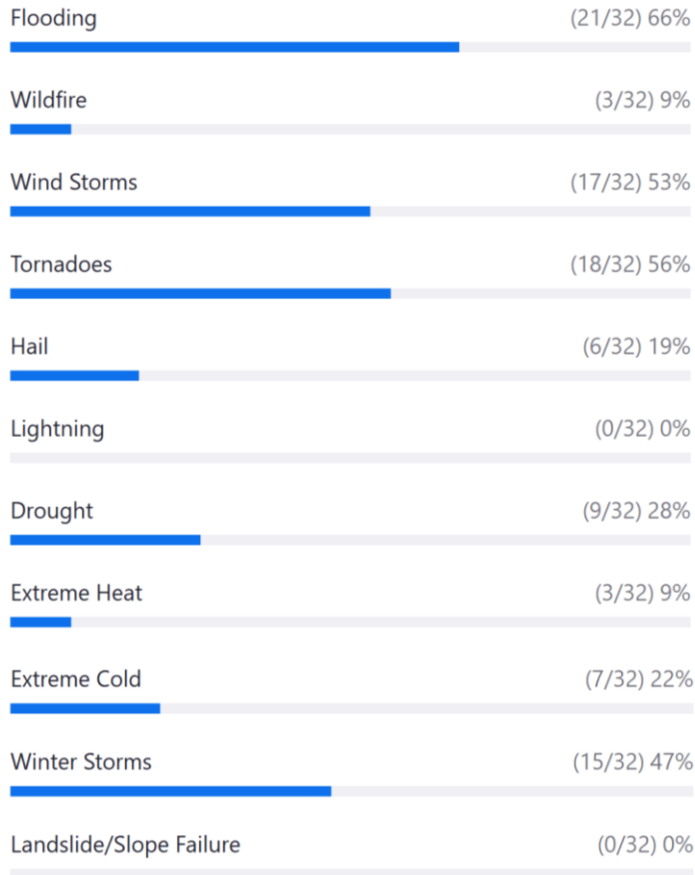
LYON COUNTY HMP PLANNING TEAM MEETING #1 DISCUSSION NOTES

PARTICIPANT POLLS

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

POLL #1: TOP HAZARDS

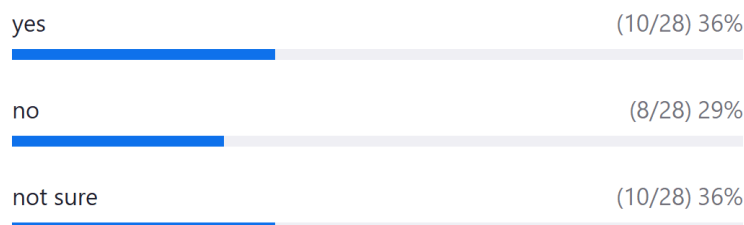
What are the top three hazards of most concern to you in this county? (Multiple Choice)



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

POLL #2: CHANGE IN PERCEIVED RISK

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



What hazard risk has changed, and in what jurisdiction?

Name	Comment
Ann Orren	Certainly Extreme Heat events seemed to have increased, which makes sense due to climate change. And more elderly are still living at home, which creates additional risk
Mark Volz	If we consider man made hazards then we may want to address the high railway speed limit that runs through several of our cities.
Eric Wallen	Wind
Pat VanKeulen	River flooding has gotten worse because of increased tiling and runoff
Deann Holland	Windstorms --is this a separate line item or art of severe summer storms?
Casey Namken	Straight line winds
Justin Guggisberg	Straight line wind damage has increased in previous years
SUE PARADIS	City of Lynd - Drought - Fire Hazard
John Biren	Precipitation patterns have been changing. Storm events tend to produce higher rainfall/snow amounts in shorter durations.
James Marshall	Drought/Extreme Heat (Power Outages) - City of Marshall
Teather Bliss	Late Spring - Summer storms have become more severe.
Jason Lichty	Flooding in the City of Tracy, with upgraded storm drains and ponds hopefully it will handle a heavy rain event better
Tim O'Leary	Extreme Heat and Extreme Cold. I feel that these have increased in severity due to base load power plants closing which affects the ability to deliver power (A/C and Heat) during these events.

FOCUSED DISCUSSION QUESTIONS

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

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

- Ann Orren - Rural, elderly, low income, those who live in the floodplain. / Outreach - social media, community presentations, mail, email, church flyers, translated materials, community leaders
- Teather Bliss - Those with language barriers and those that are not technology savvy. / Outreach - Mass mailings with multi language options.
- Deb Johnson - Those that don't have internet.
- Mark Volz - Those that live in trailer courts or other areas where there are not safe places for severe weather.

- SUE PARADIS - Elderly, trailer court in Lynd
- Tim O'Leary - Direct mailings and face to face meetings
- Roger Schroeder - Have you distributed information in native languages at the County Libraries?
- Carl Nyquist - Those with medical conditions ie home oxygen..etc; Refugee's or those seeking political asylum.
- Chris Fenske - I don't believe we have any underserved populations within the Lakeview School District. The district provides school transportation, technology devices, and meals to all students at Lakeview. We also have almost 98% population with Wi-fi in their homes. We use multiple communication methods which include mass phone calls, mass emails, and social media.
- John Biren - Elderly and Renters.
- Tim O'Leary - The cooperative serves the City of Lynd, City of Russell and most of the rural areas of Lyon County. We would be able to reach out to the different areas through mailings, social media, website, district meetings and our annual meeting.

DQ#2: *What do you feel should be recorded as the updated Hazard Prioritizations for the Lyon County 2023 HMP? Why?* Following are the updated hazard priorities noted by planning team members:

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

Comments:

- Teather Bliss - flooding, wind, and drought would be a high priority for Cottonwood
- Roger Schroeder - There are certainly areas more susceptible to flash flooding; esp. along the cottonwood, and redwood rivers
- Gary Crowley - Flooding would be high in Ghent

- SUE PARADIS - flooding, drought, wildfire-with Camden State Park here fires are a danger in drought seasons
- Roger Schroeder - extreme cold I think relates to 1) homeless population, and 2) the pressure some individuals feel to show up at work during extreme cold, and blizzard conditions.
- Roger Schroeder - I'm not sure about the population, but had not thought about those working outdoors... that is certainly a concerns for workers.
- Deb Johnson - I think very similar to what we had in 2017 is my take
- Carl Nyquist - I'm the Murray County EM but live in Lyon. if memory serves me right the Southern half of the county was part of Federal disaster (2018) 4390 for flooding.. Overland flooding...
- Stacey Stark - Lyon County has been involved in 18 federal disaster declarations. 7 of those were primarily flooding
- John Biren - Wind, flooding, and winter storms can impact electrical infrastructure. Locating infrastructure where impacts can be addressed more efficiently may be helpful. Flooding - Storm event duration and frequency has changed.
- John Biren - Maybe powerlines should be defined. Transmission versus distribution. Currently much opposition to transmission lines that won't be buried.
- Dawn Vlaminck – Ghent is at a high risk for repeated flooding. The entire water/sewer system is impacted if mitigation measures are not taken. Sewer lift stations are inundated. Ghent does not have a tornado shelter.
- Tim O’Leary - Flooding could impact power lines located near rivers and would make it difficult to repair. Replacing OH with URD lines would help with any flooding damage.

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

- Dawn Vlaminck - The City of Ghent needs to construct a flood protection berm that will protect our bluebird development/residential homes as well as both sewer lift stations from being inundated with flood water during a flood event.
- John Biren - Siting of buildings through zoning.
- Chris Fenske - For the community of Cottonwood it would be nice to have a generator at the school as we are a Red Cross Shelter. This would provide a heated/cooled environment as well as the ability to use the kitchen to prepare meals. We have had instances in the past where power has been lost for consecutive days.

- Tim O’Leary – The main mitigation that would help with rural OH power lines would be to replace them with URD lines and then look at back feed options that would allow the cooperative to serve areas from multiple substations and lines.

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

MEETING DOCUMENTATION

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

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

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

From: [Emily A. Coequyt](#)
To: [Emily A. Coequyt](#); [Eric D. Wallen](#); [Loren A. Stomberg](#); [Lyon Assessor](#); [Auditor](#); [Roger Schroeder](#); [Keith J. Lindeman](#); [Mark Volz](#); [Jason A. Lenz](#); [Aaron VanMoer](#); [John L. Biren](#); [Beth Wilms](#); [Carol Biren, M.S.](#); [Ann Orren](#); [Deann Holland](#); [Thomas D. Andries](#); [Todd M. Draper](#); [graupmann.paul@gmail.com](#); [Gary L. Crowley](#); [Rick K. Anderson](#); [balatonmn@gmail.com](#); [kaseyholm.kh@gmail.com](#); [Teather@cityofcottonwoodmn.com](#); [daledebl@mvtvwireless.com](#); [bjpowell77@hotmail.com](#); [garvinmn@gmail.com](#); [ericfoxusarmy@gmail.com](#); [dawn@ghentmn.com](#); [Mnorby66@gmail.com](#); [cityoflynd@outlook.com](#); [lyndchief@outlook.com](#); [Sharon.hanson@ci.marshall.mn.us](#); [Steven.anderson@ci.marshall.mn.us](#); [Jim.Marshall@ci.marshall.mn.us](#); [Robert.byrnes@ci.marshall.mn.us](#); [Shirley.teigland@ci.minneota.mn.us](#); [Matthew D. Boettger](#); [cityofrussell@woodstocktel.net](#); [jwiese95@gmail.com](#); [cityoftaunton@centurytel.net](#); [polejewski@mvtvwireless.com](#); [cityoftracy@lv.net](#); [jlichty@tracymn.org](#); [ttwistol@tracymn.org](#); [Tonya.ormberg@cygnusdelivers.com](#); [djschmidt@mval.net](#); [Lori.grant@swsc.org](#); [jennytowne@woodstocktel.net](#); [eric335@hotmail.com](#); [dan@hoffmanbrobst.com](#); [bkloonneman@hotmail.com](#); [Sandy.berre@gmail.com](#); [milkmade@starpoinet.net](#); [dkleine@marshallareaymca.org](#); [goodmundg@yahoo.com](#); [Scmeyer1969@gmail.com](#); [kdranch@mvtvwireless.com](#); [Wendlandfarms88@gmail.com](#); [potoolefarm@gmail.com](#); [bdparadis@mvtvwireless.com](#); [meulebroeck@mvtvwireless.com](#); [doomfarms@gmail.com](#); [jonbuysse@gmail.com](#); [Mark.Marcy@state.mn.us](#); [kelly.heather@usda.gov](#); [jeff.vanburen@usda.gov](#); [Jon.Huseby@state.mn.us](#); [Kim.schwich@usc.salvationarmy.org](#); [rdbyam@yahoo.com](#); [tricias@marshallutilities.com](#); [email@llec.coop](#); [Scott.Monson@minneotaschools.org](#); [chrisfenske@lakeview2167.com](#); [Jerry.rasmussen@lyndschool.org](#); [Jeremy.williams@marshall.k12.mn.us](#); [AndersonC@tracy.k12.mn.us](#); [khoul@swifoundation.org](#); [execdir@swrdc.org](#); [casey.namken@co.ym.mn.gov](#); [jim_s@co.redwood.mn.us](#); [cnyquist@co.murray.mn.us](#); [casey.sievert@co.pipestone.mn.us](#); [dand@upperiouxpolice-nsn.gov](#)
Cc: [Bonnie K Hundrieser](#); [Stacey Stark](#)
Subject: Lyon County HMP Meeting Invitation
Date: Tuesday, January 2, 2024 3:10:03 PM
Importance: High

LYON COUNTY

HAZARD MITIGATION PLAN UPDATE – MEETING INVITATION

Greetings,

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

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

Date: Thursday, March 7, 2024

Time: 1:00 – 2:30 p.m.

Zoom Link: https://umn-private.zoom.us/webinar/register/WN_L4qvEik5QAaWQbmY7ubVZA

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

When you register, you will automatically be placed on an RSVP list and will be sent an email confirmation.

About the Plan

The update of the Lyon County Hazard Mitigation Plan (HMP) is a requirement by the State of Minnesota Department of Homeland Security & Emergency Management (HSEM) as well as the Federal Emergency Management Agency (FEMA) every 5 years. Our last plan is due for an update and our planning is currently underway. The plan addresses the natural hazards that face Lyon

County and will result in the identification of mitigation actions and projects that will help to reduce or eliminate the impact of future hazard events, such as flooding and severe winter or summer storms.

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

1. You will help to identify critical mitigation actions to implement at the county / municipal level, and how they can be integrated with existing plans, policies, or project efforts.
2. Participating jurisdictions will be eligible to apply for FEMA hazard mitigation grant funding.
3. Mitigation planning is necessary to keep our communities resilient against future disasters and reduce the costs of recovery.
4. FEMA requires documentation of how local government and key stakeholders participated in the planning process.

During this meeting we will review and prioritize the natural hazards that pose risk to Lyon 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,

Emily Coequyt
Lyon County Emergency Management
607 W. Main St.
Marshall, MN 56258
Phone: 507-706-1276

From: [Bonnie K Hundrieser](#)
To: [emilycoequyt@co.lyon.mn.us](#); [EricWallen@co.lyon.mn.us](#); [lorenstomberg@co.lyon.mn.us](#); [lyonassessor@co.lyon.mn.us](#); [auditor@co.lyon.mn.us](#); [rogerschroeder@co.lyon.mn.us](#); [KeithLindeman@co.lyon.mn.us](#); [markvolz@co.lyon.mn.us](#); [JasonLenz@co.lyon.mn.us](#); [AaronVanMoer@co.lyon.mn.us](#); [JohnBiren@co.lyon.mn.us](#); [Beth.wilms@swmhhs.com](#); [Carol.biren@swmhhs.com](#); [Ann.Orren@swmhhs.com](#); [Deann.Holland@swmhhs.com](#); [ThomasAndries@co.lyon.mn.us](#); [ToddDraper@co.lyon.mn.us](#); [graupmann.paul@gmail.com](#); [GaryCrowley@co.lyon.mn.us](#); [rickanderson@co.lyon.mn.us](#); [balatonmn@gmail.com](#); [kaseyholm.kh@gmail.com](#); [Teather@cityofcottonwoodmn.com](#); [daledebl@mvtvwireless.com](#); [garvinmn@gmail.com](#); [ericfoxusarmy@gmail.com](#); [dawn@ghentmn.com](#); [Mnorby66@gmail.com](#); [cityoflynd@outlook.com](#); [lyndchief@outlook.com](#); [Sharon.hanson@ci.marshall.mn.us](#); [Steven.anderson@ci.marshall.mn.us](#); [Jim.Marshall@ci.marshall.mn.us](#); [Robert.byernes@ci.marshall.mn.us](#); [Shirley.teigland@ci.minneota.mn.us](#); [MatthewBoettger@co.lyon.mn.us](#); [cityofrussell@woodstocktel.net](#); [jwiese95@gmail.com](#); [cityoftaunton@centurytel.net](#); [polejewski@mvtvwireless.com](#); [cityoftracy@iw.net](#); [jcarpenter@tracymn.org](#); [jlichty@tracymn.org](#); [ttwistol@tracymn.org](#); [djschmidt@mnval.net](#); [Lori.grant@swsc.org](#); [jennytowne@woodstocktel.net](#); [eric335@hotmail.com](#); [dan@hoffmanbrobst.com](#); [bklonneman@hotmail.com](#); [Sandy.berre@gmail.com](#); [milkmade@starpoint.net](#); [dkleine@marshallareaymca.org](#); [goodmundg@yahoo.com](#); [Scmeyer1969@gmail.com](#); [kdranch@mvtvwireless.com](#); [Wendlandfarms88@gmail.com](#); [pbootoolefarm@gmail.com](#); [bdparadis@mvtvwireless.com](#); [meulebroeck@mvtvwireless.com](#); [doomfarms@gmail.com](#); [jonbuysse@gmail.com](#); [Mark.Marcy@state.mn.us](#); [kelly.heather@usda.gov](#); [jeff.vanburen@usda.gov](#); [Jon.Huseby@state.mn.us](#); [Kim.schwich@usc.salvationarmy.org](#); [rdbyam@yahoo.com](#); [tricias@marshallutilities.com](#); [email@llec.coop](#); [Scott.Monson@minneotaschools.org](#); [chrisfenske@lakeview2167.com](#); [Jerry.rasmussen@lyndschool.org](#); [Jeremy.williams@marshall.k12.mn.us](#); [AndersonC@tracy.k12.mn.us](#); [khoul@swifoundation.org](#); [execdir@swrdc.org](#); [casey.namken@co.ym.mn.gov](#); [jim_s@co.redwood.mn.us](#); [cnyquist@co.murray.mn.us](#); [casey.slevert@co.pipestone.mn.us](#); [dand@upperiouxpolice-nsn.gov](#); [ascholten@co.lincoln.mn.us](#)
Cc: [Stacey Stark](#)
Subject: Lyon County HMP Planning Team Meeting Materials - Please Review
Date: Wednesday, March 6, 2024 12:25:00 PM
Attachments: [Lyon County 2023-2024 HMP Overview handout.pdf](#)
[Lyon County HMP Mtg. #1 Discussion Questions.docx](#)
[HSEM HMA Grants Program Overview.pdf](#)
Importance: High

Greetings,

The Lyon County Hazard Mitigation Plan (HMP) Update – Planning Team Meeting #1 will be held via Zoom on **Thursday, March 7th from 1:00 – 2:30 p.m.** This meeting is a critical step in the plan update process where we meet with county and local government officials, departmental staff, and other agency stakeholders to provide an overview of the plan update and gather important feedback.

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

1. **Lyon County 2023-2024 Hazard Mitigation Plan Update Overview**
2. **Lyon County HMP Planning Team Meeting #1 - Discussion Questions.** If you are registered for the meeting, you are encouraged to review and fill out the form in advance. If you are not able to join us, we welcome your feedback by returning the Discussion Questions form via email. Please return your form prior to the meeting so that we may include you in the list of meeting participants and include your feedback in the meeting documentation.
3. **HSEM Hazard Mitigation Assistance (HMA) Grants Program Overview**

If you have not registered yet but wish to do so, please control+click on the following registration link: https://umn-private.zoom.us/webinar/register/WN_L4qvEik5QAaWQbmY7ubVZA

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

Thank you,
Bonnie Hundrieser

Bonnie K. Hundrieser, CEM

Hazard Mitigation Planning Specialist

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

Hundrieser Consulting LLC

Phone: 218-343-3468



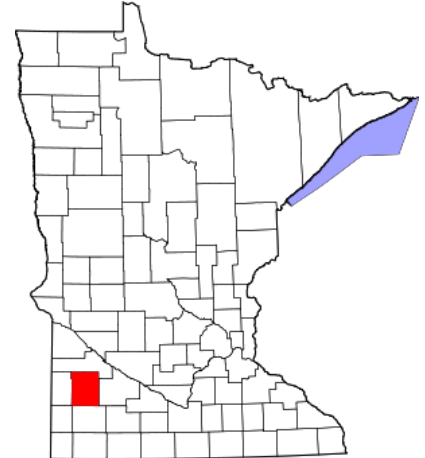
Lyon County 2023-2024 Hazard Mitigation Plan Update Overview

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

Overview

Following are key points regarding the Lyon County HMP Update:

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



Who the Plan Covers: The HMP is a multi-jurisdictional plan, covering all of Lyon County, including all cities and townships within the county. The plan also takes into consideration the needs and concerns of other stakeholders such as schools, watershed districts, and agencies or organizations involved in mitigation or services to vulnerable populations within the county.

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

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

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

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

Contact:

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

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Lyon County Hazard Mitigation Plan Update

Planning Team Meeting #1 Discussion Questions

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

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

Please provide your contact information:

Lyon:

Jurisdiction/Agency:

Job Title:

Phone:

Email:

1. Outreach to Vulnerable Populations / Underserved Communities

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

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

Type any comments

2. Review of Hazard Risk Prioritization

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

LYON COUNTY 2017 HAZARD MITIGATION PLAN

Hazards	Risk Priority
Blizzards, Winter Storms, and Extreme Cold Events	High
Drought	Moderate
Flooding	Moderate
Fire (structure/wildfire)	Moderate
Severe Summer Storms, Lightning and Hail, and Extreme Heat Events	Moderate

Earthquakes	Low
Dam Failure	Low
Landslides	Not Addressed

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

LYON COUNTY 2023 HMP UPDATE - HAZARD RISK PRIORITIZATIONS

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

Type any additional comments

3. Identification of Mitigation Actions

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

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

Type any comments



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

HAZARD MITIGATION ASSISTANCE

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

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

Who is eligible for grant funding?

All applicants must have or be covered under an approved Hazard Mitigation Plan. Eligible applicants include: State and local governments; certain private non-profit organizations or institutions; and Tribal Communities

What types of projects can be funded?

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

- **Advance Assistance** may be used to develop mitigation strategies and obtain data, including for environmental and historic preservation compliance considerations, and develop complete project applications in a timely manner.
- **Aquifer Storage and Recovery** (ASR) projects serve primarily as a drought management tool, but can also be used to reduce flood risk and restore aquifers that have been subject to overdraft. The concept is to capture water when there is an abundant supply, store the water in subsurface aquifers, and recover water from the storage aquifer when needed. Storing water underground can help protect it from pollutants, evaporation, and weather events.
- **Floodplain and stream restoration** (FSR) projects are used primarily to reduce flood risk and erosion by providing stable reaches, and may also mitigate drought impacts. FSR projects restore and enhance the floodplain, stream channel and riparian ecosystem's natural function. They provide base flow recharge, water supply augmentation, floodwater storage, terrestrial and aquatic wildlife habitat, and recreation opportunities by restoring the site's soil, hydrology and vegetation conditions that mimic pre-development channel flow and floodplain connectivity.
- **Flood Diversion and Storage** (FDS) projects often are used to reduce flood risk, but also can be used to mitigate drought and improve ecosystem services. These projects involve diverting floodwaters from a stream, river, or other body of water into a conduit such as a canal, pipe, or wetland and storing them in an above-ground storage facility. Water is then slowly released, reducing flood risk.

- **Green Infrastructure Methods** are a sustainable approach to natural landscape preservation and storm water management. Include in *eligible hazard mitigation activities* as well as provide additional ecosystem benefits. Ecosystem-based approach to replicate a site's pre-development, natural hydrologic function. Benefits include: Increase water supply, improved water quality, can be scaled to size and designed to fit site conditions.
- **Property Acquisition and Structure Demolition or Relocation** – The voluntary acquisition of an existing at-risk structure and the underlying land, and conversion of the land to open space through the demolition or relocation of the structure. The property must be deed-restricted in perpetuity to open space uses to restore and/or conserve the natural floodplain functions.
- **Retrofit Flood-Prone Residential Structures** are changes made to an existing structure to reduce or eliminate the possibility of damage to that structure from flooding, erosion, or other hazards. Examples of this mitigation are primarily elevation of structures above flood levels and floodwalls.
- **Safe Room Construction** - Safe room construction projects are designed to provide immediate life-safety protection for people in public and private structures from tornado and severe wind events. Includes retrofits of existing facilities or new safe room construction projects, and applies to both single and dual-use facilities
- **Minor Localized Flood Reduction Projects** - Projects to lessen the frequency or severity of flooding and decrease predicted flood damages, such as the installation or up-sizing of culverts, and stormwater management activities, such as creating retention and detention basins. These projects must not duplicate the flood prevention activities of other Federal agencies and may not constitute a section of a larger flood control system.
- **Infrastructure Retrofit** - Measures to reduce risk to existing utility systems, roads, and bridges.
- **Soil Stabilization** - Projects to reduce risk to structures or infrastructure from erosion and landslides, including installing geotextiles, stabilizing sod, installing vegetative buffer strips, preserving mature vegetation, decreasing slope angles, and stabilizing with rip rap and other means of slope anchoring. These projects must not duplicate the activities of other Federal agencies. *New tools for Bioengineered Shoreline Stabilization, Bioengineered Streambank Stabilization.*
- **Wildfire Mitigation** - Projects to mitigate at-risk structures and associated loss of life from the threat of future wildfire through: Defensible Space for Wildfire, Application of Ignition-resistant Construction and Hazardous Fuels Reduction. *New tool for Bioengineered Wildfire Mitigation.*
- **HMGP only - 5 Percent Initiative Projects** – These projects, which are only available pursuant to an HMGP disaster, provide an opportunity to fund mitigation actions that are consistent with the goals and objectives of approved mitigation plans and meet all HMGP program requirements, but for which it may be difficult to conduct a standard Benefit-Cost Analysis (BCA) to prove cost-effectiveness.

How do I apply?

Start by submitting a Notice of Interest, available on HSEMs website at:

<https://dps.mn.gov/divisions/hsem>

Where can I obtain further information?

For additional information about the HMA grant program, you can refer to the FEMA website:

<http://www.fema.gov/hazard-mitigation-assistance>

LYON COUNTY Hazard Mitigation Plan Update 2024

Planning Team Meeting #1
Presentation & Discussion, 3/7/24



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

Lyon County Project Lead

- Emily Coequyt, Lyon County
Emergency Management Director



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

PRESENTER: STACEY STARK

Zoom Logistics

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

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

USE CHAT:

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



ASK TO SPEAK:



PRESENTER: STACEY STARK

Meeting Purpose & Agenda

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

AGENDA

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

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

PRESENTER: STACEY STARK

HMP OVERVIEW – KEY POINTS

LYON COUNTY 2024 HMP UPDATE

Plan Requirement

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

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

Lyon County HMP Update 2024

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

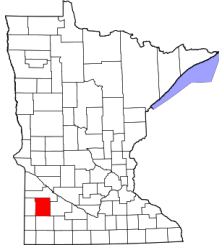


PRESENTER: BONNIE HUNDRIESER

Who the Plan Covers

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

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



PRESENTER: BONNIE HUNDRIESER

Who Participates



Planning Team

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

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

The Public

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

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

PRESENTER: BONNIE HUNDRIESER

Discussion Question #1:

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

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

Plan Content

What Hazards are Addressed

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

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

Natural hazard categories as per the State Hazard Mitigation Plan

Poll #1

PRESENTER: BONNIE HUNDRIESER

Plan Content

Risk Assessment & Vulnerability Analysis

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

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



PRESENTER: STACEY STARK

Timeframe for development & Plan Format

Timeframe:

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

- The Lyon County Plan will be completed in 2024.

Format:

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



Comments and Questions?

Hazard Prioritization

REVIEW OF THE HAZARD RISK PRIORITIES FOR
LYON COUNTY

Lyon County 2017 HMP Risk Rankings

Blizzards, Winter Storms, and Extreme Cold Events	High	<i>Has the level of priority for the following natural hazards changed for Lyon County?</i> <i>Please consider:</i> <ul style="list-style-type: none">➤ Increase or decrease of events (probability)➤ Local vulnerabilities (impacts to people, systems, and infrastructure)➤ New development and population growth
Drought	Moderate	
Flooding	Moderate	
Fire (structure/wildfire)	Moderate	
Severe Summer Storms, Lightning and Hail, and Extreme Heat Events	Moderate	
Earthquakes	Low	
Dam Failure	Low	
Landslides	Not Addressed	

Poll #2

PRESENTER: STACEY STARK

Discussion Question #2

What should be recorded as the updated Hazard Prioritizations for the Lyon County 2024 HMP?

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

PRESENTER: STACEY STARK

Natural Hazards
Assessment on Website-
Demo

LYON COUNTY HMP UPDATE Review of hazard prioritizations

Hazards	2024 Risk Priority (Low, Moderate, or High)
Flooding	
Windstorms	
Tornadoes	
Hail	
Lightning	
Winter Storms (heavy snow, blizzards, ice storms)	
Extreme Heat	
Extreme Cold	
Drought	
Wildfire	
Landslides	
Dam/Levee Failure	

Comments and Questions?

Mitigation Strategies, Actions & FEMA HMA grants

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

PRESENTER: BONNIE HUNDRIESER

Overview of Mitigation Actions



Mitigation Action Charts are the end product of the HMP.

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

PRESENTER: BONNIE HUNDRIESER

FEMA HMA Grant Funding



Eligible Activities:

- All applicants must be covered by an approved HMP
 - Cost share: Federal 75%, Applicant 25%
 - Projects must address risk reduction.
 - Eligible projects must be identified in the plan of action.
- Property Acquisition (flooding/erosion)
Tornado Safe Rooms (new/retrofit)
Infrastructure Retrofits (utility systems, roads & bridges)
Wildfire Mitigation
Soil Stabilization
Flood Risk Reduction
Green Infrastructure
Other projects difficult to conduct a standard BCA

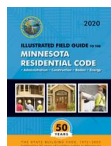
PRESENTER: BONNIE HUNDRIESER

Local Planning & Regulations



Examples:

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



PRESENTER: BONNIE HUNDRIESER

Structure & Infrastructure Projects

Examples:

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



PRESENTER: BONNIE HUNDRIESER

Natural Systems Protection

Examples:

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



PRESENTER: BONNIE HUNDRIESER

Education & Awareness Programs

Examples:

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



PRESENTER: BONNIE HUNDRIESER

Mitigation Preparedness & Response Support

Examples:

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



PRESENTER: BONNIE HUNDRIESER

Discussion Question #3

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

PRESENTER: BONNIE HUNDRIESER



Following Planning Team Meeting #1

Development of Local Mitigation Surveys

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

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

PRESENTER: BONNIE HUNDRIESER

Questions?

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

PRESENTER: STACEY STARK

Contact Information

Stacey Stark, MS, GISP

U-Spatial@UMD

slstark@d.umn.edu

218-726-7438



Bonnie Hundrieser, HM Planner

Hundrieser Consulting LLC

hundrieserconsulting@outlook.com

218-343-3468



PRESENTER: STACEY STARK

Lyon County HMP Planning Team Meeting #2

11/13/24 Meeting Summary & Documentation

Summary: On Wednesday, November 13, 2024, Lyon County Emergency Management convened key county, city, and township representatives, as well as neighboring jurisdictions and other stakeholders to participate in the 2nd and final Planning Team Meeting for the update of the Lyon County Hazard Mitigation Plan (HMP). The purpose of the meeting was to formally convene the Lyon County HMP Planning Team for a presentation on the draft plan and discussion of key items prior to public review and submission of the plan to HSEM and FEMA. The meeting was held via Zoom webinar video conference and was facilitated by Stacey Stark and Bonnie Hundrieser of the U-Spatial@UMD project team.

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

Meeting Participants: A total of **25** people attended the meeting. Representation included elected officials and departmental staff from Lyon County and the cities of Cottonwood, Ghent, Lynd, Marshall, Minneota, and Tracy. The cities of Balaton, Florence, Garvin, Russell, and Taunton were not available to participate and were not in attendance. Other stakeholders, including neighboring jurisdictions, participated in the meeting. A participant list is provided below:

	Name	Organization	Job Title
1	Emily Coequyt	Lyon County Emergency Management	Emergency Management Director
2	Todd Roelfsema	Lyon County Sheriff's Office	Chief Deputy
3	Loren Stomberg	Lyon County	County Administrator
4	Gary Crowley	Lyon County	Commissioner
5	Thomas Andries	Lyon County	Commissioner
6	Todd Draper	Lyon County	Commissioner
7	Aaron VanMoer	Lyon County	Highway Engineer
8	keith lindeman	Lyon County	Facilities Manager
9	Mark Volz	Lyon County	GIS Coordinator
10	Jason Lenz	Lyon County	IT Director
11	Teather Bliss	City of Cottonwood	City Administrator
12	Dawn Vlamnick	City of Ghent	Administrator/Clerk
13	Sue Paradis	City of Lynd	Clerk/Treasurer
14	Justin Guggisberg	City of Lynd	Mayor
15	Steven Anderson	City of Marshall	City Clerk
16	James Marshall	City of Marshall	Director of Public Safety
17	Robert Vidoloff	City of Minneota	City Administrator
18	Jeff Carpenter	City of Tracy	City Admin

19	Chris Fenske	Lakeview Schools	Superintendent
20	Tricia Stelter	Marshall Public Schools	Director of Operations
21	Jeremy Williams	Marshall Public Schools	Superintendent
22	Scott Monson	Minneota Public Schools	Superintendent
23	Les Engler	Minneota Public Schools	Facilities Manager
24	Deann Holland	Southwest Health & Human Services	Emergency Preparedness Planner
25	Mark Marcy	MN DPS HSEM	Regional Program Coordinator

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

- Meeting Purpose and Agenda
- About the Project Team
- Overview of Plan Update
- Who the Plan Covers
- Who Needs to Participate
- Overview of the Structure of the HMP (Website and PDF)
- Prioritization of Natural Hazards
- Review of Risk Assessment Factors and Hazard Profiles
- Overview of Mitigation Action Charts and FEMA HMA Grant Funding
- Review of Mitigation Strategies and Actions
- Open Discussion (Comments and Questions)
- Discussion of Next Steps & answer your questions

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

LYON COUNTY HMP PLANNING TEAM MEETING #2 DISCUSSION NOTES

Regarding Extreme Heat: The planning team revisited a review of the hazard of extreme heat. The planning team felt that extreme heat is a low priority hazard for the county, not moderate. Stacey Stark clarified that the hazard of extreme heat will be addressed in the plan, however it will not be profiled and specific mitigation actions will not need to be developed to address it.

Regarding Adopting Resolutions: The template resolution was requested to be sent with the meeting summary so that jurisdictions could have it in advance to prepare it for council action.

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

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

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

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

From: [Emily A. Coequyt](#)
To: [Emily A. Coequyt](#); [Eric D. Wallen](#); [Loren A. Stomberg](#); [Lyon Assessor](#); [Auditor](#); [Roger Schroeder](#); [Keith J. Lindeman](#); [Mark Volz](#); [Jason A. Lenz](#); [Aaron VanMoer](#); [John L. Biren](#); [Beth Wilms](#); [Carol Biren, M.S.](#); [Ann Orren](#); [Deann.Holland@swmhhs.com](#); [Thomas D. Andries](#); [Todd M. Draper](#); [graupmann.paul@gmail.com](#); [Gary L. Crowley](#); [Rick K. Anderson](#); [balatonmn@gmail.com](#); [kaseyholm.kh@gmail.com](#); [teather@cityofcottonwoodmn.gov](#); [daledebl@mvtvwireless.com](#); [garvinmn@gmail.com](#); [ericfoxusarmy@gmail.com](#); [dawn@ghentmn.com](#); [Mnorby66@gmail.com](#); [cityoflynd@outlook.com](#); [lyndchief@outlook.com](#); [Sharon.hanson@ci.marshall.mn.us](#); [Steven.anderson@ci.marshall.mn.us](#); [Jim.Marshall@ci.marshall.mn.us](#); [Robert.byrnes@ci.marshall.mn.us](#); [Shirley.teigland@ci.minneota.mn.us](#); [Matthew D. Boettger](#); [cityofrussell@woodstocktel.net](#); [jwiese95@gmail.com](#); [cityoftaunton@centurytel.net](#); [polejewski@mvtvwireless.com](#); [cityoftracy@iw.net](#); [jcarpenter@tracymn.org](#); [jllichty@tracymn.org](#); [ttwistol@tracymn.org](#); [djschmidt@mval.net](#); [Lori.grant@swsc.org](#); [jennytowne@woodstocktel.net](#); [eric335@hotmail.com](#); [dan@hoffmanbrobst.com](#); [bkloonneman@hotmail.com](#); [Sandy.berre@gmail.com](#); [milkmade@starpoint.net](#); [dkleine@marshallareaymca.org](#); [goodmundg@yahoo.com](#); [Scmeyer1969@gmail.com](#); [kdranch@mvtvwireless.com](#); [Wendlandfarms88@gmail.com](#); [pbotoolefarm@gmail.com](#); [bdparadis@mvtvwireless.com](#); [meulebroeck@mvtvwireless.com](#); [doomfarms@gmail.com](#); [jonbuysse@gmail.com](#); [Mark.Marcy@state.mn.us](#); [kelly.heather@usda.gov](#); [jeff.vanburen@usda.gov](#); [Jon.Huseby@state.mn.us](#); [Kim.schwich@usc.salvationarmy.org](#); [rdbyam@yahoo.com](#); [tricias@marshallutilities.com](#); [email@llec.coop](#); [Scott.Monson@minneotaschools.org](#); [chrisfenske@lakeview2167.com](#); [Jerry.rasmussen@lyndschool.org](#); [Jeremy.williams@marshall.k12.mn.us](#); [AndersonC@tracy.k12.mn.us](#); [khoul@swifoundation.org](#); [execdir@swrdc.org](#); [casey.namken@co.ym.mn.gov](#); [jim_s@co.redwood.mn.us](#); [cnyquist@co.murray.mn.us](#); [casey.sievert@co.pipetstone.mn.us](#); [dand@uppersiouxpolice-nsn.gov](#); [ascholten@co.lincoln.mn.us](#); [hundrieserconsulting@outlook.com](#); [slstark@d.umn.edu](#)
Cc:
Subject: Lyon County Hazard Mitigation Planning Team Meeting #2 Invitation
Date: Tuesday, September 17, 2024 2:04:04 PM
Attachments: [image001.png](#)

LYON COUNTY HAZARD MITIGATION PLAN UPDATE – MEETING INVITATION

Greetings,

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

We will be holding the meeting virtually using Zoom webinar:

Date: Wednesday, November 13, 2024

Time: 2pm

Register: [Control+Click here to follow to link to register for the meeting](#)

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

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

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

Thank you,



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

November 13, 2024



U-SPATIAL

UNIVERSITY OF MINNESOTA DULUTH
Driven to Discover

Welcome & Introductions

U-Spatial@UMD Project Leads



Stacey Stark
Project Manager
U-Spatial@UMD



Bonnie Hundrieser
HMP Planning Specialist
Hundrieser Consulting LLC

Lyon County Project Lead

- Emily Coequet, Lyon 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 Lyon 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



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

Agenda

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

PRESENTER: STACEY STARK

Overview of Plan Update

Lyon County is updating its **Hazard Mitigation Plan (HMP)** to fulfill a state & federal requirement. The plan must be updated every 5 years. The last plan was adopted in 2017.

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



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

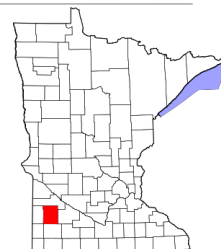
PRESENTER: BONNIE HUNDRIESER

Who the Plan Covers



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

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



PRESENTER: BONNIE HUNDRIESER

Stakeholder Involvement



Planning Team

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

The Public

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

PRESENTER: BONNIE HUNDRIESER

HMP Deliverables

PDF document:

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



Website companion:

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

PRESENTER: STACEY STARK

Prioritization of Hazards for Lyon County



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

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

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

PRESENTER: STACEY STARK

Hazards Risk Assessment

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



PRESENTER: STACEY STARK

Website Demo

z.umn.edu/LyonHMP

Comments and Questions?

Overview of Mitigation Action Charts



Mitigation Action Charts are the end product of the HMP.

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

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



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

PRESENTER: BONNIE HUNDRIESER

FEMA Mitigation Grant Funding



FEMA

Section 406

Available *after* a disaster occurs.

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

Section 404

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

Example Section 404 activities:

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

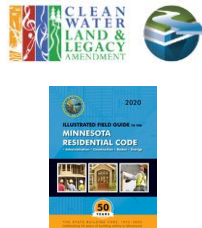
PRESENTER: BONNIE HUNDRIESER

Local Planning & Regulations



Lyon County Examples:

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



PRESENTER: BONNIE HUNDRIESER

Structure & Infrastructure Projects

Lyon County Examples:

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



PRESENTER: BONNIE HUNDRIESER

Natural Systems Protection

Lyon County Examples:

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



PRESENTER: BONNIE HUNDRIESER

Education & Awareness Programs

Lyon County Examples:

- Promoting sign-up for the county's emergency notification system.
- Encouraging residents to be aware of and prepared for severe weather events, extreme temperatures, and extended power outages.
- Tornado Shelter in Place awareness
- Extreme Cold – avoiding frozen pipes
- Drought – water use restrictions / water conservation tips

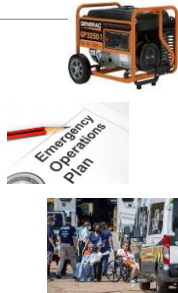


PRESENTER: BONNIE HUNDRIESER

Mitigation Preparedness & Response Support

Lyon County Examples:

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



PRESENTER: BONNIE HUNDRIESER

Comments and Questions?



November, 2024

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



Following Planning Team Mtg. #2

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

PRESENTER: BONNIE HUNDRIESER



December, 2024

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

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

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

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Bonnie Hundrieser, HM Planner

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**HUNDRIESER
CONSULTING LLC**

PRESENTER: STACEY STARK



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

HAZARD MITIGATION ASSISTANCE

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

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

Who is eligible for grant funding?

All applicants must have or be covered under an approved Hazard Mitigation Plan. Eligible applicants include: State and local governments; certain private non-profit organizations or institutions; and Tribal Communities

What types of projects can be funded?

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

- **Advance Assistance** may be used to develop mitigation strategies and obtain data, including for environmental and historic preservation compliance considerations, and develop complete project applications in a timely manner.
- **Aquifer Storage and Recovery** (ASR) projects serve primarily as a drought management tool, but can also be used to reduce flood risk and restore aquifers that have been subject to overdraft. The concept is to capture water when there is an abundant supply, store the water in subsurface aquifers, and recover water from the storage aquifer when needed. Storing water underground can help protect it from pollutants, evaporation, and weather events.
- **Floodplain and stream restoration** (FSR) projects are used primarily to reduce flood risk and erosion by providing stable reaches, and may also mitigate drought impacts. FSR projects restore and enhance the floodplain, stream channel and riparian ecosystem's natural function. They provide base flow recharge, water supply augmentation, floodwater storage, terrestrial and aquatic wildlife habitat, and recreation opportunities by restoring the site's soil, hydrology and vegetation conditions that mimic pre-development channel flow and floodplain connectivity.
- **Flood Diversion and Storage** (FDS) projects often are used to reduce flood risk, but also can be used to mitigate drought and improve ecosystem services. These projects involve diverting floodwaters from a stream, river, or other body of water into a conduit such as a canal, pipe, or wetland and storing them in an above-ground storage facility. Water is then slowly released, reducing flood risk.

- **Green Infrastructure Methods** are a sustainable approach to natural landscape preservation and storm water management. Include in *eligible hazard mitigation activities* as well as provide additional ecosystem benefits. Ecosystem-based approach to replicate a site's pre-development, natural hydrologic function. Benefits include: Increase water supply, improved water quality, can be scaled to size and designed to fit site conditions.
- **Property Acquisition and Structure Demolition or Relocation** – The voluntary acquisition of an existing at-risk structure and the underlying land, and conversion of the land to open space through the demolition or relocation of the structure. The property must be deed-restricted in perpetuity to open space uses to restore and/or conserve the natural floodplain functions.
- **Retrofit Flood-Prone Residential Structures** are changes made to an existing structure to reduce or eliminate the possibility of damage to that structure from flooding, erosion, or other hazards. Examples of this mitigation are primarily elevation of structures above flood levels and floodwalls.
- **Safe Room Construction** - Safe room construction projects are designed to provide immediate life-safety protection for people in public and private structures from tornado and severe wind events. Includes retrofits of existing facilities or new safe room construction projects, and applies to both single and dual-use facilities
- **Minor Localized Flood Reduction Projects** - Projects to lessen the frequency or severity of flooding and decrease predicted flood damages, such as the installation or up-sizing of culverts, and stormwater management activities, such as creating retention and detention basins. These projects must not duplicate the flood prevention activities of other Federal agencies and may not constitute a section of a larger flood control system.
- **Infrastructure Retrofit** - Measures to reduce risk to existing utility systems, roads, and bridges.
- **Soil Stabilization** - Projects to reduce risk to structures or infrastructure from erosion and landslides, including installing geotextiles, stabilizing sod, installing vegetative buffer strips, preserving mature vegetation, decreasing slope angles, and stabilizing with rip rap and other means of slope anchoring. These projects must not duplicate the activities of other Federal agencies. *New tools for Bioengineered Shoreline Stabilization, Bioengineered Streambank Stabilization.*
- **Wildfire Mitigation** - Projects to mitigate at-risk structures and associated loss of life from the threat of future wildfire through: Defensible Space for Wildfire, Application of Ignition-resistant Construction and Hazardous Fuels Reduction. *New tool for Bioengineered Wildfire Mitigation.*
- **HMGP only - 5 Percent Initiative Projects** – These projects, which are only available pursuant to an HMGP disaster, provide an opportunity to fund mitigation actions that are consistent with the goals and objectives of approved mitigation plans and meet all HMGP program requirements, but for which it may be difficult to conduct a standard Benefit-Cost Analysis (BCA) to prove cost-effectiveness.

How do I apply?

Start by submitting a Notice of Interest, available on HSEMs website at:

<https://dps.mn.gov/divisions/hsem>

Where can I obtain further information?

For additional information about the HMA grant program, you can refer to the FEMA website:

<http://www.fema.gov/hazard-mitigation-assistance>

Mitigation Strategies & Action Types

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

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

Mitigation Strategy	Description	Example Mitigation Actions
Local Planning and Regulations	These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built.	<ul style="list-style-type: none"> • Comprehensive plans • Land use ordinances • Planning and zoning • Building codes and enforcement • Floodplain ordinances • NFIP Community Rating System • Capital improvement programs • Open space preservation • Shoreline codes • Stormwater management regulations and master plans • Mobile home park compliance for storm shelters
Structure and Infrastructure Projects	<p>These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure.</p> <p>This type of action also involves projects to construct manmade structures to reduce the impact of hazards.</p>	<ul style="list-style-type: none"> • Property Acquisitions and elevations of structures in flood prone areas • Utility undergrounding • Structural retrofits (i.e., metal roofs) • Floodwalls and retaining walls • Detention and retention structures • Culvert Installation/Modification • Roads & Bridge risk reduction • Safe Room (New construction or facility retrofit) • Green Infrastructure Methods <p><i>Many of these types of actions are projects eligible for funding through FEMA HMA grant programs.</i></p>

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

Appendix G – Public Outreach & Engagement Documentation

Lyon County MHMP News Release #1

Record of Public Input & Incorporation

Overview: On **June 7, 2023**, Lyon County Emergency Management put out a news release titled “**Public Input Wanted as County Updates Multi-Hazard Mitigation Plan**” to announce the start of the county’s Hazard Mitigation Plan. The news release provided information on the purpose and content of the plan, who the plan covers, stakeholders involved in the plan update and examples of hazard mitigation activities. Lyon County used the news release to gather feedback from residents and businesses from across the county to incorporate into the plan, inviting feedback to the following:

- What are the natural hazards you feel pose the greatest risk to your community?
- What concerns do you have, and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for your personal property, your community, or the County as a whole?

The public was strongly encouraged contact Lyon County Emergency Management to submit comments, concerns, or questions regarding natural disasters and potential mitigation actions to be included into the plan update process. The public was also able to post comments electronically on county or city Facebook sites where the news release was posted.

Distribution: The news release was sent via email to the county’s HMP Jurisdictional Contact List, which includes the names, titles, phone numbers, and email addresses of key stakeholders to be engaged in the HMP update, including county, city, and township contacts; other related agency and organizational stakeholder contacts, and neighboring jurisdiction contacts. (A copy of the Jurisdictional Contact List can be found in Appendix F). The news release was additionally sent to local media contacts with a request to carry the news release.

Postings: Attached is documentation of the news release postings by Lyon County, participating jurisdictions, local media, and other stakeholders. Cities and townships were encouraged to help share the news release locally by posting it on their websites, social media, or community bulletin boards.

Public Input & Incorporation:

Following is a record of public responses to the news release and how their input will be incorporated into the plan update, and if not relevant to be addressed, why.

COMMENT #1

6/17/23 Email to Lyon County Emergency Management Director

Emily,

I recently saw your invitation to share about severe weather impact on property owners in Lyon County. I live at 1054 County Road 63 Balaton. Rock Lake township, section 36.

The problem I had was with the huge rain we had in 2018, which caused flooding near my house and extending into Balaton, Lake Yankton and down into Lake Shetek. My house is near and at the end of Lyon County ditch 48. The water flows from the county ditch into a creek that is in my native prairie/pasture area. It then continues towards the end area of Lake Yankton and then flows into Lake Shetek.

Of course, as you know, that huge rain caused flooding in and around Lake Yankton and Lake Shetek. I am a member of the Shetek Area Lakes Association, which I became a member of because this association was going to address the flooding and help to find solutions. At meetings we discussed that one of the problems is that more farmland gets drained into a ditch system that is not able to handle the amount of water that comes through during these heavy rains.

Since 2018, we now have the One Watershed One Plan of the Des Moines River Watershed. When I have spoken to Lyon County officials in the past about the water problems and if the One Watershed One Plan help with this, I was told that Lyon County only has a small percentage of land in the Des Moines watershed. But I am in that small portion of the watershed and I am a Lyon County taxpayer. So I am thankful that you have opened this avenue for mine and others' voices and stories to be heard.

One solution, I feel, is to do some structures that will slow the amount of water going through the county ditches. This would affect working with our neighboring counties to possibly put in structures like there is in Lyon County around Marshall, which slows the water down.

I have attached some pictures of the amount of water that travels through during heavy rains. Although I had only minor damage to my driveway during this flood, these waters caused more damage as they flowed downstream.

I hope this was helpful. Thank you for allowing my voice to be heard.
Karen Larson

6/21/23 Lyon County EMD Email Response

Hello Karen,

Thank you for your time to respond to the Lyon County news release on our current hazard mitigation plan update and voicing your concerns addressing your localized flooding during high rain events. The HMP will address flooding as a hazard that affects Lyon County, as well as identifying the types of localized mitigation actions that can be implemented to reduce risk. Your input has been recorded and we will seek to include mitigation actions that address this in the county's 5-year mitigation action plan. We will also be engaging agency partners that would have a role in this. Your time and input are appreciated!

Thank you,

Emily Coequyt
Lyon County Emergency Management
607 W. Main St.

Marshall, MN 56258
Phone: 507-706-1276

Incorporation: The Lyon County HMP will address flooding as a hazard that affects the county and specific areas of local vulnerability. Localized mitigation actions will be identified for reducing future risk, and will include the related agency stakeholders and existing planning mechanisms that would be related to those efforts.

From: [Emily A. Coequyt](#)
To: [Emily A. Coequyt](#); [Eric D. Wallen](#); [Loren A. Stomberg](#); [Lyon Assessor](#); [Auditor](#); [Roger Schroeder](#); [Keith J. Lindeman](#); [Mark Volz](#); [Jason A. Lenz](#); [John L. Biren](#); [Beth Wilms](#); [Carol Biren, M.S.](#); [Thomas D. Andries](#); [Todd M. Draper](#); ["Paul Graupman"](#); [Gary L. Crowley](#); [Rick K. Anderson](#); ["City Of Balaton"](#); [Kasey Holm](#) (kaseyholm.kh@gmail.com); teather@cityofcottonwoodmn.com; [Dale Louwagie \(daledebl@mvtvwireless.com\)](mailto:Dale Louwagie (daledebl@mvtvwireless.com)); garvinmn@gmail.com; [Eric Fox \(ericfoxusarmy@gmail.com\)](mailto:Eric Fox (ericfoxusarmy@gmail.com)); Dawn Vlaininck; Mnorby66@gamil.com; cityofflynd@outlook.com; Sharon.hanson@ci.marshall.mn.us; Steven.anderson@ci.marshall.mn.us; jim.marshall@ci.marshall.mn.us; Robert.byrnes@ci.marshall.mn.us; Shirley Teigland; Matthew D. Boettger; city of russell; [John Weise \(jweise95@gmail.com\)](mailto:John Weise (jweise95@gmail.com)); cityoftaunton@centurytel.net; polejewski@mvtvwireless.com; cityoftracy@iw.net; jlichty@tracymn.org; tonya.ormberg@cygnusdelivers.com; Don & Jean; Lori Grant; jennytowne@woodstocktel.net; eric335@hotmail.com; dan@hoffmanbrobst.com; bkionneman@hotmail.com; sandy.berre@gmail.com; milkmade@starpoint.net; dkleine@marshallareaymca.org; goodmundg@yahoo.com; scmeyer1969@gmail.com; kdranch@mvtvwireless.com; wendlandfarms88@gmail.com; potoolefarm@gmail.com; bdparadis@mvtvwireless.com; meulebroeck@mvtvwireless.com; doomfarms@gmail.com; jonbuysse@gmail.com; [Marcy, Mark \(DPS\)](mailto:Marcy, Mark (DPS)); kelly.heather@usda.gov; jeff.vanburen@usda.gov; Jon.Huseby@state.mn.us; Kim.schwich@usc.salvationarmy.org; rdbyam@yahoo.com; tricias@marshallutilities.com; email@llec.coop; Scott Monson; Chris Fenske; Jerry Rasmussen; Williams Jeremy; Chad Anderson; khoul@swifoundation.org; execdir@swrdc.org; Casey Namken; Jim Sandgren; Carl Nyquist; [Casey Sievert \(casey.sievert@co.pipestone.mn.us\)](mailto:Casey Sievert (casey.sievert@co.pipestone.mn.us)); Dan DeSmet; Amber Scholten; Bonnie K Hundrieser; bjpowell77@hotmail.com; lyndchief@outlook.com
Subject: Lyon County Hazard Mitigation Plan Update
Date: Wednesday, June 7, 2023 7:34:29 PM
Attachments: [Press Release 6.7.2023.pdf](#)

*Hello, this is a second send of the news release, with instructions on posting it and returning documentation. Thank you!

Greetings,

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

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

- **Websites/Facebook Postings:** Please send me an email detailing the date, location, and link of the posting. We will need to get a screenshot of the posting online.
- **Hardcopy Postings:** Please send me an email detailing the date and location of where the news release was posted (i.e., City Hall bulletin board).

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

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

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

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

If you have any questions, please let me know.

Thank you,

Emily Coequyt

From: [Emily A. Coequyt](#)
To: news@marshallindependent.com; editor@minneotamascot.com; per@headlightherald.com; balatonpublishing@yahoo.com
Cc: [Bonnie K Hundrieser](#)
Subject: Lyon County Mitigation Plan Press Release
Date: Wednesday, June 7, 2023 1:31:16 PM

Greetings,

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

It would be helpful if this news release could be run in your paper to help notify the public about the plan update and to have an opportunity to provide feedback.

Please let me know if you have any questions or concerns.

Have a great Day!



LYON COUNTY EMERGENCY MANAGEMENT

607 West Main Street
Marshall, MN 56258

LYON COUNTY NEWS RELEASE

June 7, 2023

Public Input Wanted as County Updates Hazard Mitigation Plan

Lyon County residents, community leaders, business owners, area agencies and organizations now have an opportunity to share how severe weather events impact their property and lives. There is also an opportunity to share their ideas on how to reduce local impacts in the future.

The Lyon County Office of Emergency Management is working with U-Spatial at the University of Minnesota Duluth to update the county's Hazard Mitigation Plan (HMP). The plan assesses the natural hazards that pose risk to the county, such as tornadoes, straight line winds, ice storms, blizzards, wildfire, flooding, and extreme temperatures and identifies ways to minimize the damage of future events. As the county works to update the plan, it wants to hear from the public.

The Lyon County HMP is a multi-jurisdictional plan that covers Lyon County, including the cities of Balaton, Cottonwood, Florence, Garvin, Ghent, Lynd, Marshall, Minneota, Russell, Taunton, and Tracy. The Lyon County HMP also incorporates the concerns and needs of townships, school districts, and area agencies or organizations participating in the plan. The plan will be updated by a planning team made up of representatives from county departments, local municipalities, school districts and other key stakeholders. When completed, the plan will be submitted to the Minnesota Department of Homeland Security and Emergency Management and the Federal Emergency Management Agency (FEMA) for approval.

"Hazard mitigation planning is a central part of our emergency management program," said Emily Coequyt, Lyon County Emergency Management Director. "Understanding the natural hazards that can cause serious impact to our communities and taking action to reduce or eliminate the impact of future disasters makes us more resilient. Hazard mitigation helps us to break the cycle of damage and repair caused by things like flooding, ice storms, and severe wind events that can damage property, stress economies, and threaten life safety in our county."

Examples of hazard mitigation include:

- Conducting public outreach on severe weather awareness and preparedness
- Limiting or restricting development in floodplain areas

- Removing existing buildings from flood or erosion prone hazard areas
- Using snow fences to limit blowing and drifting of snow over road corridors
- Constructing tornado safe rooms in vulnerable areas such as mobile home parks
- Burying overhead powerlines that may fail due to heavy snow, ice, or windstorms

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

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

- What are the natural hazards you feel pose the greatest risk to your community?
- What concerns do you have, and what sorts of actions do you feel would help to reduce damages of future hazard events in your community or the county as a whole?

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

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

The Federal Disaster Mitigation Act of 2000 (DMA 2000) requires counties to update their plan every 5 years to maintain eligibility for FEMA's Hazard Mitigation Assistance (HMA) grant programs.

Contact

Emily Coequyt
Lyon County Emergency Management Director
Phone: (507) 706-1276
Email: emilycoequyt@co.lyon.mn.us

Lyon County HMP News Release #1 – June 7, 2023
Chart Documentation of News Release Postings

Jurisdiction or Agency	Posting Representative	Date & Location of News Release Posting
Lyon County	Emily Coequyt, Lyon County EMD	6/7/23, Lyon County website and Facebook page
City of Balaton	Kimberly Wall, City Clerk	6/7/23, City Hall front window and notification board located in the city hall.
City of Cottonwood	Teather Bliss, City Clerk	6/7/23, City Hall bulletin board
City of Florence		
City of Garvin	Sandy Carlson, City Clerk	6/26/23, City Hall front window
City of Ghent	Dawn Vlaminck, City Clerk	6/26/23, City Hall bulletin board and City website.
City of Lynd	Sue Paradis, City Clerk	6/7/23, City website, City Hall bulletin board and Post Office
City of Marshall	Steven Anderson, Clerk	6/13/23, City website
City of Minneota	Shirley Teigland, City Administrator	6/7/23, City Office bulletin board
City of Russell	Laurie Millner, Clerk	6/12/23, City Office bulletin board and Post Office
City of Taunton	Rebecca Jerzak, City Clerk	6/26/23, City Hall bulletin board
City of Tracy	Tyler Twistol, Finance Director	6/23/23, City Hall bulletin board
Clifton Township	Donald Schmidt, Clerk	6/10/23, Town Hall bulletin board.
Marshall Municipal Utilities	Tricia Stelter, HR Coordinator	6/8/23, Marshall Public Utilities Office public display board
Lyon-Lincoln Electric Coop	Brian Jeremiason, Coop Manager	6/9/23, LLEC Facebook page
Lakeview Public Schools	Chris Fenske, Superintendent	6/12/23, School website
Lynd Public School	Jason Swenson, Principal	6/7/23, School Facebook page
Minnesota Public Schools	Scott Monson, Superintendent	6/13/23, School Facebook page

Lyon County HMP News Release #2

Record of Public Input & Incorporation

Overview: On December 3, 2024 Lyon County Emergency Management put out a news release titled “Public Comment Sought for County’s Hazard Mitigation Plan” to announce the completion of the draft Lyon County Hazard Mitigation Plan and invitation for public review and comment. The news release informed jurisdictional stakeholders and the public that a copy of the draft plan, interactive website, and comment form for public feedback was available online with a website link. The public review period for the draft plan was open from 12/3/24 – 12/17/24 for a total of 15 days.

Distribution: The news release was sent via email to the county’s HMP Jurisdictional Contact List, which includes the names, titles, phone numbers, and email addresses of key stakeholders to be engaged in the HMP update, including County Contacts, City Contacts, Township Contacts, Other Stakeholder Contacts, and Neighboring Jurisdiction Contacts. (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 Lyon 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 Lyon County news release and how the input will be incorporated into the plan update, and if not relevant to be addressed, why.

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

From: [Emily A. Coequyt](#)
To: [Emily A. Coequyt](#); [Eric D. Wallen](#); [Loren A. Stomberg](#); [Lyon Assessor](#); [Auditor](#); [Roger Schroeder](#); [Keith J. Lindeman](#); [Mark Volz](#); [Jason A. Lenz](#); [Aaron VanMoer](#); [John L. Biren](#); [Beth.wilms@swmhhs.com](#); [Carol.biren@swmhhs.com](#); [Ann.Orren@swmhhs.com](#); [Deann.Holland@swmhhs.com](#); [Thomas D. Andries](#); [Todd M. Draper](#); [graupmann.paul@gmail.com](#); [Gary L. Crowley](#); [Rick K. Anderson](#); [balatonmn@gmail.com](#); [kaseyholm.kh@gmail.com](#); [teather@cityofcottonwoodmn.gov](#); [daledebl@mytvwireless.com](#); [garvinmn@gmail.com](#); [ericfoxusarmy@gmail.com](#); [dawn@ghentmn.com](#); [Mnorby66@gmail.com](#); [cityoflynd@outlook.com](#); [lyndchief@outlook.com](#); [Sharon.hanson@ci.marshall.mn.us](#); [Steven.anderson@ci.marshall.mn.us](#); [Jim.Marshall@ci.marshall.mn.us](#); [Robert.byernes@ci.marshall.mn.us](#); [robert.vidoloff@ci.minneota.mn.us](#); [Matthew D. Boettger](#); [cityofrussell@woodstocktel.net](#); [jwiese95@gmail.com](#); [cityoftaunton@centurytel.net](#); [polejewski@mytvwireless.com](#); [cityoftracy@iw.net](#); [jcarpenter@tracymn.org](#); [jlichty@tracymn.org](#); [ttwistol@tracymn.org](#); [djschmidt@mnval.net](#); [Lori.grant@swsc.org](#); [jennytowne@woodstocktel.net](#); [eric335@hotmail.com](#); [dan@hoffmanbrobst.com](#); [bkionneman@hotmail.com](#); [Sandy.berre@gmail.com](#); [milkmade@starpoint.net](#); [dkleine@marshallareaymca.org](#); [goodmundg@yahoo.com](#); [Scmeyer1969@gmail.com](#); [kdranch@mytvwireless.com](#); [Wendlandfarms88@gmail.com](#); [pbotoolefarm@gmail.com](#); [bdparadis@mytvwireless.com](#); [meulebroeck@mytvwireless.com](#); [doomfarms@gmail.com](#); [jonbuysse@gmail.com](#); [Mark.Marcy@state.mn.us](#); [kelly.heather@usda.gov](#); [jeff.vanburen@usda.gov](#); [Jon.Huseby@state.mn.us](#); [Kim.schwich@usc.salvationarmy.org](#); [tricias@marshallutilities.com](#); [email@llec.coop](#); [Scott.Monson@minneotaschools.org](#); [chrisfenske@lakeview2167.com](#); [Jerry.rasmussen@lyndschool.org](#); [Jeremy.williams@marshall.k12.mn.us](#); [AndersonC@tracy.k12.mn.us](#); [khoul@swifoundation.org](#); [execdir@swrdc.org](#); [casey.namken@co.ym.mn.gov](#); [jim_s@co.redwood.mn.us](#); [cnyquist@co.murray.mn.us](#); [casey.sievert@co.pipestone.mn.us](#); [dand@uppergiouxpolice-nsn.gov](#); [ascholten@co.lincoln.mn.us](#); [robert.vidoloff@ci.minneota.mn.us](#)
Cc: [hundrieserconsulting@outlook.com](#); [slstark@d.umn.edu](#)
Subject: Lyon County HMP News Release #2 - Public Review Period
Date: Monday, December 2, 2024 1:31:40 PM
Attachments: [image001.png](#)
[12-3-24 Lyon County HMP Press Release - Public Review Period.pdf](#)

Greetings,

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

The public review period will run from **December 3 to December 17**, prior to submission of the plan to FEMA.

Lyon County and the cities of Balaton, Cottonwood, Florence, Garvin, Ghent, Lynd, Marshall, Minneota, Russell, Taunton, and Tracy are requested to please post the release. Townships and other related stakeholders involved in the plan update are also encouraged to share the news release. Please post the news release to areas such as your website, Facebook page, bulletin boards, or other locations.

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

In addition, if you have not already reviewed the plan during the government review period, you are strongly encouraged to do so. There are website links as well as a QR code in the news release that will take you to PDF of the plan, interactive website, and mitigation action charts. There is also an online feedback form where you are encouraged to provide any comments, questions, or other feedback. If you review the plan, please let me know.

As this is a 15-day public review period, your prompt attention to this is appreciated.

Thank you,

Emily Coequet

DIRECTOR
EMERGENCY MANAGEMENT
LYON COUNTY



 www.lyonco.org

 emilycoequet@co.lyon.mn.us

 507-706-1276

 607 W Main St.
Marshall, MN 56258

From: [Emily A. Coequyt](#)
To: ["office@minneotamascot.com"](#); ["news@marshallindependent.com"](#); ["per@headlightherald.com"](#)
Cc: ["Bonnie K Hundrieser"](#)
Subject: Lyon County HMP Press Release
Date: Monday, December 2, 2024 1:28:16 PM
Attachments: [image001.png](#)
[12-3-24 Lyon County HMP Press Release - Public Review Period.pdf](#)

Greetings,

Lyon County is nearing completion of our Hazard Mitigation Plan, as required by FEMA, part of the process is to hold a public review period. Would you be willing and able to add this notice to your next publication. I would appreciate it very much.

Have a Great Week!

Em





LYON COUNTY EMERGENCY MANAGEMENT

607 West Main Street
Marshall, MN 56258

LYON COUNTY NEWS RELEASE

December 3, 2024

Public Comment Sought for Lyon County Hazard Mitigation Plan

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

All county residents, as well as other interested agency or organizational stakeholders are strongly encouraged to review and offer feedback on the interactive website, PDF of the draft plan, and proposed local mitigation actions. The review and comment period is open for a period of 15 days through December 17, 2024. The public can access the plan using the following hyperlinks:

[Lyon County HMP Website Homepage](#) (feedback form at the bottom of page)

[Lyon County Mitigation Action Charts](#) (feedback form at the bottom of page)

The Lyon County HMP is a multi-jurisdictional plan that covers Lyon County, including all cities and townships within the county. The Lyon County HMP also incorporates the concerns and needs of other key stakeholders such as school districts and related agencies, organizations, or businesses participating in the planning process.

Update of the plan has been under direction of Lyon County Emergency Management in cooperation with U-Spatial at the University of Minnesota Duluth and representatives from county departments, city and township governments and other participating stakeholders. Together, the planning team worked to identify cost-effective and sustainable actions to reduce or eliminate the long-term risk to human life or property from natural hazards. Examples include infrastructure projects for areas that experience repetitive flooding; construction of safe rooms in areas where residents and visitors are vulnerable to tornadoes and severe storm events; burying powerlines that may fail due to heavy snow, ice, or wind storms; ensuring timely emergency communication to the public through warning sirens and mass notification systems; and conducting outreach to increase public awareness of severe weather and personal preparedness.

Hazard mitigation planning helps Lyon County and other jurisdictions protect their residents. Working with local communities through the process helps identify vulnerabilities and develop strategies to reduce or eliminate the effects of a potential hazard. In addition, increasing public awareness of natural disasters and encouraging personal preparedness helps to create a community that is resilient to disaster, and breaks the cycle of response and recovery. Updating the plan further allows Lyon 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. Lyon 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 Lyon County Emergency Management.

Contact:

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



Lyon County HMP News Release #2 (12/3/24)
Chart Documentation of News Release Postings

Jurisdiction or Agency	Posting Representative	Date & Location of News Release Posting
Lyon County	Emily Coequyt, Lyon County EMD	12/2/24 – Posted on Lyon County Facebook and Website
City of Balaton	Kimberly Wall, City Clerk	12/2/24 – Posted on Website and at City Office
City of Cottonwood	Teather Bliss, City Clerk	12/2/24 – Posted at City Office
City of Florence		
City of Garvin	Sandy Carlson, City Clerk	12/10/24 – Posted on City Notice Board
City of Ghent	Dawn Vlaminck, City Clerk	12/2/24 – Posted on Website and in City Office
City of Lynd	Sue Paradis, City Clerk	12/2/24 – Posted on Website, Community Board, and Post Office
City of Marshall	Steven Anderson, Clerk	12/10/24 – Posted to the City of Marshall Website
City of Minneota	Rob Vidoloff, City Administrator	12/4/24 – Posted on City of Minneota Facebook 12/12/24 – Posted at City Office
City of Russell	Laurie Millner, Clerk	12/3/24 – Posted at City Office
City of Taunton	Rebecca Jerzak, City Clerk	12/5/24 – Posted at Post Office
City of Tracy	Tyler Twistol, Finance Director	12/4/24 – Posted at City Office
Tracy Headlight	News Editor	12/6/24 – Posted in Newspaper
Marshall Independent	News Editor	12/6/24 – Posted and Story in the Newspaper
Chris Fenske	Lakeview Public School	12/2/24 – Posted on Website and in Weekly Newsletter sent home to all Families in the District
Don Schmidt	Clifton Township	12/3/24 – Posted on Town Hall Bulletin Board

Appendix H – Mitigation Actions by Jurisdiction

CITY OF BALATON

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events such as blizzards, ice storms, windstorms, tornadoes, and flooding that can result in power outages, property damage, and risk to life safety.	Existing High 2025-2030	City Admin / City EM	We post information on the city of Balaton's website and Facebook page. We also post information on bulletin boards at the community center, liquor store, gas station and post office. Balaton also sends out spring and fall newsletters. The fire department keeps people trained on storm watching and the city posts notifications of the National Weather Service out of Sioux Falls SD. The city will work with Lyon County Emergency Management to participate in the National Weather Service's – Severe Weather Awareness Weeks and share information with our residents locally.	City Funding
2	All-Hazards	Education & Awareness Programs	Encourage residents in our community to sign up for the county's CodeRED system to receive timely emergency notifications.	Existing High 2025-2030	City Admin / City EM	The city will work with Lyon County emergency management to provide us with a link to put on our website, as well as a flyer that we can post in public places directing people to sign up.	City Funding
3	All-Hazards	Mitigation Preparedness Response Support	Work with our Assisted Living Facility to develop an evacuation and sheltering plan.	New High 2025-2030	City EM	The city of Balaton will work with our local assisted living facility to ensure that plans and procedures are in place for emergency evacuation and sheltering of residents.	City Funding, Assisted Living Facility
4	Extreme Temps (Heat/Cold)	Education & Awareness Programs	Encourage residents to be aware of and prepared for periods of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures occur.	Existing High 2025-2030	City Admin / City EM	Balaton posts notifications on extreme heat or cold temperatures and safety information put out by the National Weather Service out of Sioux Falls SD.	City Funding

CITY OF BALATON

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
5	Extreme Cold	Education & Awareness Programs	Conduct outreach to property owners on how to avoid freezing pipes during periods of extreme cold.	Existing High 2025-2030	City Admin / City EM	We do this as part of our outreach during periods of extreme cold. We remind homeowners to run a stream of hot water to avoid frozen pipes during periods of extreme cold.	City Funding ³
6	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Obtain a portable generator for our City Hall and Community Center that serves as our local shelter if people are displaced from a severe storm event or extended power outage.	New High 2025-2030	City EM / City Public Works	The city will work to purchase a generator as funding is available. If necessary, we will seek possible outside grant funding.	City Funding, FEMA 5% Initiative Grant Funding
7	Severe Summer Storms	Structure & Infrastructure Projects	Work with the local mobile home park owner to construct a storm shelter or tornado safe room.	New High 2025-2030	City EM, Public Works	The city will work with our local mobile home park operator to evaluate possible shelter solutions, or to establish an alternate facility location for residents to take shelter. The city would work with Lyon County Emergency Management to seek potential FEMA grant funding for a tornado safe room.	City Funding, FEMA BRIC grant funding
8	Drought	Local Planning & Regulations / Education & Awareness Programs	Establish and enforce watering use restrictions when in periods of severe drought and raise public awareness of water conservation measures.	New Moderate 2025-2030	City Admin	The city will enforce emergency water use restrictions as per direction from the MN DNR. The city will also do outreach to help make residents aware of limitations on non-essential water use. We recently developed a new lawn irrigation ordinance.	City Funding
9	Flooding	Structure & Infrastructure Projects	Implement new storm sewer upgrades as construction projects and purchase additional pumps in the event of flooding.	Existing Moderate 2025-2030	City Public Works	Our public works staff monitors and addresses any stormwater infrastructure upgrades and equipment as needed.	City Funding

CITY OF BALATON

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
10	Flooding	Local Planning & Regulations	Establish and enforce city ordinances that reduce the impacts of high rain events.	New High 2025-2030	City Admin	The city of Balaton will work with the MN DNR to enroll in the National Flood Insurance Program and establish a floodplain ordinance. We also enforce the city's sump pump ordinance to minimize impacts to the city's stormwater system.	City Funding, MN DNR
11	Flooding	Structure & Infrastructure Projects	Work with the city and county engineer to address stormwater infrastructure upgrades and other flood reduction measures to better handle high rain events.	Existing High 2025-2030	City Admin, City Public Works in coord with Lyon County	This is part of our city's public works program. Our city public works dept. and city engineer are continuously repairing storm drains to ensure they can handle significant rainfall amounts. Upgrading the storm sewer culvert under County Road 5 is currently a high priority. We also have a city lift station that is prone to flooding during high rain events. The city park (Knudson Bosely) is vulnerable to flooding. We need to upsize several culverts to better handle high rain events. Upgrading the storm sewer culvert under County Road 5 is a high priority. Funding for these projects will primarily be from the city budget. The city may also seek outside grant funding for flood mitigation from the MN DNR or FEMA in the future.	City Funding, MN DNR FHM grant program, FEMA BRIC grant program
12	Wildfire	Education & Awareness Programs	Work to raise public awareness of wildfire risk and actions that can be taken to reduce risk locally.	Existing Moderate 2025-2030	City Admin, City EM, Fire Dept.	The city will work increase public awareness of creating defensible space in woodland areas that are experiencing new development. We will also post information on burning restrictions when burning bans are in place.	City Funding

CITY OF BALATON**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
13	Wildfire	Structure & Infrastructure Projects	Work with our fire department to address the need for water resources outside of the municipal water system.	New Moderate 2025-2030	City Admin, EM, Fire Dept.	Our city EM and Fire Dept. will work to assess where water resources are needed outside of the municipal water services and what solutions may be feasible, such as installation of cisterns or dry hydrants. Outside grant funding would possibly be sought from the USDA Community Wildfire Defense Grant Program.	City Funding, USDA CWDG program

CITY OF COTTONWOOD

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events such as blizzards, ice storms, windstorms, tornadoes, and flooding that can result in power outages, property damage, and risk to life safety.	Existing High 2025-2030	City Admin / City EM	The city of Cottonwood utilizes our city website and social media to share information with the public. We also post information on bulletin boards outside of the city office, put information in city council packets, and put information into a city newsletter. We provide free materials to new residents and all members of the community including an emergency preparedness guide, 911 bookmarks, a kids guide for emergencies, and more. The city participates in the NWS Severe Weather Awareness Week, Fire Prevention Week, and EMS Week.	City Funding
2	All-Hazards	Education & Awareness Programs	Encourage residents in our community to sign up for the county's CodeRED system to receive timely emergency notifications.	Existing High 2025-2030	City Admin / City EM	We encourage people to sign up for CodeRED and the city's PAYA notification system on our city utility bills, social media, the city website, and the city newsletter.	City Funding
3	All-Hazards	Education & Awareness Programs	Work to address language barriers in the sharing of emergency communications by the city.	New High 2025-2030	City Admin / City EM	The city will work with Lyon County Emergency Management for assistance on how we can best translate emergency information we put via our city communication channels (PAYA, city website, etc).	City Funding

CITY OF COTTONWOOD

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
4	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and development.	Existing High 2025-2030	City Admin, Planning & Zoning Committee	The city's Planning & Zoning committee enforces the city zoning requirements for developments, variances, and shoreland alterations. The committee also ensures that impervious surface limits are being followed so that the storm sewers and roads are not being overwhelmed by runoff. We do have a 20-year-old comprehensive plan that is in need of updating that addresses community growth. The city also recently adopted the Minnesota Basic Code or Ordinances.	City Funding
5	Extreme Temps (Heat/Cold)	Education & Awareness Programs	Encourage residents to be aware of and prepared for periods of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures occur.	Existing High 2025-2030	City Admin / EM	The city will work to share important temperature safety information that comes to us from the county emergency manager and the NWS.	City Funding
6	Extreme Cold	Local Planning & Regulations	Provide resources to the community to assist with energy bills during winter months.	Existing High 2025-2030	City Admin	The city of Cottonwood provides the community with resources that will help with utility bills during winter. The city follows the Cold Weather Rule with water so that we do not run the risk of frozen or broken pipes. Minnesota's Cold Weather Rule (CWR) is a state law that protects residential utility customers from having electric or natural gas service shut off between October 1 and April 30.	City Funding
7	Extreme Cold	Education & Awareness Programs	Conduct outreach to property owners on how to avoid freezing pipes during periods of extreme cold.	Existing High 2025-2030	City Admin, City Public Works	The city uses our city website and utility billing to remind homeowners to run a stream of hot water to avoid frozen pipes during periods of extreme cold.	City Funding

CITY OF COTTONWOOD

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
8	Extreme Cold	Education & Awareness Programs	Encourage residents to be prepared for periods of extreme cold and potential power outages, and to avoid frozen pipes.	Existing Moderate 2025-2030	City Admin / City EM, City Public Works	When we have periods of extreme cold in the winter, we will do outreach to remind residents to be ready for possible power outages and to run a stream of hot water to avoid frozen pipes.	City funding
9	Severe Winter & Summer Storms	Structure & Infrastructure Projects	Work with Excel Energy to convert overhead power lines to underground to avoid future power outages.	New Moderate 2025-2030	City Admin / Public Works in coord with Xcel Energy	The city will seek to start discussing options with Xcel Energy on converting OH powerlines to UG where infrastructure projects take place to keep costs down.	Xcel Energy, City Funding
10	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Install generators at our City Hall and Community Center that serves as our local shelter in the event people are displaced from a severe storm event or extended power outage.	New High 2025-2030	City Admin /City EM	The city will purchase portable generators as funding is available. We may also possibly seek future FEMA grant funding for this effort.	City Funding, FEMA 5% Initiative Grant Funding
11	Severe Summer Storms	Local Planning & Regulations / Structure & Infrastructure Projects	Work with the mobile home park to address emergency storm sheltering for residents of the park.	New High 2025-2030	City Admin / City EM	The city will work with our local mobile home park owner to assess options for construction of either an on-site storm shelter or tornado safe room. We will also evaluate other locations to designate as a shelter facility for residents of the mobile home park. The city may apply for future FEMA grant funding if a tornado safe room is something we pursue.	City Funding, MHP funding, FEMA BRIC grant funding
12	Drought	Local Planning & Regulations / Education & Awareness Programs	Enforce watering use restrictions when in periods of severe drought and raise public awareness of water conservation measures.	New Moderate 2025-2030	City Admin	The city will enforce emergency water use restrictions as per direction from the MN DNR. The city will also work to educate our citizens on water conservation and smart watering techniques.	City Funding
13	Drought	Local Planning & Regulations	Ensure a water supply plan is in place for extreme periods of drought.	Existing Moderate 2025-2030	City Admin, City Public Works	The city has a water supply plan that helps with the management of our water supply as well as water conservation efforts during periods of severe drought.	City funding

CITY OF COTTONWOOD

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
14	Flooding	Structure & Infrastructure Projects	Address where improvements are needed to improve the city's stormwater infrastructure, bank stabilization, and erosion control.	Existing High 2025-2030	City Admin, City Public Works	We continue to work with our city engineers on the upgrading of infrastructure. The city is working with county, state, and other entities on Cottonwood Lake rehabilitation that includes bank stabilization and erosion control. The city is looking into more green infrastructure options along the county ditch system in Cottonwood to help with erosion control and bank stabilization as well as utilizing it for stormwater management. We are also taking a stricter stance when it comes to residential use of sump pumps and discharge.	City Funding
15	Flooding	Local Planning & Regulations	Continue to participation in the NFIP and enforce the city's floodplain ordinance.	Existing High 2025-2030	City Admin	The city of Cottonwood enforces requirements of the NFIP through the city's current floodplain ordinance, adopted 10/19/2010 and made effective 10/27/2010 (date of publication). This ordinance regulates development in the flood hazard areas of the city.	City Funding
16	Flooding	Structure & Infrastructure Projects	Continue to work with our city engineers on upgrading our stormwater infrastructure to better handle high rain events.	Existing High 2025-2030	City Public Works, City Engineers	Our public works department continue to address issues with our sanitary inflow and infiltration issues that occur following large rain events. PW is also working to upsize storm sewers in town to avoid street flooding during large rain events.	City Funding
17	Flooding	Local Planning & Regulations	Continue to enforce the city's sump pump ordinance.	Existing High 2025-2030	City Admin	The city has a sump pump ordinance and permitting process to encourage residents to not overload the sanitary sewer with their sump pump hoses. We continue to enforce this ordinance.	City Funding

CITY OF GARVIN

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events such as blizzards, ice storms, windstorms, tornadoes, and flooding that can result in power outages, property damage, and risk to life safety.	Existing High 2025-2030	City Admin / City EM	We share information with residents at City Council meetings. We primarily look to Lyon County to do outreach. We will work with Lyon County Emergency Management to participate in the National Weather Service's – Severe Weather Awareness Weeks and share information with our residents locally.	City Funding
2	All-Hazards	Education & Awareness Programs	Encourage residents in our community to sign up for the county's CodeRED system to receive timely emergency notifications.	Existing High 2025-2030	City Admin / City EM	The city will work to provide occasional reminders at City Council meetings. We will ask LCEM to provide us with an informational flyer about signing up for CodeRED that we can post in public areas.	City Funding
3	Extreme Temps (Heat/Cold)	Education & Awareness Programs	Encourage residents to be aware of and prepared for periods of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures occur.	New Moderate 2025-2030	City Admin / City EM	The city will work to share important temperature safety information that comes to us from the county emergency manager and the NWS. We primarily look to residents to follow local media for weather reports and for Lyon County to do outreach.	County Funding
4	Extreme Cold	Education & Awareness Programs	Conduct outreach to property owners on how to avoid freezing pipes during periods of extreme cold.	New Moderate 2025-2030	City Admin / City EM	We will use our city council meetings or post information to remind homeowners to run a stream of hot water to avoid frozen pipes during periods of extreme cold.	
5	Drought	Local Planning & Regulations / Education & Awareness Programs	Enforce watering use restrictions when in periods of severe drought and raise public awareness of water conservation measures.	New Moderate 2025-2030	City Admin	The city will enforce emergency water use restrictions as per direction from the MN DNR. The city will also do outreach to help make residents aware of limitations on non-essential water use.	City Funding

CITY OF GARVIN**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
6	Flooding	Structure & Infrastructure Projects	Address where improvements are needed to improve the city's ability to handle stormwater from high rain events.	Existing Moderate	City Admin / City Public Works	The city of Garvin city council and our public works department monitor and address planning for any stormwater improvements we may need to make. We also work with the county engineer as needed.	City Funding, County Funding

CITY OF GHENT

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events such as blizzards, ice storms, windstorms, tornadoes, and flooding that can result in power outages, property damage, and risk to life safety.	Existing High 2025-2030	City Admin / City EM	The City of Ghent has a city website, Facebook page, and a public alert system that can reach all water/sewer/garbage customers by text/phone/email. The city will work with Lyon County Emergency Management to participate in the National Weather Service's – Severe Weather Awareness Weeks and share information with our residents locally.	City Funding
2	All-Hazards	Education & Awareness Programs	Encourage residents in our community to sign up for the county's CodeRED system to receive timely emergency notifications.	Existing High 2025-2030	City Admin / City EM	We will work with Lyon County Emergency Management to provide us with a link to the county notification system and a flyer that we can post in public areas.	City Funding
3	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and development.	Existing High 2025-2030	City Admin	The City of Ghent has adopted and enforces the MN State Building Code and City Zoning Ordinances that include a Floodplain ordinance. We are also in the process of developing a comprehensive plan for growth.	City Funding
4	Extreme Temps (Heat/Cold)	Education & Awareness Programs	Encourage residents to be aware of and prepared for periods of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures occur.	Existing High 2025-2030	City Admin / City EM	The city will work to share important temperature safety information that comes to us from the county emergency manager and the NWS.	City Funding
5	Extreme Cold	Education & Awareness Programs	Conduct outreach to property owners on how to avoid freezing pipes during periods of extreme cold.	Existing High 2025-2030	City Admin / City EM, City Public Works	The city puts out reminders each winter with our city website and utility bills to remind homeowners to run a stream of hot water to avoid frozen pipes during periods of extreme cold.	City Funding

CITY OF GHENT

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
6	Extreme Cold	Structure & Infrastructure Projects	Construct a new water tower for back up water storage to avoid frozen water services and ensure the city has backup water.	In-Progress High 2027-2030	City Admin / City Public Works	The City of Ghent has applied for PFA funding to construct a 50,000 – 100,000 gallon water tower. We hope to receive this funding and start construction in 2027. PFA funding refers to financial assistance provided by the Public Facilities Authority which offers low-interest loans and grants to local communities for infrastructure projects like wastewater treatment plants, drinking water distribution systems, and stormwater management.	PFA funding
7	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase backup generators for City Hall and our Fire Department.	New High 2025-2030	City Admin / City EM	The city will work to purchase backup generators as funding is available.	City Funding, FEMA BRIC grant
8	Severe Summer Storms	Mitigation Preparedness & Response Support	Establish a designated tornado/storm shelter for residents or travelers who are vulnerable to dangerous storm events.	New High 2025-2030	City Admin / City EM	The City of Ghent does not have a tornado/storm shelter with backup generator to allow residents or travelers to shelter in place during a tornado/ wind storm/ blizzard. Our newly remodeled Fire Department Meeting room, located in the basement of the city hall, could be used to meet this need if a backup generator was added as well as shelter equipment. The city has been working to obtain FEMA grant funding for a generator.	City Funding, FEMA BRIC grant
9	Severe Summer Storms	Structure & Infrastructure Projects	Construct a summer storm/tornado shelter in Legion Park.	New High 2025-2030	City Admin / City EM	The city sees a need for providing shelter at this location and will pursue funding for this purpose.	City Funding, FEMA BRIC grant

CITY OF GHENT

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
10	Drought	Local Planning & Regulations / Education & Awareness Programs	Enforce watering use restrictions when in periods of severe drought and raise public awareness of water conservation measures.	New Moderate 2025-2030	City Admin	The city will enforce emergency water use restrictions as per direction from the MN DNR. The city will also do outreach to help make residents aware of limitations on non-essential water use.	City Funding
11	Flooding	Local Planning & Regulations	Continue to participation in the NFIP and enforce the city's floodplain ordinance.	Existing High 2025-2030	City Admin	The city of Ghent enforces requirements of the NFIP through the city's current floodplain ordinance, adopted 11/10/2010 and made effective 11/18/2010 (date of publication). This ordinance regulates development in the flood hazard areas of the city. The city recently adopted a Letter of Map Revision on 5/24/24.	City Funding
12	Flooding	Structure & Infrastructure Projects	Address where improvements are needed to improve the city's ability to handle stormwater from high rain events and protect homes from sewer backups.	In-Progress High 2025-2030	City Admin / Public Works in coord with Bolten & Menk city engineer	The City of Ghent is planning a city-wide sewer improvement project which will commence in 2025. This project hopes to address two issues: first, we plan to elevate our main lift station above floodplain levels to prevent future inundation of flood waters. Second, this project includes the replacement of all sewer lines in the city as well as relining our current sewer ponds and adding a third pond for additional storage. This will help with ground water protection by reducing our I & I considerably. The additional pond will be necessary when the current ponds no longer leak.	City Funding, PFA, USDA Rural Development, FEMA BRIC grant funding

CITY OF GHENT

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
13	Flooding	Structure & Infrastructure Projects	Install flood infrastructure protection for homes and the lift station within the Bluebird Addition.	New High 2025-2030	City Admin / Public Works in coord with Bolten & Menk city engineer	The city is currently working with city engineers Bolton & Menk to develop an engineering report that proposes multiple possible flood protection plans to protect our Bluebird Court, Cardinal Circle development, and lift station #2 from flood water inundation during flood events. We are also working with Lyon SWCD and DNR staff to identify the best method for flood protection that also meet their permitting requirements. Protection methods may include but are not limited to a flood protection berm, a flood protection wall, re-meandering of Bluebird Creek, upstream storage, or combination of each. We hope to implement this plan as soon as funding becomes available. We are also in need of a 6" water pump to help pump water from inside the flood protection to the outside during a flood event.	City Funding, Lyon SWCD cost share funding, PFA, USDA Rural Development, FEMA BRIC grant funding

CITY OF LYND

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events such as blizzards, ice storms, windstorms, tornadoes, and flooding that can result in power outages, property damage, and risk to life safety.	Existing High 2025-2030	City Admin / City EM	We use a city website to distribute information along with a school circular and the city office bulletin board. If other information is needed to be handed out in a timely manner, we use the US Postal system and do a bulk mailing. City of Lynd Fire Department participate in the National Weather Service, severe weather training and stay up to date on awareness and storm watching.	City Funding
2	All-Hazards	Education & Awareness Programs	Encourage residents in our community to sign up for the county's CodeRED system to receive timely emergency notifications.	Existing High 2025-2030	City Admin / City EM	The city will work with Lyon County Emergency Management to provide a link to put on our city website for residents to sign up, as well as a local flyer to post in public locations such as City Hall.	City Funding
3	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and development.	Existing High 2025-2030	City Admin	The city of Lynd enforces MN State Building Code and utilizes Lyon County building inspectors as needed. We have a comprehensive plan for steady state growth and development, currently. The city of Lynd utilizes an engineering firm to ensure plans and progress for roads and waterways are safe and secure for public use.	City Funding
4	Extreme Temps (Heat/Cold)	Education & Awareness Programs	Encourage residents to be aware of and prepared for periods of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures occur.	Existing Moderate 2025-2030	City Admin / City EM	The city will work to share important temperature safety information that comes to us from the county emergency manager and the NWS. We will use our existing outreach methods (website, flyers, bulletin).	City Funding
5	Extreme Cold	Education & Awareness Programs	Conduct outreach to property owners on how to avoid freezing pipes during periods of extreme cold.	Existing Moderate 2025-2030	City Admin / City EM	The city uses our city website and utility billing to remind homeowners to run a stream of hot water to avoid frozen pipes during periods of extreme cold.	City Funding

CITY OF LYND

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
6	Severe Winter & Summer Storms	Natural Systems Protection	Reduce the risk of downed powerlines from downed trees and branches from severe storm events.	Existing Moderate 2025-2030	City Public Works	Our public works and Lyon-Lincoln Electric Coop continue to trim trees near power lines. Lyon-Lincoln Electric Coop oversees projects for overhead to underground powerline conversion projects.	City Funding, LLEC
7	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase and install backup generator power for the City Hall and Community Center that serves as our local shelter if people are displaced from a severe storm event or extended power outage.	New High 2025-2030	City Admin / City EM	The city will work to purchase generators as funding allows. Backup power has been installed in both lift stations and the community center and firehall are next on the project list for backup power. In 2023 the city of Lynd installed back up power generator for lift stations and added a weather siren for Affinity Hills.	City Funding
8	Severe Summer Storms	Structure & Infrastructure Projects	Purchase and install a new outdoor warning siren to upgrade to our current siren.	New Moderate 2025-2030	City Admin / City EM	The city has an existing warning siren which we wish to upgrade. In 2023 the city added a weather siren for Affinity Hills. We will work with the Lyon County Sheriff's office on this effort. If we need outside grant funding we may consider possible application for FEMA grant funding for a siren.	City Funding, FEMA BRIC grant funding
9	Severe Summer Storms	Local Planning & Regulations / Structure & Infrastructure Projects	Work with the 1 mobile home park within the city to address the need for a storm shelter or tornado safe room.	New High 2025-2030	City Admin / City EM	The city will work with our local mobile home park owner to assess options for construction of either an on-site storm shelter or tornado safe room. We will also evaluate other locations to designate as a shelter facility for residents of the mobile home park. The city may apply for future FEMA grant funding if a tornado safe room is something we pursue.	City Funding, MHP funding, FEMA BRIC grant funding

CITY OF LYND

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
10	Drought	Local Planning & Regulations / Education & Awareness Programs	Enforce watering use restrictions when in periods of severe drought and raise public awareness of water conservation measures.	New Moderate 2025-2030	City Admin	The city will enforce emergency water use restrictions as per direction from the MN DNR. The city will also do outreach to help make residents aware of limitations on non-essential water use.	City Funding
10	Flooding	Local Planning & Regulations	Continue to participation in the NFIP and enforce the city's floodplain ordinance.	Existing High 2025-2030	City Admin	The city of Lynd enforces requirements of the NFIP through the city's current floodplain ordinance, adopted 1/17/2023 and made effective 2/1/2023 (date of publication). This ordinance regulates development in the flood hazard areas of the city.	City Funding
11	Flooding	Structure & Infrastructure Projects	Address where improvements are needed to improve the city's stormwater system and lift station infrastructure.	In-Progress High 2025-2030	City Admin / City Public Works	Our public works department oversees maintenance of our stormwater system and implementation of flood mitigation projects. We are currently seeking an upgrade to two of our storm drains to ensure they can handle large amounts of rain fall. We are also working to address a city lift station, North River St., that is an area of concern with flooding during high rain events	City Funding
12	Wildfire	Education & Awareness Programs	Work to raise public awareness of wildfire danger and burning bans during periods of drought.	Existing Moderate 2025-2030	City Admin / City EM, Fire Dept.	The city works with our local DNR and State Park officials to inform residents of burn bans and other restricted times to have a fire.	City Funding, MN DNR
13	Wildfire	Mitigation Preparedness & Response Support	Assess and plan for wildfire evacuation routes for the residents of Lynd.	New High 2025-2030	City Admin / City EM, Fire Dept.	We will work with our fire department, the MN DNR, and Camden State Park on this effort. We are located in a valley with limited roads to exit town, located in and near Camden State Park. If a wildfire started there would be a high risk to the residents of Lynd and their property.	City Funding, MN DNR

CITY OF MARSHALL**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events such as blizzards, ice storms, windstorms, tornadoes, and flooding that can result in power outages, property damage, and risk to life safety.	Existing High 2025-2030	City Admin / City EM	The City of Marshall posts information on our city website and Facebook page. We release short videos on social media providing information to our community. Local area radio shows and group presentations are used to educate our community on topics related to public safety and promote the use of Code Red Emergency Notification System. We 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. Our local school practices tornado drills on an annual basis.	City Funding
2	All-Hazards	Education & Awareness Programs	Encourage residents in our community to sign up for the county's CodeRED system to receive timely emergency notifications.	Existing High 2025-2030	City Admin / City EM	We have a place on our city website with a link to the sign-up page. During Weather Awareness Week, we promote the Code Red Alert System and encourage sign-up.	City Funding

CITY OF MARSHALL

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
3	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and development.	Existing High 2025-2030	City Admin	The city's Community Planning department enforces the MN State Building Code and the City Code zoning requirements for new development. The city also has a 5-year capital Improvement Program (CIP) to identify infrastructure that needs maintenance, updating, reconstruction and proactively completes studies and reports to identify additional new improvement projects for the communities. These projects include storm water projects to improve conveyance and pond construction to minimize localized flooding from storm events.	City Funding
4	Extreme Temps (Heat/Cold)	Education & Awareness Programs	Encourage residents to be aware of and prepared for periods of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures occur.	Existing High 2025-2030	City Admin / City EM	The city will use our community outreach methods to share important temperature safety information that comes to us from the county emergency manager and the NWS. We also work to ensure emergency crews are able to respond to 911 calls and roads leading to the hospital are passable.	City Funding
5	Extreme Cold	Education & Awareness Programs	Conduct outreach to property owners on how to avoid freezing pipes during periods of extreme cold.	Existing High 2025-2030	City Admin / City Public Works	The city uses our city website and utility billing to remind homeowners to run a stream of hot water to avoid frozen pipes during periods of extreme cold.	City Funding
6	Drought	Local Planning & Regulations / Education & Awareness Programs	Enforce watering use restrictions when in periods of severe drought and raise public awareness of water conservation measures.	New Moderate 2025-2030	City Admin	The city will enforce emergency water use restrictions as per direction from the MN DNR. The city will also do outreach to help make residents aware of limitations on non-essential water use.	City Funding

CITY OF MARSHALL**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
7	Flooding	Local Planning & Regulations	Continue to participation in the NFIP and enforce the city's floodplain ordinance.	Existing High 2025-2030	City Admin	The city of Marshall enforces requirements of the NFIP through the city's current floodplain ordinance, adopted 12/13/2022 and made effective 12/23/2022 (date of publication). This ordinance regulates development in the flood hazard areas of the city.	City Funding
8	Flooding	Structure & Infrastructure Projects	Address where improvements are needed to improve the city's ability to handle stormwater from high rain events.	Existing High 2025-2030	City Public Works / City Engineers	The city of Marshall is working to implement new storm sewer upgrades as construction projects are scheduled. We work with the city engineers on local flood reduction measures. We also plan to purchase additional pumps in the event of flooding.	City Funding
9	Flooding	Local Planning & Regulations	Enforce the city's sump pump ordinance to minimize impacts to the city's stormwater system.	Existing High 2025-2030	City Admin	Each spring and winter we do outreach to make residents aware of the sump pump ordinance and encourage them to maintain their sump pumps and discharge them into the storm water basins to reduce the chances of basement flooding.	City Funding
10	Severe Summer Storms	Mitigation Preparedness & Response Support	Continue to maintain the city's system of outdoor warning sirens to ensure they are functioning properly.	Existing High 2025-2030	City EM	The City of Marshall continues to work with Front-Line Warning System to ensure our siren warning system (12 sirens) are operating at high level.	City Funding

CITY OF MINNEOTA

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events such as blizzards, ice storms, windstorms, tornadoes, and flooding that can result in power outages, property damage, and risk to life safety.	Existing High 2025-2030	City Admin / City EM	The city posts information on the city's website and Facebook page. We also use the Nixle notification system to send out messages, considerable information is posted on the city's digital sign, as needed, on bulletin boards at the Senior Center, Library, Post Office and front window of City Hall. Announcements are also published in the local newspaper, the Minneota Mascot. The city will work with Lyon County Emergency Management to participate in the National Weather Service's – Severe Weather Awareness Weeks and share information with our residents locally.	City Funding
2	All-Hazards	Education & Awareness Programs	Encourage residents in our community to sign up for the county's CodeRED system to receive timely emergency notifications.	Existing High 2025-2030	City Admin / City EM	The city does not currently post information on the county's emergency notification system sign-ups but we would be able to place a link on the city's website and/or post flyers on the city's digital sign and other various locations around town.	City Funding
3	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and development.	Existing High 2025-2030	City Admin	The city enforces the MN State Building Code and the City's Code with zoning requirements for new development. The city works with the Maybe Estates Mobile Home Park on emergency evacuation and sheltering of residents and recently approved the Park's Severe Weather Plan. The city has passed a local floodplain ordinance.	City Funding

CITY OF MINNEOTA

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
4	Severe Winter & Summer Storms	Local Planning & Regulations / Natural Systems Protection	Reduce the risk of downed trees and branches falling on power lines from severe storm events.	Existing Moderate 2025-2030	City Admin in coord with Otter Tail Power Co.	Otter Tail Power trims/removes trees near powerlines. City Code and new Tree Policy regulates the type and placement of trees that can be planted to avoid issues with powerlines. The city has opened discussions with Otter Tail Power Co. to convert powerlines to underground but the power company is not open to such a project at this time. Ottertail Power company is also working to replace aged power poles.	Otter Tail Power, City Funding
5	Severe Summer Storms	Structure & Infrastructure Projects	Construct a storm shelter for our mobile home park and the Riverside Park municipal campground.	New Moderate 2025-2030	City Admin / City EM	Our city Admin, EM and Public Works will evaluate possible construction options to meet the needs of these areas. The city is considering the upgrade of bathrooms in Riverside Park while adding a storm shelter for campers. We may seek to apply for future FEMA grant funding if a tornado safe room is deemed as the best option.	City Funding, FEMA BRIC Grant Funding
6	Extreme Temps (Heat/Cold)	Education & Awareness Programs	Encourage residents to be aware of and prepared for periods of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures occur.	Existing Moderate 2025-2030	City Admin / City EM	The city will work to share important temperature safety information that comes to us from the county emergency manager and the NWS. Residents and special	City Funding

CITY OF MINNEOTA

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
7	Extreme Cold	Education & Awareness Programs	Encourage residents to be prepared for periods of extreme cold and potential power outages, and to avoid frozen pipes.	Existing Moderate 2025-2030	City Admin / City EM, City Public Works	The city publishes flyers encouraging residents to be prepared for periods of extreme cold and potential power outages. The city also notifies and educates residents of measures they can take to avoid freezing pipes during sub-zero weather. The city does have equipment to unfreeze frozen pipes and acts as needed to mitigate issues that may arise in city pipes.	City Funding
8	Drought	Local Planning & Regulations / Education & Awareness Programs	Enforce watering use restrictions when in periods of severe drought and raise public awareness of water conservation measures.	New Moderate 2025-2030	City Admin	The city has established and enforces watering use restrictions when in periods of severe drought and will continue to do so. We also do outreach to help make residents aware of limitations on non-essential water use.	City Funding
9	Flooding	Local Planning & Regulations	Continue to participation in the NFIP and enforce the city's floodplain ordinance.	Existing High 2025-2030	City Admin	The city of Minneota enforces requirements of the NFIP through the city's current floodplain ordinance, adopted 8/8/2022 and made effective 9/8/2022 (date of publication). This ordinance regulates development in the flood hazard areas of the city. The city also enforces its sump pump ordinance to minimize impacts to the city's stormwater system.	City Funding

CITY OF MINNEOTA

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
10	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Address where improvements are needed to improve the city's ability to handle stormwater from high rain events.	New High 2025-2030	City Admin, City Public Works	The city's CFP is updated annually, and upgrades of sewer, water, stormwater, and streets are planned as funds are available. The city will begin Phase 1 of a multi-million-dollar project for portions of E. Lyon, Grant and Wilson Street and adjacent areas to replace aging infrastructure and improvements to the city's sewer, storm drainage, drinking water, street systems along with updates to the city's Wastewater Treatment Facility and Lift Stations.	City Funding
11	Flooding	Structure & Infrastructure Projects	Implement mitigation measures to protect community assets at Riverside Park and homes located along the south side of E. Lyon St. from flooding.	New High 2025-2030	City Admin, City Public Works	The city's Riverside Park, including the picnic shelter and camping spots are prone to flooding. They have been damaged during past flood events and the riverbank has also experienced significant erosion in this area during flood events. There are also a small number of homes along the south side of E. Lyon Street that can experience flooding due to an existing drainageway that is located behind these properties. Localized flooding can also occur in various parts of Minneota during large rain events and has caused damage. The city will work with our city public works dept and engineer to assess solutions. The city may seek future MN PFA, MN DNR Flood Hazard Mitigation or FEMA BRIC grant funds to assist with these projects.	City Funding, MN PFA, DNR FHM, FEMA BRIC grant funding

CITY OF MINNEOTA**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
12	Dam Failure	Structure & Infrastructure Projects	Inspect and maintain the city's levee system to ensure it's intact.	Existing Moderate 2025-2030	City Public Works Dept.	The city maintains a levee system that protects a large portion of the west side of the city from flood impacts.	City Funding

CITY OF RUSSELL

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events such as blizzards, ice storms, windstorms, tornadoes, and flooding that can result in power outages, property damage, and risk to life safety.	Existing High 2025-2030	City Admin / City EM	We post notices on Facebook as well as sending broadcast messages via, text, email or voice alert. We also have a community newsletter where we can post information for our citizens. We post information on the city Facebook page and in our city newsletter. The city will work with Lyon County Emergency Management to participate in the National Weather Service's – Severe Weather Awareness Weeks and share information with our residents locally.	City Funding
2	All-Hazards	Education & Awareness Programs	Encourage residents in our community to sign up for the county's CodeRED system to receive timely emergency notifications.	Existing High 2025-2030	City Admin / City EM	We periodically remind our residents that we have the public alert system and if they aren't signed up to please contact the city office to get added to the list.	City Funding
3	All-Hazards	Mitigation Preparedness & Response Support	Establish a plan to provide temporary sheltering to vulnerable residents in the event of severe weather.	New Moderate 2025-2030	City Admin / City EM	The city will work to put a plan in place in the event that we need to use the fire hall or community center as a shelter due to a severe storm. We will seek planning assistance from Lyon County Emergency Management on this effort.	City Funding
4	Extreme Temps (Heat/Cold)	Education & Awareness Programs	Encourage residents to be aware of and prepared for periods of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures occur.	New Moderate 2025-2030	City Admin / City EM	The city will work to share important temperature safety information that comes to us from the county emergency manager and the NWS. Residents and special	City Funding
5	Extreme Cold	Education & Awareness Programs	Conduct outreach to property owners on how to avoid freezing pipes during periods of extreme cold.	New Moderate 2025-2030	City Admin / City Public Works	When we have periods of extreme cold in the winter we will do outreach to remind residents to be ready for possible power outages and to run a stream of hot water to avoid frozen pipes.	City Funding

CITY OF RUSSELL**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
6	Drought	Local Planning & Regulations / Education & Awareness Programs	Enforce watering use restrictions when in periods of severe drought and raise public awareness of water conservation measures.	New Moderate 2025-2030	City Admin	The city will enforce emergency water use restrictions as per direction from the MN DNR. The city will also do outreach to help make residents aware of limitations on non-essential water use.	City Funding
7	Flooding	Local Planning & Regulations	Continue to participation in the NFIP and enforce the city's floodplain ordinance.	Existing High 2025-2030	City Admin	The city of Russell enforces requirements of the NFIP through the city's current floodplain ordinance, adopted 11/9/2010 and made effective 11/17/2010 (date of publication). This ordinance regulates development in the flood hazard areas of the city.	City Funding
8	Flooding	Structure & Infrastructure Projects	Address where improvements are needed to improve the city's ability to handle stormwater from high rain events.	In-Progress High 2025-2030	City Admin City Public Works	We are starting an infrastructure project that will improve our streets as well as doing work on the lift stations.	City Funding

CITY OF TAUNTON

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events such as blizzards, ice storms, windstorms, tornadoes, and flooding that can result in power outages, property damage, and risk to life safety.	Existing High 2025-2030	City Admin / City EM	We post notices at the State Bank of Taunton, and the Post Office and if need be we do a bulk mailing to all our residents. The City of Taunton participates in the National Weather Service, severe weather training and stays up to date on awareness and storm watching.	City Funding
2	All-Hazards	Education & Awareness Programs	Encourage residents in our community to sign up for the county's CodeRED system to receive timely emergency notifications.	Existing High 2025-2030	City Admin / City EM	We will work with Lyon County Emergency Management to provide us with a flyer on signing up for CodeRED that we can post at public locations and do a mailing.	City Funding
3	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and development.	Existing Moderate 2025-2030	City Admin	The city of Taunton enforces the MN State Building Code and utilizes local county building inspectors as needed.	City Funding
4	Extreme Temps (Heat/Cold)	Education & Awareness Programs	Encourage residents to be aware of and prepared for periods of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures occur.	Existing Moderate 2025-2030	City Admin / City EM	The city will work to share important temperature safety information that comes to us from the county emergency manager and the NWS.	City Funding
5	Extreme Cold	Education & Awareness Programs	Conduct outreach to property owners on how to avoid freezing pipes during periods of extreme cold.	Existing Moderate 2025-2030	City Admin / City Public Works	When we have periods of extreme cold in the winter we will do outreach to remind residents to be ready for possible power outages and to run a stream of hot water to avoid frozen pipes.	City Funding
6	Extreme Cold	Education & Awareness Programs	Encourage residents to be prepared for periods of extreme cold and potential power outages, and to avoid frozen pipes.	Existing Moderate 2025-2030	City Admin / City EM, City Public Works	When we have periods of extreme cold in the winter we will do outreach to remind residents to be ready for possible power outages and to run a stream of hot water to avoid frozen pipes.	City funding

CITY OF TAUNTON

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
7	Drought	Local Planning & Regulations / Education & Awareness Programs	Enforce watering use restrictions when in periods of severe drought and raise public awareness of water conservation measures.	New Moderate 2025-2030	City Admin	The city will enforce emergency water use restrictions as per direction from the MN DNR. The city will also do outreach to help make residents aware of limitations on non-essential water use.	City Funding
8	Flooding	Local Planning & Regulations	Continue to participation in the NFIP and enforce the city's floodplain ordinance.	Existing High 2025-2030	City Admin	The city of Taunton enforces requirements of the NFIP through the city's current floodplain ordinance, adopted 10/4/2010 and made effective 11/3/2010 (date of publication). This ordinance regulates development in the flood hazard areas of the city.	City Funding
9	Flooding	Structure & Infrastructure Projects	Address where improvements are needed to improve the city's ability to handle stormwater from high rain events as well as spring frost heaves.	Existing High 2025-2030	City Admin, City Public Works	The city has experienced damages to streets from spring frost heaves, and lots of spring rain. Our public works department continues to assess and address all stormwater and other infrastructure projects in the city such as repairing roads or upsizing culverts. We work with the county engineer as needed.	City Funding

CITY OF TRACY

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather events such as blizzards, ice storms, windstorms, tornadoes, and flooding that can result in power outages, property damage, and risk to life safety.	Existing High 2025-2030	City Admin / City EM	The City of Tracy and the Tracy Police Department work together to get information out to the public. We share information with the public by posting information on our city website, the Tracy Channel, our city Facebook page, and the community bulletin board outside City Hall. We also share information by making announcements at City Council meetings, running articles in our local newspaper, and putting PSAs on local radio. Our city works with the county to participate in the National Weather Service's annual Severe Winter/Spring Weather Awareness Week. Our local school practices tornado drills on an annual basis.	City Funding
2	All-Hazards	Education & Awareness Programs	Encourage residents in our community to sign up for the county's CodeRED system to receive timely emergency notifications.	Existing High 2025-2030	City Admin / City EM	We have a place on the police tab of our city website and on the Tracy Channel. We also publish the sign-up information in the local newspaper a couple times a year. When it comes to storms, we use Nixle, Facebook, CodeRED, outdoor warning systems, and any means necessary to alert the public.	City Funding
3	All-Hazards	Local Planning & Regulations	Incorporate mitigation strategies across the city's long-term plans and policies for future growth and development.	Existing High 2025-2030	City Admin	The city's planning and zoning department enforces the MN State Building Code and the City Code zoning requirements for new development. We have a 20-year Comprehensive Plan that is designed to plan physical growth of the city and appropriate land uses.	City Funding

CITY OF TRACY

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
4	Extreme Temps (Heat/Cold)	Education & Awareness Programs	Encourage residents to be aware of and prepared for periods of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures occur.	Existing Moderate 2025-2030	City Admin / City EM	The city will work to share important temperature safety information that comes to us from the county emergency manager and the NWS. We use our existing range of communication platforms to do so.	City Funding
5	Extreme Cold	Education & Awareness Programs	Conduct outreach to property owners on how to avoid freezing pipes during periods of extreme cold.	Existing Moderate 2025-2030	City Admin / City EM, City Public Works	The city uses our city website and utility billing to remind homeowners to run a stream of hot water to avoid frozen pipes during periods of extreme cold.	City Funding
6	Extreme Cold	Mitigation Preparedness & Response Support	Work with the local nursing home and hospital to be prepared with emergency plans for extended power outages.	Existing High 2025-2030	City EM	The city offers the City Hall/VMC building for a warm shelter.	City Funding
7	Drought	Local Planning & Regulations / Education & Awareness Programs	Enforce watering use restrictions when in periods of severe drought and raise public awareness of water conservation measures.	New Moderate 2025-2030	City Admin	The city will enforce emergency water use restrictions as per direction from the MN DNR. The city will also do outreach to help make residents aware of limitations on non-essential water use.	City Funding
8	Flooding	Structure & Infrastructure Projects	Address where improvements are needed to improve the city's ability to handle stormwater from high rain events.	New Moderate 2025-2030	City Admin, City Public Works	We have a contracted city engineer and a public works director that address road maintenance issues for flooding (culverts, repetitive flooding). The city plans to implement storm sewer upgrades as construction projects are completed and purchase additional pumps in the event of flooding. We also enforce the city's sump pump ordinance.	City Funding

CITY OF TRACY**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
9	Severe Summer Storms	Local Planning & Regulations / Structure & Infrastructure Projects	Work with our mobile home park to address construction of a new storm shelter or tornado safe room to protect residents who are vulnerable to high wind and tornado events.	New High 2025-2030	City Admin / City EM	The city will work with the MHP operator to evaluate possible solutions to construct a shelter structure for residents to use during severe storm events. This may be something that the city will seek future FEMA grant funding on in the event we choose to pursue the option of a tornado safe room. In the interim, the city will work with the MHP operator to develop an evacuation and sheltering plan with an off-site facility designated for sheltering.	City Funding, MHP funding, FEMA BRIC grant funding