Multi-Hazard Mitigation Plan

Steele County, Minnesota, 2024

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Section 1 – Introduction

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1.1 Introduction

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

From 1980–2022, there were 341 weather/climate disaster events with losses exceeding $1 billion (CPI-Adjusted) each to affect the United States:

- Events: 341 (7.9/ year)
- Cost: $2476.2 B ($57.6B/year)
- Deaths: 15,821 (368/year)

(Billion-Dollar Weather and Climate Disasters https://www.ncei.noaa.gov/access/billions/)

Hazard mitigation planning and preparedness is the most effective instrument to diminish losses by reducing the impact of disasters upon people and property. Mitigation plans are key to breaking the cycle of disaster damage and reconstruction.

The Multi-Hazard Mitigation Plan (MHMP) is a requirement of the Federal Disaster Mitigation Act of 2000 (DMA 2000). The development of a local government plan is required in order to maintain eligibility for certain federal disaster assistance and hazard mitigation funding programs. In order for communities to be eligible for future mitigation funds, they must adopt an MHMP.

According to an analysis by the Multi-hazard Mitigation Council (a public/private partnership designed to reduce the economic and social costs of natural hazards), for every dollar spent by the federal treasury on FEMA mitigation grants, $3.65 is saved: "The present value of potential annual savings to the federal treasury because of the FEMA grants studied is approximately $970 million compared to an annual budget expenditure on these grants of $265 million" (Multi-Hazard Mitigation Council, 2005).

A 2017 Interim Report by the National Institute of Building Sciences concluded Federal Mitigation Grants Save $6 per $1 Spent.
(Multi-Hazard Mitigation Council (2017) Natural Hazard Mitigation Saves 2017 Interim Report)

Steele County is vulnerable to a variety of potential natural disasters, which threaten the loss of life and property in the county. Hazards such as tornadoes, flooding, wildfires, blizzards, straight-line winds, ice storms, and droughts have the potential for inflicting vast economic loss and personal hardship. In 2013, Minnesota had some of the highest weather-related disaster claims in the country (MN Environmental Quality Board, 2014).

This Multi-Hazard Mitigation Plan represents the efforts of Steele County and its local governments to fulfill the responsibility for hazard mitigation planning. The intent of the plan is to reduce the actual threat of specific hazards by limiting the impact of damages and losses.

1.1.1 Scope

This Multi-Hazard Mitigation Plan evaluates and ranks the major natural hazards affecting Steele County as determined by frequency of event, economic impact, deaths, and injuries. Mitigation recommendations are based on input from state and local agencies, public input, and national best practices.

This is a multi-jurisdictional plan that covers Steele County, including the cities of Blooming Prairie, Ellendale, Medford, and Owatonna. The Steele County risks and mitigation activities identified in this plan also incorporate the concerns and needs of townships, school districts, and other entities participating in this plan.

Members from each of these jurisdictions actively participated in the planning process by attending workgroup meetings, providing information, suggesting mitigation strategies and reviewing the plan document. Each jurisdiction will adopt the plan by resolution after approval by FEMA. County and local city resolutions will be added by Steele County after final approval by FEMA, in Appendix D in the back of the plan.

Steele County has specified the following goals for this Multi-Hazard Mitigation Plan:

- To evaluate and rank the hazards that impact Steele County.
- To determine the extent of existing mitigation programs and policy capabilities within Steele County.
- To create a detailed, working document that will establish a standardized process for ensuring coordination of hazard mitigation efforts and to implement an ongoing and comprehensive hazard mitigation strategy.
- To familiarize state and local officials and the general public about comprehensive hazard mitigation in Steele County and obtain their support.

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. Potential types of hazard mitigation measures include the following:

- Structural hazard control or protection projects
- Retrofitting of facilities
- Acquisition and relocation of structures
- Development of mitigation standards, regulations, policies, and programs
- Public awareness and education programs
- Development or improvement of warning systems

1.1.3 Benefits of Mitigation Planning

The benefits of hazard mitigation planning include the following:

- Saving lives, protecting the health of the public, and reducing injuries
- Minimizing social dislocation and stress
- Protecting mental health
- Preventing or reducing property damage
- Reducing economic losses
- Reducing agricultural losses
- Maintaining critical facilities in functioning order
- Protecting infrastructure from damage
- Reducing legal liability of government and public officials
- Decrease the time to recover after a disaster

1.1.4 Minnesota Residential Building Code and Steele County Building Inspection Services

The Minnesota State Building Code is the minimum construction standard throughout all of Minnesota including all cities, townships, and counties. (Minnesota Administrative Rules, Chapter 1300)

The purpose of this code is to establish minimum requirements to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment and to provide safety to firefighters and emergency responders during emergency operations.

The code applies to the design, construction, addition, alteration, moving, replacement, demolition, repair, equipment, installation, use and occupancy, location, maintenance, and inspection of any building, structure, or building service equipment in a municipality, except work located primarily in a public way, public utility towers and poles, mechanical equipment not specifically regulated in the code, and hydraulic flood control structures.

Although it isn't enforceable by municipalities unless it is adopted by local ordinance, the State Building Code creates a level playing field for the construction industry by establishing the construction standard for all buildings in the state.

Steele County Planning and Zoning Building Inspection services have two licensed building inspectors by the Minnesota Department of Labor and Industry (DOLI) for Steele County including all township, the cities of Blooming Prairie, Ellendale, and Medford. The City of Owatonna Community Department Building Inspections covers the City of Owatonna. The placard system is part of the disaster preparedness manual from DOLI. This placard system can be used for all disaster types. Law Enforcement and Fire Service conduct initial search & rescue marking and scene safety identification. The Steele County Building inspectors and the City of Owatonna Building inspectors can enter and assess the structures for habitability and substantial improvement/substantial damage determinations after all disasters including flooding.

Disasters can easily overwhelm the local Building Official and can temporarily assist with coordinating extra inspectors and office staff. The Association of Minnesota Building Officials (AMBO) Disaster Mitigation Committee and DOLI have building department information as possible volunteers for disaster assistance.

Minnesota State Statute 326B Construction Codes and Licensing Building Code Administration rule 1300 as amended.

The Minnesota State Disaster Preparedness Manual for reference
http://www.doli.state.mn.us/sites/default/files/pdf/disaster_preparedness_manual.pdf

Updated in 2020, the Residential Building Code:

- Regulates the design, construction, addition, alteration, repair, use, and location of detached one- and two-family dwellings, certain townhouses, and their accessory structures.
- Contains detailed provisions governing dwelling construction including requirements for structural, life-safety, fire-safety, and moisture protection.
- Located in Minnesota Rules Chapter 1309. This rule chapter adopts by reference Chapters 2 through 10, 44, Section P2904, and Appendix K and Q from the 2018 International Residential Code (IRC) as amended in Minnesota.

Additional information about the Minnesota State Building Code can be viewed at:
Minnesota Department of Labor and Industry
https://www.dli.mn.gov/business/codes-and-laws/overview-minnesota-state-building-code

1.2 State Administration of Mitigation Grants

FEMA currently has several mitigation grant programs that are administered by the State of Minnesota through the Department of Public Safety, Division of Homeland Security and Emergency Management.

Program	Mitigation Award Activity (percent of federal/non-federal cost share)
Hazard Mitigation Grant Program	75/25
Hazard Mitigation Grant Program: Post Fire	75/25
Building Resilient Infrastructure and Communities	75/25
Building Resilient Infrastructure and Communities: Economically Disadvantaged Rural Communities	up to 90/10
Flood Mitigation Assistance: (Localized Flood Risk Reduction, Project Scoping, individual mitigation of insured properties, and planning grants)	75/25
Flood Mitigation Assistance: Socially Vulnerable Communities with a Center's for Disease Control and Prevention (CDC) Social Vulnerability Index (SVI) of 0.5 or greater	up to 90/10
Flood Mitigation Assistance: Repetitive Loss Property	90/10
Flood Mitigation Assistance: Severe Repetitive Loss Property	100/0

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Section 2 – Public Planning Process

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2.1 Steering Committee Information

The Steele County Multi-Hazard Mitigation Plan steering committee is headed by the Steele County Emergency Management Director, the primary point of contact. Members of the Steele County MHMP steering committee include representatives from the public, private, and governmental sectors. Table M-1 identifies the steering committee individuals and the organizations they represent.

Jurisdictional representatives participating on the steering committee were contacted throughout the plan update process to provide feedback on the hazards of concern to their community and the mitigation actions which they would seek to implement upon plan adoption. The list of final mitigation actions was divided into jurisdiction-specific mitigation action charts so that each could see and address those actions that applied specifically to their cities (see Appendix G: Mitigation Actions by Jurisdiction).

2.2 Review of Existing Plans

Steele County and its local communities utilized a variety of planning documents to direct community development. These documents include a Comprehensive/Master Plan, Capital Improvements Plan, Emergency Operations Plan, Transportation Plan, Continuity of Operations Plan, etc. (see Appendix J for a full listing of plans and programs in place in Steele County). The planning process also incorporated the existing natural hazard mitigation elements from previous planning efforts. Table M-2 lists the plans, studies, reports, and ordinances used in the development of the plan.

2.3 Planning Process Timeline and Steps

Updating the 2023 Steele County Multi-Hazard Mitigation Plan was a collaboration of the Steele County Emergency Management Director, State of Minnesota Hazard Mitigation officials, municipality officials, and members of the steering committee starting September 26, 2022, kickoff meeting and ending with a final review steering committee meeting on January 17, 2024. The goals of the updating process were to include more recent data documenting the critical infrastructure and hazards faced by Steele County, reformat and reorganize the plan to reflect definitions of hazards as expressed in the 2023 State of Minnesota Multi-Hazard Identification and Risk Assessment Plan, and reflect current hazard mitigation priorities in Steele County. Therefore, the new plan includes new data documenting the types of hazards faced by Steele County residents and emergency planning officials and new thinking about how to address these hazards. All participating jurisdictions completed survey documents and attended meetings, which are documented in Appendix F.

This is a multi-jurisdictional plan that covers Steele County and the cities of Blooming Prairie, Ellendale, Medford, and Owatonna. The Steele County risks, and mitigation activities identified in this plan incorporate the concerns and needs of townships, school districts, and other entities participating. Steele County Hazard Mitigation Update Meetings and Public Outreach are summarized in Table M-3 and detailed documentation is in Appendix F.

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

Section 3 – Steele County Profile

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This section offers a general overview of Steele County to provide a basic understanding of the characteristics of the community, such as the physical environment, population, and the location and distribution of services.

3.1 General County Description

Steele County is located in southeastern Minnesota, south of the Minneapolis/St. Paul metropolitan area. To the west lies Waseca County, and to the south is Freeborn County. Rice County is on the northern border of the Steele county border, and to the east is Dodge County. Steele County covers 432 square miles (276,480 acres). The US Census 2020 Decennial Census estimates the county's estimated population was 37,406. Owatonna is the county seat and the largest city in the county.

The 4 cities in Steele County are Owatonna, Medford, Ellendale and Blooming Prairie. The 13 townships are Meriden, Clinton Falls, Lemond, Havana, Somerset, Deerfield, Merton, Berlin, Aurora, Medford, Summit and Blooming Prairie as illustrated in Map A-2.

3.2 Environmental Characteristics

The southwestern and southeastern parts of Steele County are covered by recessional moraines that exhibit a rolling to hilly landscape with relief ranging from 10 to 50 feet. The southwestern moraine is a wide area of hills that are circular with flat tops, exhibiting a rolling landscape. The southeastern moraine is a narrow belt of hills that are more irregular in shape. The hills in both moraine belts are separated by lowlands that serve as drainage ways and contain lakes and wetlands.

The northern and eastern parts of the county contain a nearly level to gently rolling ground moraine that exhibits a local relief of 5 to 20 feet. In the north central part of the county the relief may be as much as 90 feet where the Straight River has carved a valley into the nearly level uplands. Many of the nearly flat areas of the ground moraine are artificially drained to improve agricultural conditions.

The highest surface elevation, about 1,330 feet above mean sea level, is located in the southeastern part of the county. The lowest elevation, about 1,060 feet above mean sea level, is located on the north central edge of the county where the Straight River leaves Steele County to the north. The maximum total relief is approximately 270 feet.

3.3 Hydrography

The availability of groundwater in Steele County is generally not a problem. In addition to the sand and gravel aquifers in the glacial deposits, there are 4 major bedrock aquifer systems that underlie Steele County which readily yield water: the Cedar Valley-Maquoketa-Galena aquifer system, St. Peter-Prairie Du Chien-Jordan aquifer system, Franconia-Ironton-Galesville aquifer system, and Mt. Simon-Hinckley aquifer system. Steele County residents are dependent on groundwater for residential, commercial, industrial, and agricultural uses. Because groundwater is such a precious resource that we know very little detailed information about, there is a need to obtain more useful information about groundwater quantities.

Steele County contains approximately 2,000 acres of surface water including lakes, 1 major river with its tributaries, and several ditches, streams, and wetlands. Surface water constitutes less than 1% of the total surface area of Steele County. There are 2 lakes, Rice Lake and Beaver Lake, which have established "ordinary high water marks" (OHW) for regulatory purposes.

More than 80% of the original pre-settlement wetlands in Steele County have been drained or filled. Wetlands greater than 10 acres that once existed were mainly in shallow basins formed by the irregular deposition of till along the eastern and western borders of the county.

Basic hydrography in Steele County is mapped in Map A-1 in Appendix A, while aquifer vulnerability and public wells are mapped in Map A-14. (Minnesota Department of Agriculture – Water Table Aquafer Vulberability)

3.3.1 Groundwater

The groundwater supplies that are contained in the bedrock aquifers underlying Steele County appear to be adequate for present and foreseeable needs. Water wells in the county range in depth from shallow (i.e. 20-30 ft.) for some rural wells to over 1,000 ft. deep for a municipal well in Owatonna. The shallow glacial deposit wells are generally more susceptible to groundwater quantity and quality (contamination) problems.

Steele County SWCD staff monitor a total of 8 wells throughout the county for the DNR. These 8 wells are located on 4 sites indicated on Map A-31. Some of the sites have multiple wells. This monitoring can provide some critical data on how groundwater levels respond to various climatic conditions and land use activities.

The observation well network should be expanded to include more wells of different depths and locations. Even though groundwater quantity has not been a limiting factor for present water and land uses in Steele County, there is still a need for individual residents and industry to practice water conservation measures to ensure an adequate supply for future use.

3.3.2 Lakes

Steele County contains 12 lakes all 10 acres or greater. Together, these lakes represent 1,292 of the county's 276,480 acres (0.4%). Rice Lake is the largest lake in Steele County, covering 610 acres. Rice Lake has an OHW (Ordinary High-Water Level) elevation of 1,238.2 feet and is located in the Zumbro River major watershed. Beaver Lake has an OHW elevation of 1,204.9 feet and is located in the Cannon River watershed.

The OHW is the elevation delineating the highest water level which has been maintained for a sufficient period of time to leave evidence upon the landscape. Generally, the OHW is the point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial. Any work done below the OHW is within the beds of public waters or wetlands and is therefore subject to permit authority of the Department of Natural Resources. Water levels in lakes do fluctuate naturally as a result of climatic conditions.

An 'Unnamed gravel pit' located in S16, T108, R20W was identified to contain Eurasian watermilfoil and added to the Minnesota Department of Natural Resources Infested Waters List in 2012. This water body is recognized as the only infested site in Steele County by the Minnesota DNR as of March 07, 2023. (Minnesota Department of Natural Resources – Infested Waters List)

3.3.3 Rivers

There are 6 rivers in Steele County: Cedar River (west fork), Le Sueur River, Little Le Sueur River, Straight River and Zumbro River. The Straight River is the source of 8 of the 9 named creeks that flow through Steele County. This river originates in the southeast quadrant of the state and meanders south and then west before following a northern path through the center of the state.

Protected flows are also established by the DNR on rivers and streams when there is a need because of climatic conditions and public uses (i.e. water appropriation). Since there is currently minimal data available on surface water quantity in Steele County, there is a need for local agencies to work with the DNR and other sources in gathering useful information such as streamflow data. Protected flows should be carefully monitored with respect to surface water appropriation permits, especially during drought years.

3.3.4 Wetlands

Important benefits of wetlands include storage area for excess water during flooding; filtering of sediments and nutrients before they enter lakes, rivers and streams; and fish and wildlife habitat. According to a 1965 DNR bulletin, nearly 90% of these larger wetlands have been artificially drained over the last 100 years and turned into agricultural land. The majority of wetlands that are left in Steele County are classified as Type 2 (inland fresh meadows) or Type 3 (inland shallow fresh marshes) wetlands; these are areas where the soil is usually waterlogged to within a few inches of the surface or covered with up to 6 inches of water during parts of the growing season. The wetlands that still exist are scattered throughout the county.

Because of current wetland regulatory programs, there will be minimal further loss of wetlands in Steele County. The incentive programs to preserve or restore wetlands provide opportunities for increasing wetland areas. The Wetland Conservation Act (WCA) requires counties to designate high priority wetland preservation areas in the water plan. (MN BWSR, 2019).

3.4 Climate

The climate of Steele County is classified as continental, characterized by wide variations in temperature from summer to winter. Although the climate is essentially uniform throughout the county, variations in microclimate may occur as a result of differences in vegetation, soil and relief.

3.4.1 Climate Change

Minnesota's climate is currently changing in ways that affect the environment, economy and everyday life. Historical weather data show changing trends in some weather phenomenon over the past few decades, and future changes are likely. Definite predictions are difficult to make, as changes may vary depending on geographical location, even within Minnesota. Intense study of these topics is ongoing.

According to the 2015 Minnesota Weather Almanac,

> *During the three most recent decades, the Minnesota climate has shown some very significant trends, all of which have had many observable impacts…Among the detectable measured quantity changes are: (1) warmer temperatures, especially daily minimum temperatures, more weighted to winter than any other season; (2) increased frequency of high dew points, especially notable in mid- to late summer as they push the Heat Index values beyond 100°F; and (3) greater annual precipitation, with a profound increase in the contribution from intense thunderstorms* (Seeley M. , 2015).

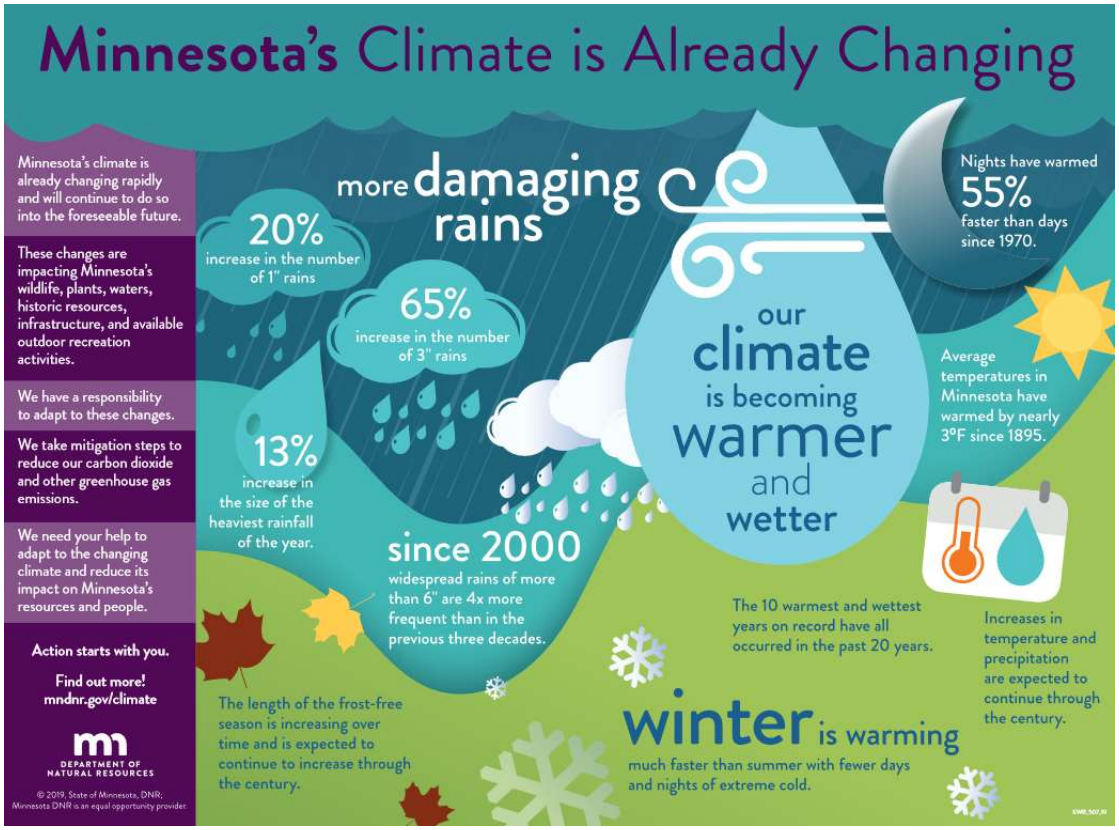

Figure 3.1 Climate Change Fact Sheet

Source: *https://files.dnr.state.mn.us/natural_resources/climate/change/climatechange-factsheet.pdf*

The years ahead will bring even warmer winters and nights, and even larger rainfalls, along with increased summer heat and longer dry spells. Even if we drastically reduce or halt greenhouse gas emissions immediately, the climate has already changed and will continue to change:

- Minnesota is getting warmer, especially winter nights in the northern parts of the state. Daily average minimum temperatures during winter (Dec-Feb) have increased 7.3 degrees from 1895-2021 in northern Minnesota, 6 degrees in central Minnesota and 4.9 degrees in southern Minnesota.
- Minnesota lakes have lost an average of 10 to 14 days of ice cover in the past 50 years, affecting lake and fish health, outdoor recreation opportunities, local governments, and business owners.
- Frequent and intense storms are now occurring more than any time on record, and the trend is projected to continue. Record-breaking floods damage streets, wastewater facilities, businesses, homes, farms, and natural resources, costing local governments, business owners, and residents millions of dollars in cleanup and repairs.
- Annual precipitation has increased as well, especially in the southern parts of the state. Various studies have also concluded that the frequency and intensity of precipitation in the Midwest has increased, with more storm events leading to flooding.

Winter temperatures in Minnesota have been warming nearly twice as fast as annual average temperatures, a trend that has been noticed throughout the Midwest. There has also been a distinct spread of warmer lows into the northern portion of the state, and 7 of the top 10 warmest years in Minnesota since record-keeping began in 1895 have occurred within the last 15 years. (Minnesota Department of Health, 2015)

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

Warming trends, climate volatility, extreme weather events, and environmental change are already affecting the economies and cultures of rural areas. Many rural communities face considerable risk to their infrastructure, livelihoods, and quality of life from observed and projected climate shifts…These changes will progressively increase volatility in food commodity markets, shift the ranges of plant and animal species, and, depending on the region, increase water scarcity, exacerbate flooding and coastal erosion, and increase the intensity and frequency of wildfires across the rural landscape (*Climate Change Impacts in the United States: The Fifth National Climate Assessment, 2022*).

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

The composition of the region's forests is expected to change as increasing temperatures shift tree habitats northward. While forests in the Midwest are currently acting as a net absorber of carbon, this could change in the future due to projected increases in insect outbreaks, forest fires, and drought, which will result in greater tree mortality and carbon emissions (Pryor, et al., 2014).

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

Federal, state, and tribal governments are increasingly integrating climate change adaptation into existing decision-making, planning, or infrastructure-improvement processes (Georgakakos, et al., 2014).

3.5 Demographics

Owatonna City is the largest city in Steele County (pop. 36,576) and the designated county seat. There are 4 cities and 13 townships within the county.

Table M-4 summarizes population by community according to the 2010 U.S. Census. Map A-2 illustrates the Steele County Population by Census Block.

Population growth trends have an important influence on the needs and demands of a variety of services such as transportation, law enforcement, and emergency response. An understanding of population trends and location of population concentrations is important for making projections regarding potential impacts in the event of a disaster.

In 2020, Steele County had a population of 37,406 residents, averaging 86.5 persons per square mile of land area. Owatonna, the largest city in the county and the county seat, has a population 26,420. Steele County's population is increasing. Since 1940, the population has risen by 89%. Table M-5 shows the population change in Steele County between 1940 and 2020.

According to the Minnesota State Demographic Center, Steele Co.'s population is expected to decline from 2023 to 2033, with a rate of change that is slower than the projected statewide growth rate (5.6%). Despite the decline, the number of people aged 65 years and older is expected to increase over the next decade. Table M-6 shows population projections for Steele County until 2045.

3.6 Economy

The most common employment sectors for those who live in Steele County, MN, are Manufacturing, Health Care & Social Assistance and Retail Trade. Figure 1 shows the share breakdown of the primary industries for residents of Steele County, MN, though some of these residents may live in Steele County, MN and work somewhere else. Census data is tagged to a residential address, not a work address.

The county has a strong commercial and industrial base. Major employers include Bosch, Federated, and Viracon. as well as a focus toward entertainment attractions around Owatonna.
Labor force growth has slowed in recent years. After experiencing a net gain of 271.3 workers each year from 1990 to 2000, Steele Co. averaged an annual gain of 155 new workers from 2000 to 2010, and most recently a loss of -40.5 fewer workers since 2010. Moving forward, Steele Co. is expected to see a labor force decline from 2023 to 2033. Figure 3.2 provides an overview of the annual average employment by major industry sector in Steele County.

Figure 3.2. Steele County Employment by Census Bureau ACS 5-year Estimate.

The county has a strong commercial and industrial base. Major employers include Bosch, Federated, and Viracon. as well as a focus toward entertainment attractions around Owatonna.
Labor force growth has slowed in recent years. After experiencing a net gain of 271.3 workers each year from 1990 to 2000, Steele Co. averaged an annual gain of 155 new workers from 2000 to 2010, and most recently a loss of -40.5 fewer workers since 2010. Moving forward, Steele Co. is expected to see a labor force decline from 2023 to 2033. Table M-7 provides an overview of the annual average employment by major industry sector in Steele County.

According to 2017-2021 ACS estimates, the median household income in Steele County was $73,468, compared to a Minnesota average of $77,706.

3.7 Community Services & Infrastructure

The following section provides an overview on community services and infrastructure within Steele County. Examples of community services include healthcare and public safety, while examples of community infrastructure include power utilities, water and sewer facilities, and the transportation network. Maps included in Appendix A shows critical facilities in the county. Tables of all critical facilities can be found in Appendix B.

3.7.1 Health Care Providers

Steele County has a comprehensive health care campus in Owatonna consisting of:

- Owatonna Hospital, operated by Allina Health
    - Owatonna Hospital provides a full range of inpatient, outpatient and emergency care services, as well as home and palliative care and hospice.
- Mayo Clinic operated by Mayo Clinic Health Systems
    - Mayo Clinic provides a wide range of health care providers and services. The Owatonna facility is directly connected to other Mayo Health System facilities.
- Rehabilitation facility operated by Courage Kenny Rehabilitation Institute
    - Courage Kenny Rehabilitation Institute provides services to help patients achieve their personal best following an injury or illness.

Additional health care and mental health care services are provided by Steele County Public Health and MNPrairie County Alliance through contract with South Central Human Relation Center.
Mayo Clinic Ambulance Service is based in Owatonna and covers the majority of Steele County. In addition, the City of Blooming Prairie and City of Ellendale also provide ambulances services through their volunteer fire departments.

Appendix A includes maps of health services and emergency services within Steele County. Appendix B provides tables listing the specifics for these services.

3.7.2 Public Safety Providers/Government Services

County wide law enforcement is provided by the Steele County Sheriff. The Sheriff is also responsible for the operation of the Steele County Detention Center and security for the Steele County Courthouse.

Local law enforcement departments services are provided by the City of Blooming Prairie and City of Owatonna.

Fire services are provided the City of Blooming Prairie, City of Ellendale, City of Medford, and City of Owatonna. All of the fire departments rely on volunteers. The City of Owatonna Fire Department has a part-paid force.

Emergency Services are dispatched from the Rice Steele 911 Center. This is a joint Public Service Access Point (PSAP) for Steele County and Rice County.

Interoperability between the emergency service organizations is achieved with the Allied Radio Matrix for Emergency Response (ARMER) system. This system is administered by the Minnesota Statewide Radio Board, managing the implementation of a 700/800 megahertz (MHz) shared digital trunked radio communication system. In Steele County, there is one ARMER tower.

Maps in Appendix A and Tables in Appendix B identifies government and emergency facilities, including city halls, fire departments, police departments, the Sheriff's Office and the Steele County Courthouse.

Appendix A also shows fire departments and fire response times in Steele County. These drive times were created using ArcGIS Network Analyst extension and Esri's Business Analyst. The user may note discrepancies between MN DOT road data and the map in this document; Network Analyst requires a seamlessly-connected data source in order to perform the calculations for drive times, which Business Analyst provides but MN DOT does not. The Business Analyst data was used for this reason. According to this model, most of the county is within 15 minutes of a fire department.

3.7.3 Utilities / Communications

3.7.3.1 Electrical Utility

There are 3 electricity companies providing power to Steele County:

- Southern Minnesota Municipal Power Agency (SMMPA)
- Alliant
- Great River Energy

Local distribution of electricity may also be provided by:

- Steele-Waseca Co-Op Electric
- Owatonna Public Utilities
- City of Blooming Prairie Public Works

The majority of the electrical supply is generated outside of Steele County. SMMPA operates the Owatonna Energy Station to help ensure a reliable electrical system. SMMPA has a goal of providing 80% of the electrical supply from carbon-free sources by 2030. The State of Minnesota is mandating 100% carbon-free energy sources by 2040.

3.7.3.2 Natural Gas Utility

The majority of Steele County does not have access to natural gas and rely on other energy sources, such as propane and electricity. Natural gas is generally supplied within cities and surrounding areas:

- City of Blooming Prairie: Minnesota Energy Resources
- City of Ellendale: Minnesota Energy Resources
- City of Medford: Centerpoint Energy
- City of Owatonna: Owatonna Public Utilities

3.7.3.3 Water / Sewer

The majority of Steele County relies on private wells and septic systems. These utilities are provided within the cities of Blooming Prairie, Ellendale, Medford, and Owatonna by the respective Public Utility Departments. Water service within Owatonna is provided by the Owatonna Public Utility.

3.7.3.4 Communication

Communication can be provided by several different technologies. Major providers include:

- Land line telephone
  - Century Link
- Cell phones
  - Verizon
  - T-Mobile
- Broadband internet
  - Spectrum
  - Metronet

3.7.4 Transportation

The county transportation system (illustrated in Appendix A) is composed of roads, highways, an airport, public transit and railroads. The system is designed to serve all residents, businesses, industries and tourists.

3.7.4.1 Roads

The existing roadway system reflects the concentration of urban development in the north. This area has the greatest concentration of roads and highest traffic volumes:

- Interstate-35 runs north to south through the center of the county connecting Ellendale with Owatonna.
- US-14 runs east to west, passing through Owatonna and connecting Waseca County to Dodge County
- MN-30 proceeds east to west across the southern region of the county from Blooming Prairie to Ellendale.
- US-218 reaches from Owatonna to the southeastern corner where Blooming Prairie is located.
- The Steele County transportation infrastructure consists of over 377 centerline miles of road including 132 bridges. The highway system is categorized by funding sources. County State Aid Highways (CSAH) consist of 313 miles and gas tax revenue is distributed by the State of Minnesota to assist in the construction and maintenance of these highways. County Roads (CR) consist of 64 miles and the local property tax levy, wheelage tax and sales tax funds the construction and maintenance of these roads.

3.7.4.2 Airport

There is one airport in the county, the Owatonna Degner Regional Airport. Regular scheduled flights are not available. It can accommodate corporate jets, air freight, flight instruction, aircraft rental and aircraft sales. The airport has two runways:

- Runway 12/30: a 5,500-foot concrete runway that is 100 feet wide with modern ILS.
- Runway 5/23: a 3,000-feet long and 75 feet wide asphalt runway.

3.7.4.3 Railroads

Railroads in Steele County serve regional agriculture and industrial uses. Passenger service is not available. Two carriers currently operate in Steele County:

- Union Pacific Railroad generally runs north and south through Steele County.
- Canadian Pacific Railroad generally runs east and west through Steele County. The track also runs north toward the Twin Cities and south with a southern spur toward Blooming Prairie.

3.7.4.4 Ground Transport

Residents of Steele County may utilize the Southern Minnesota Area Rural Transit (SMART) as a mode of public transportation in the region. SMART operates a scheduled route through Owatonna. Daily trips to Medford, Blooming Prairie and Ellendale are available on request. This service is also available in Freeborn, Mower, and Waseca Counties.

Scheduled interstate bus service is available by Jefferson Lines.

3.8 Land Use, Ownership, and Development Trends

Steele County covers a total of 432 square miles (276,480 acres). Land in Steele County is primarily used for agricultural production, with farm holdings dominating the county. A few woodland areas are spread throughout the county but are not focused in any large region.

In 2023, 1,516 farms cultivated cropland covered 231,083 acres, which correlates to 84% of the county. Deciduous forest, woody wetlands, and emergent herbaceous wetlands contribute 19,161 acres to the classification of Steele County land cover. Impervious surfaces which are defined as developed regions of low, medium, or high intensity in the MN DNR land cover dataset qualify only 9,315 acres in the Steele County parameter. The rest is classified as “open water”, “open space”, “barren land”, “evergreen or mixed forest”, “shrub/scrub”, and “hay/pasture” which contribute a less significant land cover percentage (Steele County GIS Department, 2023).

According to the Steele County Feedlot Officer, just over 200 feedlots are located in Steele County in 2023, only 20 have 1,000 or more animal units. Feedlots in Steele County are mapped in Map A-27. Agricultural areas in the state such as those in Steele County may need to undergo transformative changes to keep pace with climate change, the country’s agricultural system is expected to be fairly resilient overall due to “the system’s flexibility to engage in adaptive behaviors such as the expansion of irrigated acreage, regional shifts in acreage for specific crops, crop rotations, changes to management decisions (such as choice and timing of inputs and cultivation practices), and altered trade patterns compensating for yield changes” (Hales, et al., 2014).

Land ownership categories from the 2023 U.S. Geological Survey GAP (Gap Analysis Program) are shown in Map A-8 Land cover is also mapped in Map A-7.

Sites with chemical and hazardous waste based on data from the Minnesota Pollution Control Agency (MPCA) are mapped in Map A-12.

Steele County, particularly Owatonna, is experiencing significant development across various sectors. Here are some key highlights:

Economic Development: Owatonna's diversified industrial and commercial base makes it an economic powerhouse in Southern Minnesota. The city is home to over 40 industries and 500 retail and professional businesses (Source: https://www.owatonna.gov/691/Economic-Development).

Construction Projects: Several infrastructure projects are underway, including the 18th Street SE Trail Extension, Cedar Avenue North Mill & Overlay, and the East Side Corridor project. These projects aim to improve connectivity and infrastructure within the county (Source: https://www.owatonna.gov/494/Construction-Projects).

Community Development: Owatonna is committed to growth and quality of life, and it is making ongoing efforts to add new homes and enhance services for residents (Source: https://owatonnadevelopment.com/).

From 2018 to 2022, the City of Owatonna has issued 9,730 building permits in the past five years totaling $354 million in value.

- 2018: 2,252 permits
- 2019: 1,783 permits
- 2020: 1,838 permits
- 2021: 1974 permits
- 2022: 1,883 permits

According to the US Census, the residential building permits in Steele County, Minnesota typically cover a variety of construction types, including (Source: https://www.census.gov/construction/bps/):

- Single-family homes: This is the most common type of residential construction permit.
- Multi-family units: Includes duplexes, townhouses, and apartment buildings.
- Additions and renovations: Permits for adding new rooms, garages, or other structures to existing homes.
- Accessory buildings: Such as detached garages, sheds, and other outbuildings.
- Manufactured homes: Permits for placing manufactured or mobile homes on a property.

From 2018 to the present, Steele County, Minnesota has seen the following number of residential building permits issued annually (Source: Steele County Planning & Zoning Department):

- 2018: 198 permits
- 2019: 210 permits
- 2020: 225 permits
- 2021: 230 permits
- 2022: 214 permits

Trends for specific categories of residential construction in Steele County:

- Single-Family Homes

  Steady Growth: There has been a consistent increase in permits for new single-family homes from 2018 to 2021, with a slight dip in 2022.

  Popular Areas: New developments are concentrated in the city areas and near schools and parks.

- Multi-Family Units

  Increasing Demand: Permits for multi-family units have seen a notable rise, reflecting a growing demand for affordable housing options.

Most of these permits are for projects in the city areas of the county, catering to young professionals and smaller families.

- Additions and Renovations

  Home Improvement Boom: There has been a surge in permits for home additions and renovations, particularly during the pandemic years (2020-2021), as people spent more time at home and invested in upgrading their living spaces.

  Energy Efficiency: Many of these projects focus on improving energy efficiency, such as adding insulation, new windows, and solar panels.

- Accessory Buildings

  Stable Numbers: Permits for accessory buildings like garages and sheds have remained relatively stable, with a slight increase in recent years as more homeowners seek additional storage and workspace.

- Manufactured Homes

  Moderate Growth: There has been a moderate but steady increase in permits for manufactured homes, providing an affordable housing alternative.

The environmental impact and damage potential after disasters can vary significantly across different types of residential construction. Here's a breakdown:

- Single-Family Homes

  Environmental Impact: These homes often have a larger footprint per unit, leading to more land use and potential habitat disruption. They also typically consume more energy and resources per household.

  Disaster Damage: Single-family homes can be vulnerable to disasters like tornadoes, floods, and wildfires. The extent of damage often depends on construction quality, materials used, and adherence to building codes.

- Multi-Family Units

  Environmental Impact: Multi-family units are generally more efficient in terms of land use and resource consumption per household. They can reduce urban sprawl and promote more sustainable living.

  Disaster Damage: These buildings can be more resilient due to stricter building codes and shared walls, which can provide additional structural support. However, high-density living can complicate evacuation and emergency response.

- Additions and Renovations

  Environmental Impact: Renovations can improve energy efficiency and reduce the environmental footprint of older homes. However, they can also generate construction waste and require significant resources.

  Disaster Damage: Properly executed renovations can enhance a home's resilience to disasters by updating structural elements and incorporating modern safety standards.

- Accessory Buildings

  Environmental Impact: These structures typically have a smaller environmental footprint but can contribute to land use changes and increased resource consumption.

  Disaster Damage: Accessory buildings like sheds and garages are often less robust and more susceptible to damage in severe weather events.

- Manufactured Homes

  Environmental Impact: Manufactured homes can be more resource-efficient in terms of construction but may have a shorter lifespan and require more frequent replacement.

  Disaster Damage: These homes can be particularly vulnerable to high winds, flooding, and other natural disasters due to their construction methods and materials. Proper anchoring and placement can mitigate some risks.

- General Considerations

  Sustainable Practices: Incorporating sustainable building practices, such as using eco-friendly materials and energy-efficient designs, can mitigate environmental impacts across all categories.

  Building Codes and Standards: Adherence to modern building codes and standards is crucial for minimizing damage. This includes using materials and techniques designed to withstand local environmental hazards.

Steele County takes several measures to ensure that building does not occur in floodplains and to mitigate flood risks:

Floodplain Mapping and Zoning

Floodplain Maps: The county uses detailed floodplain maps to identify areas at risk of flooding. These maps are available through the county's Geographic Information Systems (GIS) department (Source: https://steelecountymn.gov/gis/floodplain_maps.php). See Maps A-33 and A-34

Zoning Regulations: Specific zoning regulations restrict or prohibit construction in designated floodplain areas to minimize risk (Source: https://steelecountymn.gov/planning_and_zoning/ordinances.php) .

Building Codes and Permitting

Strict Building Codes: The county enforces building codes that require elevated structures and flood-resistant designs in flood-prone areas.

Permit Review Process: Any construction in or near floodplains undergoes a rigorous review to ensure compliance with floodplain management regulations.

Flood Control and Mitigation

Flood Control Infrastructure: The county supports the cities, the Steele County Soil and Water Conservation District and participates in the Cannon River Joint Powers Organization in the One Watershed One Plan to consider flood control measures such as levees, dikes, and stormwater management systems to protect developed areas (Source: Cannon River 1W1P).

This Steele County Multi-Hazard Mitigation Plan includes strategies for reducing flood risks and managing floodplains effectively The City of Owatonna and Medford utilize home buyout programs wherever feasible and willing homeowners.

Public Awareness and Education

Community Outreach: The county provides resources and information to educate the public about flood risks and the importance of avoiding construction in flood-prone areas.

Emergency Preparedness: Residents are informed about how to prepare for and respond to flooding events, enhancing community resilience.

Collaboration and Compliance

National Flood Insurance Program (NFIP): Steele County participates in the NFIP, which sets standards for floodplain management and provides flood insurance to property owners.

State and Local Coordination: The county works closely with state and local agencies to ensure comprehensive floodplain management and regulatory compliance.

Steele County has several community-based initiatives that promote sustainable practices, particularly in flood-prone areas:

United Way of Steele County Initiatives

Community Resilience Programs: United Way of Steele County supports various programs improving community resilience, including those that address environmental sustainability and flood risk management (Source: https://www.unitedwaysteelecounty.org/initiatives).

Green Infrastructure Projects

Stormwater Management: The city of Owatonna has implemented green infrastructure projects to manage stormwater and reduce flooding. These projects often involve community participation in planning and maintenance (Source: https://www.epa.gov/green-infrastructure/mitigate-flooding).

Public Education and Outreach

Workshops and Seminars: Local organizations and the county government frequently host workshops and seminars to educate residents about sustainable practices and flood risk mitigation.

Community Engagement: Efforts to engage the community in sustainable practices include volunteer opportunities for planting trees, creating rain gardens, and other activities that help manage flood risks.

Floodplain Restoration and Conservation

Habitat Restoration Projects: There are ongoing projects to restore natural floodplains and habitats, which help absorb floodwaters and reduce the impact of flooding.

Conservation Efforts: Local conservation groups work to protect and preserve natural areas that can mitigate flood risks, often involving community volunteers in their efforts.

These initiatives not only help manage flood risks but also promote a sense of community and environmental stewardship.

Community-based initiatives that promote sustainable practices to mitigate high wind hazards:

Wind-Resistant Construction: Local builders and homeowners are encouraged to adopt wind-resistant construction practices. This includes using materials and designs that can withstand high winds, such as reinforced roofing and impact-resistant windows.

Public Education and Outreach

Emergency Preparedness Training: The county offers training sessions for residents on how to prepare for high-wind events, including creating emergency kits and developing family emergency plans.

Information Campaigns: Public information campaigns help raise awareness about the risks of high winds and the importance of sustainable practices to mitigate these risks.

Collaboration with Local Organizations

Partnerships with Non-Profits: Steele County collaborates with local non-profits and community organizations to promote sustainable practices and enhance community resilience against high wind hazards.

Volunteer Programs: There are opportunities for community members to volunteer in initiatives aimed at improving local infrastructure and preparing for high-wind events.

Community-based initiatives that promote sustainable practices to mitigate the impact of blizzard hazards:

Public Education and Outreach

Winter Preparedness Workshops: The county and local organizations frequently host workshops to educate residents about preparing for blizzards. Topics include creating emergency kits, winterizing homes, and safe driving practices during winter storms.

Information Campaigns: Public information campaigns help raise awareness about the risks of blizzards and the importance of sustainable practices to mitigate these risks.

Emergency Response Training

Community Emergency Response Teams (CERT): Steele County offers CERT training, which includes preparing for and responding to blizzard conditions. This training helps residents learn how to assist their neighbors and community during severe winter weather.

Infrastructure Improvements

Snow Removal and Road Maintenance: The county invests in infrastructure improvements to ensure efficient snow removal and road maintenance during blizzards. This includes upgrading equipment and implementing best practices for snow and ice management.

These initiatives help ensure that the community is better prepared for blizzard hazards and promote sustainable practices that enhance overall resilience.

Section 4 – Risk Assessment

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The goal of mitigation is to reduce 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. Risk assessment involves quantifying the potential loss resulting from a disaster by assessing the vulnerability of buildings, infrastructure, and people. This assessment identifies the characteristics and potential consequences of a disaster, how much of the community could be affected by a disaster, and the impact on community assets. A risk assessment consists of 3 components:

- Hazard identification and prioritization
- Risk profile
- Vulnerability profile.

Basing risk assessments on the best information available is important in developing effective mitigation actions that benefit communities. Geographic Information System (GIS) tools are not only helpful in producing maps, but they also show structures at risk and may determine damage estimates for potential hazard scenarios. MN Homeland Security and Emergency Management (HSEM) mitigation staff encourages the use of GIS tools in risk assessments. These tools are used to predict estimated losses from floods, hurricanes and other related phenomena and to measure the impact of various mitigation practices that might help reduce those losses.

4.1 Hazard Identification/Profile

The cornerstone of the risk assessment is identification of the hazards that affect jurisdictions. To facilitate the planning process, several sources were employed to ensure that the natural hazards are identified prior to assessment.

The county maintenance of the plan includes continual updates of the hazards identified in the initial plan. The mitigation steering committee compared the hazards in the initial plan to current publications to determine if new hazards should be considered or if some should be deleted.

Natural hazards are identified in the FEMA publication “Multi-Hazard Identification and Risk Assessment – A Cornerstone of the National Mitigation Strategy,” also known as MHIRA. FEMA Region V developed a list based on state mitigation plans in the region. The list was divided into natural (Table M-8) and other hazards (Table M-9) as was done in the 2019 Minnesota State Hazard Mitigation Plan.

For the purpose of this plan, FEMA defines other hazards or “man-made hazards” as technological hazards and terrorism. These are distinct from natural hazards primarily in that they originate from human activity. In contrast, while the risks presented by natural hazards may be increased or decreased as a result of human activity, they are not inherently human-induced. The term “technological hazards” refers to the origins of incidents that can arise from human activities such as the manufacture, transportation, storage, and use of hazardous materials. The term “terrorism” refers to intentional, criminal, and malicious acts. There is no single, universally accepted definition of terrorism, and it can be interpreted in many ways. For the purposes of this plan, FEMA refers to “terrorism” as the use of Weapons of Mass Destruction (WMD), including biological, chemical, nuclear, and radiological weapons; arson, incendiary, explosive, and armed attacks; industrial sabotage and intentional hazardous materials releases; and “cyber terrorism.”

4.1.1 National Risk Index

In 2022, FEMA's Natural Hazards Risk Assessment Program published an online tool called the National Risk Index. The Index is a dataset to help aid in the emergency planning process. The National Risk Index development team led research, design, development, and testing of the Risk Index. They conducted a broad and thorough literature review to determine these strategies and approaches for data collection and visualization in the field of disaster mitigation and recovery. Centering the research for national hazards and exposure variables.

Risk is defined as the potential for negative impacts because of a natural hazard. The Risk Index includes three components:

- A natural hazard component (expected annual loss);
- A consequence enhancing component (social vulnerability), and
- A consequence reduction component (community resilience).

The following risk indicator categories and indicators were used in the calculations:

Risk Indicators	Individual Risk Indicators	
Social	Income	Road Systems
Economic	Age	Economic Productivity
Environmental	Illness	Housing
Infrastructure	Hospitals	Community Revenue

(https://hazards.fema.gov/nri/literature-review):

Steele County's score is represented by its percentile ranking among all other communities at the same level for risk, expected annual loss, social vulnerability and community resilience based on all US Census tracts.

Steele County's ratings is represented by a qualitative rating that describes the community in comparison to all other communities at the same level, range of relatively low. Figure 4.1 compares the Overall Risk Index Score for Steele County with neighboring counties.

Figure 4.1 Steele County Overall Risk Index Score.
https://hazards.fema.gov/nri/understanding-scores-ratings

4.1.1.1 National Risk Index – Expected Annual Loss

Expected Annual Loss represents the average economic loss in dollars resulting from natural hazards each year. It is a calculated for each hazard type and quantifies loss for relevant consequence types including buildings, people, and agriculture. The Risk Index scored Steele County relatively low for Expected Annual Loss. Figure 4.2 compares the Expected Annual Loss for Steele County with neighboring counties.

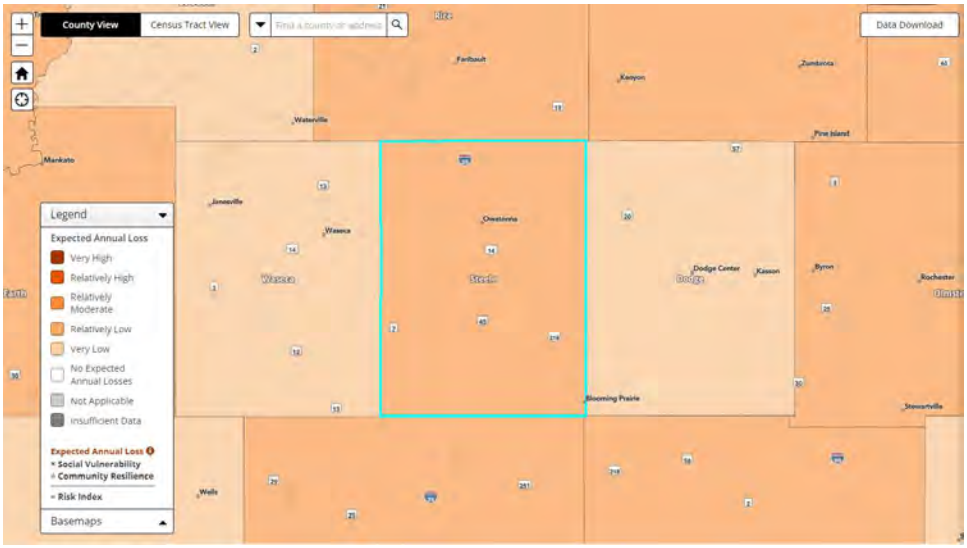

Figure 4.2 Steele County Risk Index Score for Expected Annual Loss
https://hazards.fema.gov/nri/expected-annual-loss

4.1.1.2 National Risk Index – Social Vulnerability

Social vulnerability is the susceptibility of social groups to the adverse impacts of natural hazards, including disproportionate death, injury, loss, or disruption of livelihood. The Risk Index scored Steele County relatively low for Social Vulnerability. Figure 4.3 compares the Social Vulnerability for Steele County with neighboring counties.

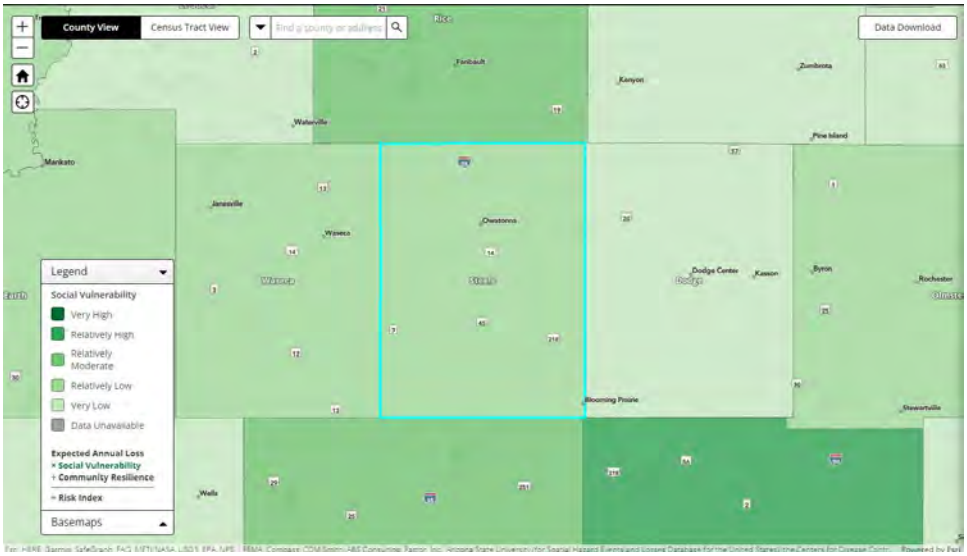

Figure 4.3 Steele County Risk Index Score for Social Vulnerability
https://hazards.fema.gov/nri/social-vulnerability

4.1.1.3 National Risk Index – Community Resilience

Community Resilience is the ability Steele County to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions. The Risk Index scored Steele County very high for Community Resilience. Figure 4.4 compares the Community Resilience for Steele County with neighboring counties.

Figure 4.4 Steele County Risk Index Score for Community Resilience
https://hazards.fema.gov/nri/community-resilience

4.1.2 Community Resilience Zone

The Community Disaster Resilience Zones Act was passed on December 20, 2022 and signed by President Biden. FEMA uses data from the National Risk Index Scores and the Climate & Economic Justice Screening Tool to determine if a community is at risk for natural disasters and if they are a disadvantaged community. The 2020 Population Census and National Risk Index were used in determining the ranking for all Counties in Minnesota. Each state is required to have one area designated.

According to the Community Disaster Resilience map (Map A-32), Steele County is in the top 50 (Top 1% in Minnesota) in the United States of disadvantaged community resilience to natural disasters. This is due the burden on housing and water/wastewater.

4.1.3 Vulnerability Assessment by Jurisdiction

The steering committee met multiple times to review and update the hazards faced by residents of Steele County, update the existing mitigation actions published in the 2017 Multi-Hazard Mitigation Plan, and propose new mitigation actions.

To engage in this process, the committee drew on a number of data sources. First, the committee examined the hazards identified in the 2023 Hazard Mitigation Plan (Table M-10). The natural hazards that pose risk to Steele County were discussed and adjusted to reflect the definitions of natural hazards used in the 2019 Minnesota State Hazard Mitigation Plan. This was done to assure that the risks faced by Steele County were categorized the same way as the priority hazards established by the State of Minnesota.

While the focus of this MHMP is on natural hazards, planning took place with the understanding that many non-natural hazards could occur as a result of natural disasters (i.e., disruption in electrical service due to freezing rain causing problems for both utility corporations and vulnerable populations dependent on electricity for heat).

This plan draws on a variety of data sources including the State of Minnesota and Homeland Security Emergency Management Critical Infrastructure Strategy for the State of Minnesota (2023) FEMA's Local Mitigation Planning Handbook (2013), and the State of Minnesota Multi Hazards Identification Risk Assessment.

Steele County ranked hazards based on a Calculated Priority Risk Index, or CPRI, for their 2022 MHIRA rankings. These rankings were considered by the steering committee in the process of ranking hazards for the MHMP update. The methodology of the CPRI is outlined below.

4.1.4 Calculated Priority Risk Index

The vulnerability assessment builds upon the previously developed hazard information by identifying the community assets and development trends and intersecting them with the hazard profiles to assess the potential amount of damage that could be caused by each hazard event. A summary of Calculated Priority Risk Index (CPRI) categories and risk levels is shown in Table M-11. Definitions for the CPRI Category are:

Definitions of CPRI Categories
Probability – a guide to predict how often a random event will occur. Annual probabilities are expressed between 0.001 or less (low) up to 1 (high). An annual probability of 1 predicts that a natural hazard will occur at least once per year.

Magnitude/Severity – indicates the impact to a community through potential fatalities, injuries, property losses, and/or losses of services. The vulnerability assessment gives information that is helpful in making this determination for each community.

Warning Time – plays a factor in the ability to prepare for a potential disaster and to warn the public. The assumption is that more warning time allows for more emergency preparations and public information.
Duration – relates to the span of time local, state, and/or federal assistance will be necessary to prepare, respond, and recover from a potential disaster event.

The hazard rankings for the Steele County MHMP update (Table M-12) were based upon review of 1) hazard rankings in the past MHMP, 2) hazard rankings in the Calculated Priority Risk Index (CPRI) conducted by the county, and 3) group review and discussion during the MHMP steering committee meetings and public meetings.

4.1.5 Hazard Profiling Concept of Planning

The risk assessments identify the characteristics and potential consequences of a disaster, how much of the community could be affected by a disaster, and the impact on community assets. A risk assessment consists of 3 components—hazard identification, risk profile, and vulnerability profile.

4.1.6 GIS and Risk Assessment

The risk analysis step in this assessment quantifies the risk to the population, infrastructure, and economy of the community. Hazards that can be geographically identified (wildland fires, windstorms, tornadoes, hail, floods) were mapped.

FEMA's Hazus Program provides standardized tools and data for estimating risk from earthquakes, floods, tsunamis, and hurricanes. Hazus models combine expertise from many disciplines to create actionable risk information that increases community resilience.

Hazus-MH was used to estimate the damages incurred for a 100-year flood and for general asset assessment. Hazus-MH also generates aggregated loss estimates for the entire county due to a 100-year flood. Aggregate inventory loss estimates, which include building stock analysis, are based upon the assumption that building stock is evenly distributed across each census block.

Therefore, it is possible that overestimates of damage will occur in some areas while underestimates will occur in other areas. With this in mind, total losses tend to be more reliable over larger geographic areas (groups of many blocks) than for individual census blocks. It is important to note that Hazus-MH is not intended to be a substitute for detailed engineering studies.

4.1.7 National Centers for Environmental Information (NCEI) Records

Historical storm event data was compiled from the National Centers for Environmental Information (NCEI). NCEI records are estimates of damage reported to the National Weather Service (NWS) from various local, state, and federal sources. However, these estimates are often preliminary in nature and may not match the final assessment of economic and property losses related to given weather events.

The NCEI data included 280 reported events in Steele County between 1950 and December 2022. However, some weather event categories only had available data going back as recent as 1996. No records before 1950 were available. A summary table of events related to each hazard type is included in the hazard profile sections that follow. A full table listing all events, including additional details, is included in Appendix C. NCEI hazard categories used in this plan are listed in Table M-13.

4.1.8 FEMA Declared Disasters

Another historical perspective is derived from FEMA-declared disasters. 14 major disaster and 5 emergency declarations in Steele County have been made between 1957 and December 2022 (Figure 4.1, right).

Table M-14 and Table M-15 show the details of the disasters and emergencies including payments for Public Assistance (PA) and Individual Assistance (IA), listed under the flooding and severe storm profiles. No declarations were made for the other storms listed in the NCEI database. Reviewing the federal payments for damages from the declared disasters is a way of correlating the impact from the NCEI report.

Table M-16 summarize the historical projects in Steele County resulting from hazard mitigation funding.

Table M-20 summarizes Declared Disasters by the State of Minnesota.

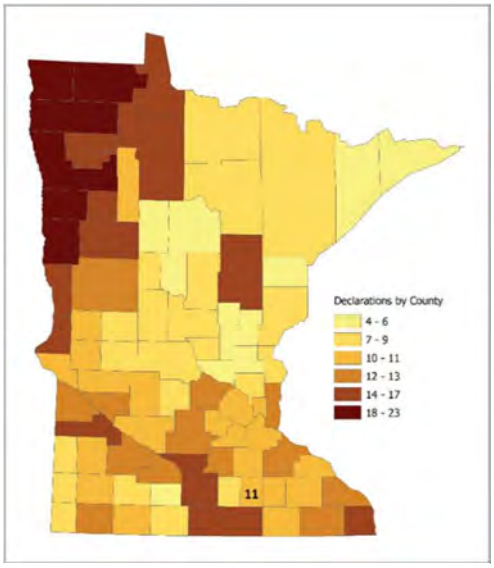

Figure 4.5 FEMA Declared Disasters

4.2 Vulnerability Assessment

4.2.1 Asset Inventory

For the purposes of this plan, critical infrastructure and key resources were defined by Steele County. Essential facilities are a subset of critical facilities. Names and locations of all critical facilities are found in Appendix B. Tables B-1 through B-17 group the facilities by sector (e.g., Agriculture, Manufacturing, Retail). The definition for each sector is included at the bottom of each table. Critical facilities are mapped geographically in Appendix A:

- Map A-15 Steele County critical facilities.
- Map A-16 Owatonna critical facilities.
- Map A-17 Blooming Prairie critical facilities.
- Map A-18 Ellendale critical facilities.
- Map A-19 Medford critical facilities

4.2.2 Facility Replacement Costs

Steele County-specific building data was sourced from the parcel tax databases and parcel polygon data included building valuations and occupancy class. Structure values for each parcel were aggregated within each parcel and assigned to the parcel centroid point. Records were aggregated to the relevant census administrative boundaries for the flood hazard analysis.

Table M-18 identifies facility replacement costs and total building exposure by general occupancy class, as calculated by Hazus.

4.3 Future Development

Steele 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.

Steele County continues to grow and expand development opportunities that can affect the vulnerability and risk for the community. Each of the larger cities has developed a Comprehensive Plan that describes future changes and expected hazards for future development projects.

The City of Medford has increased population by 12.9% according to the Medford Comprehensive Plan. This high growth rate increases the vulnerability and risk for the city, while the rest of the county has seen a decrease overall. Medford Public Schools completed a $1.84 million dollar renovation to the high school by adding a secured entrance and improved parking lot. There are future plans to renovate more of the school in the future, increasing possible replacement costs for future vulnerability and risk assessments.

The City of Blooming Prairie is split between three counties (Steele, Dodge, and Mower). The Steele County portion of Blooming Prairie is holding steady on population and development. There are plans to expand in the areas that are in Dodge County. There are not any current plans for new structures in Steele County at this time. There is no change on vulnerability or risk expected for future development.

The City of Ellendale has slightly lower population growth than the rest of the county. Future development projects include building an apartment building and updates for electric and sewer in town.

The City of Owatonna continues to add house projects over the next 5 years, additional construction of roads, and improvement of wetlands. The City of Owatonna is constructing a new high school with expected completion to be in the summer of 2023. The new high school and new apartments will increase the housing options and help local employers attract new people to the area. There is increased risk for flooding as the agricultural land changes and structures are developed. This could potentially change the vulnerability and risk assessment for Steele County due the population increases, the cost of replacement for the newer buildings, and topography changes due to new development.

The Steele County Emergency Management Director will work to keep the jurisdictions covered by the Multi-Hazard Mitigation Plan engaged and informed during the plan's cycle. By keeping jurisdictional leaders actively involved in the monitoring, evaluation and update of the MHMP, 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. Each jurisdiction has identified mitigation strategies they will seek to implement in their communities (see Appendix G: Mitigation Actions by Jurisdiction). Jurisdictions will include considerations for hazard mitigation in relation to future development when updating local comprehensive plans or other plans that may influence development.

4.4 Hazard Profiles

4.4.1 Tornadoes

Tornadoes are defined as violently-rotating columns of air extending from thunderstorms to the ground, with wind speeds between 40-300 mph. They develop under 3 scenarios:

1. along a squall line;
2. in connection with thunderstorm squall lines during hot, humid weather;
3. in the outer portion of a tropical cyclone.

Funnel clouds are rotating columns of air not in contact with the ground; however, the column of air can reach the ground very quickly and become a tornado.

Since 2007, tornado strength in the United States is ranked based on the Enhanced Fujita scale (EF scale), replacing the Fujita scale introduced in 1971. The EF scale uses similar principles to the Fujita scale, with 6 categories from 0-5, based on wind estimates and damage caused by the tornado. The EF Scale is used extensively by the NWS in investigating tornadoes (all tornadoes are now assigned an EF Scale number), and by engineers in correlating damage to buildings and techniques with different wind speeds caused by tornadoes. To see a comparative table of F and EF scales, see http://www.spc.noaa.gov/faq/tornado/ef-scale.html.

In Minnesota, the peak months of tornado occurrence are June and July. The typical time of day for tornadoes in Minnesota ranges between 4:00 p.m. and 7:00 p.m. Most of these are minor tornadoes, with wind speeds under 125 miles per hour. A typical Minnesota tornado lasts approximately 10 minutes, has a path length of 5 to 6 miles, is nearly as wide as a football field, has a forward speed of about 35 miles an hour, and affects less than 0.1% of the county warned.

4.4.1.1 Tornado History in Steele County

Historic tornado events in the county are listed in Table C-1. Map A-10 shows tornado touchdown points and tracks in Steele County.

According to the NCEI, 22 tornadoes were reported in Steele County between 1950 and December of 2022, causing no deaths, one injury, and over $53,000,000 dollars in property damage. Tornado classification ranged from F0/EF0 to F3/EF3 on the Enhanced Fujita Scale.

On May 19, 2021, a storm rolled through the Steele County area that produced an EF0 in Meriden and three funnel clouds in Medford. A picture of the funnel clouds is illustrated in Figure 4.2.

Figure 4.6: May 19, 2021 Funnel Clouds
Credit: Craig Henry

The most recent tornado occurred in Blooming Prairie on December 15, 2021. This EF 0 tornado was part of a historic “serial derecho”, that moved from Kansas to Wisconsin, produced over 60 tornadoes and wind gusts over 75+mph. This is the first time tornadoes were recorded in Minnesota during the month of December (https://www.weather.gov/mpx/HistoricStormDecember2021).

4.4.1.2 Tornadoes and Climate Change

Tornadoes and other severe thunderstorm phenomena frequently cause as much annual property damage in the U.S. as do hurricanes, and often cause more deaths. Although recent research has yielded insights into the connections between global warming and the factors that cause tornados and severe thunderstorms, such as atmospheric instability and increases in wind speed with altitude (Del Genio, Yao, & Jonas, 2007), these relationships remain mostly unexplored, largely because of the challenges in observing thunderstorms and tornadoes and simulating them with computer models (National Climate Assessment Development Advisory Committee, 2022).
According to Harold Brooks, Gregory Carbin, and Patrick Marsh (2014) of NOAA’s National Severe Weather Laboratory, there is increasing variability in the “start” of tornado season. The number of days with more than 30 EF1 or greater tornadoes is increasing, while the number of days with at least 1 EF1 or greater tornadoes is decreasing. Thus, tornadoes are occurring on fewer days, but *more* are occurring on outbreak days.

Tornadoes have not been recorded in Minnesota in the winter months of January and February (MN DNR, 2022). In December of 2021, a tornado outbreak in multiple states occurred during a historic and unprecedented derecho. This severe and dangerous storm produced over 61 tornadoes and had wind gusts over 75+ mph.

4.4.1.3 Vulnerability

The county has experienced at least one tornado in 19 of the 76 full years on record. According to these statistics, there is a 19.7% chance of a tornado affecting Steele County each year. The vulnerability of each jurisdiction to severe summer storms has not changed due to any development in the last 5 years.

4.4.1.4 Plans and Programs in Place

Emergency Notifications

Summer storm warnings are initiated by the National Weather Service or local trained SKYWARN spotters. The emergency warning system is activated by the dispatch center as directed. Residents receive warnings by NOAA weather radio, the Everbridge Emergency Notification System, IPAWS and the outdoor warning siren system.

SKYWARN Program

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communities safe by providing timely and accurate reports of severe weather to their local National Weather Service office.

Severe Weather Awareness Week

Steele County helps promote and participates in the National Weather Service's "Severe Weather Awareness Week" held in April each year. The event seeks to educate residents on the dangers of severe summer storms and highlights the importance of preparing for severe weather before it strikes.

Outdoor Warning Sirens

There are outdoor warning sirens located throughout Steele County. Sirens are activated when the National Weather Service or trained weather spotters notify Dispatch that there are high winds or tornado conditions that pose a risk to public safety.

School Closings

All school districts within Steele County have a school closing policy and communications plan in place if inclement weather or temperatures create a hazardous situation for students or staff.

4.4.1.5 Program Gaps or Deficiencies

Doppler Radar

As illustrated in Figure 4.3, radar beams are elevated above ground due to the curvature of the earth. Because of the distance between Steele County and the Doppler radar in Chanhassen, radar does not see anything below approximately 6,000 feet in Steele County. This makes it difficult for the National Weather Service (NWS) to detect tornadoes at ground level. The Association of Minnesota Emergency Managers (AMEM) is forming a group to research the deficiencies of Doppler radar in Minnesota.

Steele County residents are particularly vulnerable to tornados at night. The NWS may not detect tornadoes on radar and SKYWARN spotters are not activated at night for their safety.

N*OAA All-Hazard Radios*

Reception of NOAA radio's, particularly in the Eastern part of the county, can be unreliable during storm events.

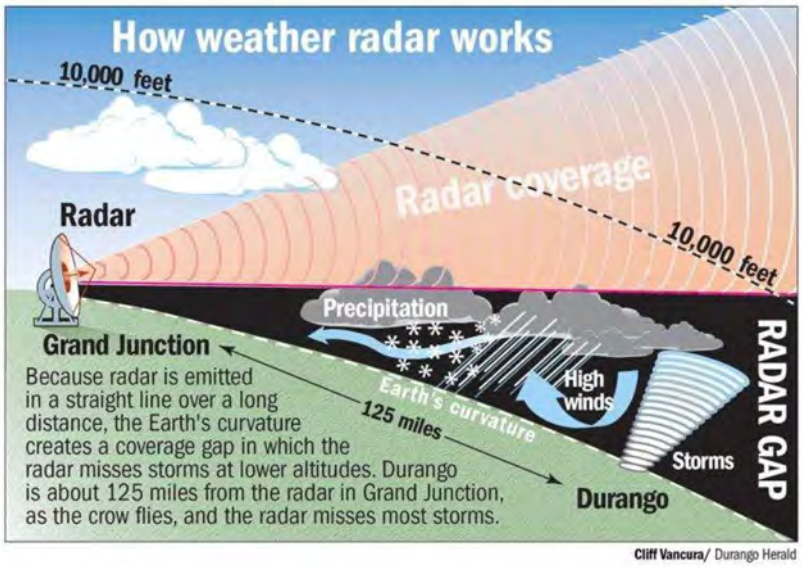

Figure 4.7: How Weather Radar Works

4.4.2 Windstorms

FEMA defines winds in excess of 50 knots (58 miles per hour), excluding tornadoes, as windstorms. Straight-line winds and windstorms are used interchangeably in the plan. There are several different types of windstorms:

- A “downburst” is defined as a strong downdraft with an outrush of damaging winds on or near the earth’s surface. Downbursts may have wind gusts up to 130 mph and are capable of the same damage as a medium-sized tornado.
- A “gust front” is the leading edge of the thunderstorm downdraft air. It is most prominent near the rain-free cloud base and on the leading edge of an approaching thunderstorm and is usually marked by gusty, cool winds and sometimes by blowing dust. The gust front often precedes the thunderstorm precipitation by several minutes.
- Straight-line winds, when associated with a thunderstorm, are most frequently found with the gust front. These winds originate as downdraft air reaches the ground and rapidly spreads out, becoming strong horizontal flow.

This hazard is treated as a different category than tornadoes (which may also include high winds). Severe winds can damage and destroy roofs, toss manufactured homes off their pier foundations, and tear light-framed homes apart. Windstorms are among the nation’s most severe natural hazards in terms of both lives lost and property damaged (https://hazards.fema.gov/nri/strong-wind).

4.4.2.1 Windstorm History in Steele County

Historic severe thunderstorm wind events are listed in Table C-3. Map A-9 shows severe wind and hailstorm points in Steele County.

Steele County experiences less frequent high winds blowing at over 50 knots than other Minnesota counties, although in the summer of 2017, there were seven recorded storms with 50 knot winds. According to NCEI records there have been 97 thunderstorm wind and high wind events reported between 1950 and November 2022 with wind speeds at or above 50 knots. The highest recorded wind speed from a windstorm event in Steele County was measured at 70 knots on 6/26/1979 and again on 5/19/1996. These winds can inflict damage to buildings and in some cases overturn high-profile vehicles.

4.4.2.2 Windstorms and Climate Change

Lack of high-quality long-term data sets make assessment of changes in wind speeds very difficult (Kunkel, et al., 2013). One analysis generally found no evidence of significant changes in wind speed distribution. Other trends in severe storms, including the numbers 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 (National Climate Assessment Development Advisory Committee, 2013).

4.4.2.3 Vulnerability

The magnitude of summer storms each year is unpredictable and within Steele County and the vulnerability of jurisdictions to windstorms does not vary geographically. The vulnerability of each jurisdiction to severe summer storms has not changed due to any development in the last 5 years.

4.4.2.4 Plans and Programs in Place

Emergency Notifications

Summer storm warnings are initiated by the National Weather Service or local trained SKYWARN spotters. The emergency warning system is activated by the dispatch center as directed. Residents receive warnings by NOAA weather radio, the Everbridge Emergency Notification System, IPAWS and the outdoor warning siren system.

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Outdoor Warning Sirens

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School Closings

All school districts within Steele County have a school closing policy and communications plan in place if inclement weather or temperatures create a hazardous situation for students or staff.

4.4.2.5 Program Gaps or Deficiencies

Doppler Radar

As illustrated in Figure 4.3 (above), radar beams are elevated above ground due to the curvature of the earth. Because of the distance between Steele County and the Doppler radar in Chanhassen, radar does not see anything below approximately 6,000 feet in Steele County. This makes it difficult for the National Weather Service (NWS) to high winds at ground level. The Association of Minnesota Emergency Managers (AMEM) is forming a group to research the deficiencies of Doppler radar in Minnesota.

Steele County residents are particularly vulnerable to severe winds at night. The NWS may not detect high winds at ground level on radar and SKYWARN spotters are not activated at night for their safety.

N*OAA All-Hazard Radios*

Reception of NOAA radio's, particularly in the Eastern part of the county, can be unreliable during storm events.

Loss of Power

Above-ground power lines are susceptible to damage as a result of high wind events. Locating lines underground where it is feasible and cost effective, as is occurring in some parts of Steele County, can reduce damage and potential power outages. Specific vulnerabilities include:

- Not all county & city facilities have backup power in the event of a severe winter storm that takes out power.
- Life safety is critical for individuals requiring power for medical equipment.
- The age of some distribution equipment makes the system less reliable during high wind events.

4.4.3 Lightning

Lightning typically occurs as a by-product of a thunderstorm. In only a few millionths of a second, the air near a lightning strike is heated to 50,000° F, a temperature hotter than the surface of the sun.

The hazard posed by lightning is significant. High winds, rainfall, and a darkening cloud cover are the warning signs for possible cloud-to-ground lightning strikes. While many lightning, casualties happen at

the beginning of an approaching storm, more than half of lightning deaths occur after a thunderstorm has passed. Lightning has been known to strike more than 10 miles from the storm in an area with clear sky above.

Lightning strikes the ground approximately 25 million times each year in the U.S. According to the NWS, the chance of an individual in the U.S. being killed or injured by lightning during a given year is 1 in 240,000 (NOAA National Severe Storms Laboratory, n.d.).

Lightning is the most dangerous and frequently encountered weather hazard that most people in the United States experience annually. Lightning is the second most frequent killer in the U.S., behind floods and flash floods, with nearly 100 deaths and 500 injuries annually. The lightning current can branch off to strike a person from a tree, fence, pole, or other tall object. In addition, an electrical current may be conducted through the ground to a person after lightning strikes a nearby tree, antenna, or other tall object. The current may also travel through power lines, telephone lines, or plumbing pipes to damage property or cause fires.

According to NOAA data, the natural hazards that caused the greatest overall property loss in Minnesota between 1996 and 2014 were thunderstorms and lightning, at $86.3 million per year.

Minnesota experienced 23 electric transmission outages from 1992 to 2009, 5 of which were due to heat waves and thunderstorms. On average, the number of people affected annually by all electric outages during 2008 to 2013 in Minnesota was 449,995, with a high of 1,460,810 in 2011 (U.S. Department of Energy, 2015).

Figure 4.4 (right) shows the causes of outages in the state between 2008 and 2013, with the largest cause being weather/falling trees. Figure 4.5 (below) shows the seasonality of electric outages by month for the years 2008 – 2013.

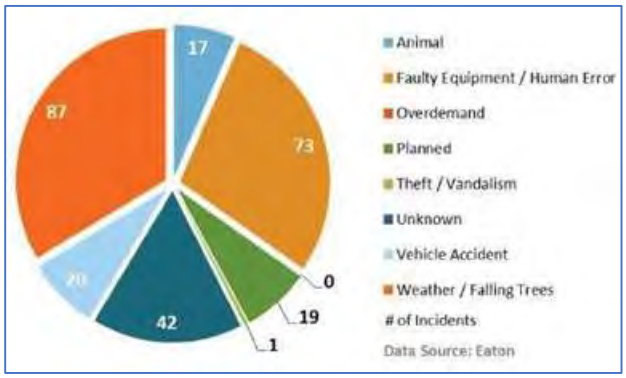

Figure 4.8. Electrical Outages by cause

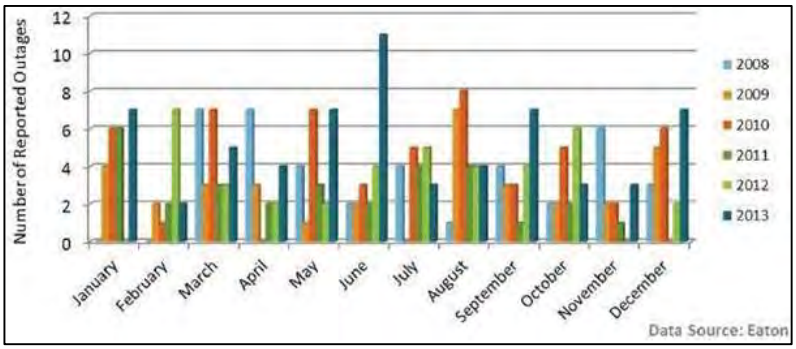

Figure 4.9 Electrical outages by month

4.4.3.1 Lightning History in Steele County

Table C-8 lists all lightning events recorded by the NCEI, 1996-March 2017. The data shows only 1 recorded lightning event in Steele County. This event on 6/26/2006, resulting in $1 million in property damages. A church in Havana Township burned to the ground after lighting hit. One fire fighter was injured while fighting the fire.

4.4.3.2 Lightning and Climate Change

The projected possible intensity and frequency of tornadoes, hail, and damaging thunderstorm winds, the conditions associated with lightning, are uncertain (National Climate Assessment Development

Advisory Committee, 2013). Severe rain events are becoming more common and may include an additional risk of lightning.

4.4.3.3 Vulnerability

The magnitude of summer storms each year is unpredictable and within Steele County and the vulnerability of jurisdictions to windstorms does not vary geographically. The vulnerability of each jurisdiction to severe summer storms has not changed due to any development in the last 5 years.

4.4.3.4 Plans and Programs in Place

Emergency Notifications

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Severe Weather Awareness Week

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Outdoor Warning Sirens

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School Closings

All school districts within Steele County have a school closing policy and communications plan in place if inclement weather or temperatures create a hazardous situation for students or staff.

4.4.3.5 Program Gaps or Deficiencies

Forecasting

Scientists use characteristics of the current weather in order to forecast if and where a storm is likely to produce lightning in the future. Forecasters can and do forecast the likelihood of intense lightning activity. There are commercial web sites that can illustrate where lightning strikes have occurred. However, it is impossible to forecast individual strikes because lightning is so widespread, frequent and random. Web sites showing the occurrence of lightning strikes include:

- https://www.lightningmaps.org
- https://www.blitzortung.org

Loss of Power

Above-ground power lines are susceptible to damage as a result of lightning strikes on power lines or substations. Outages due to direct lightning strikes may last only seconds as systems automatically reset. Outages can be extended based on the damage to the system from a direct strike. Locating lines underground where it is feasible and cost effective, as is occurring in some parts of Steele County, can reduce damage and potential power outages. Specific vulnerabilities include:

- Not all county & city facilities have backup power in the event of a severe storm and lightning that takes out power.
- Life safety is critical for individuals requiring power for medical equipment.
- The age of some distribution equipment makes the system less reliable during high wind events.

4.4.4 Hail

Hailstorms are a product of severe thunderstorms. Hail is formed when strong updrafts within the storm carry water droplets above the freezing level, where they remain suspended and continue to grow larger, until their weight can no longer be supported by the winds. Hailstones can vary in size, depending on the strength of the updraft.

The NWS uses the following descriptions when estimating hail sizes: pea size is ¼-inch, marble size is ½-inch, dime size is ¾-inch, quarter size is 1-inch, golf ball size is 1 ¾-inches, and baseball size is 2 ¾-inches. Individuals who serve as volunteer "storm spotters" for the NWS are located throughout the state, and are instructed to report hail dime size (¾-inch) or greater.

Hailstorms can occur throughout the year; however, the months of maximum hailstorm frequency are typically between May and August. Although hailstorms rarely cause injury or loss of life, they can cause significant property damage.

4.4.4.1 Hail History in Steele County

Hail is a particular concern in Steele County due to the damage it can inflict on agriculture. Table C-2 shows storms producing hail greater than 1 inch in diameter in Steele County.

4.4.4.2 Hail and Climate Change

According to the Federal Advisory Committee Draft National Climate Assessment (NCA), trends in severe storms, including the numbers 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 (National Climate Assessment Development Advisory Committee).

The occurrence of very heavy precipitation has increased in Minnesota in recent decades and future projections also indicate this will continue (Adaptation Clearinghouse). While it is unknown if this precipitation will occur during severe storms that produce hail, the possibility has not been ruled out.

4.4.4.3 Vulnerability

Summer storms affect Steele County each year, so there is a 100% probability that the county and its jurisdictions will be affected. According to the 66 full year NCEI record, there is a 38% chance of a significant hailstorm any year in Steele County and a 20% chance in each year that there will be a hailstorm that produces hail greater than 1 inch in size.

The magnitude of summer storms each year is unpredictable and within Steele County the vulnerability of jurisdictions to summer storms does not vary geographically. The vulnerability of each jurisdiction to severe summer storms has not changed due to any development in the last 5 years.

4.4.4.4 Plans and Programs in Place

Emergency Notifications – Summer storm warnings are initiated by the National Weather Service or local trained SKYWARN spotters. The emergency warning system is activated by the dispatch center as directed. Residents receive warnings by NOAA weather radio, the Everbridge Emergency Notification System, IPAWS and the outdoor warning siren system.

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School Closings – All school districts within Steele County have a school closing policy and communications plan in place if inclement weather or temperatures create a hazardous situation for students or staff.

4.4.4.5 Program Gaps or Deficiencies

The National Weather Service Storm Prediction Center (SPC) has the ability to forecast potential severe hail storms. This information is available to the public through the daily Convective Outlook and regular forecasts. Because there is very little than can be mitigated to reduce property damage, the emphasis must be placed on life safety.

Doppler Radar

The limitations of Doppler radar discussed in Section 4.4.1.5 also apply to hail storms. Hail can be detected at higher altitudes, but not at ground level. Actual hail reaching the ground must be reported by the general public, law enforcement, or SKYWARN spotters.

Radar is also limited detecting hail by the distance the hail occurs from the radar. The size of hail must be larger with increased distance for the radar to detect it.

4.4.5 Flash Flood and Riverine Flood

Flooding is a significant natural hazard throughout the United States. The type, magnitude, and severity of flooding are functions of the amount and distribution of precipitation over a given area, the rate at which precipitation infiltrates the ground, the geometry and hydrology of the catchment, and flow dynamics and conditions in and along the river channel. Upstream floods, also called flash floods, occur in the upper parts of drainage basins, and are generally characterized by periods of intense rainfall over a short duration. These floods arise with very little warning and often result in locally intense damage, and sometimes loss of life, due to the high energy of the flowing water. Flood waters can snap trees, topple buildings, and easily move large boulders or other structures. Six inches of rushing water can upend a person; another 18 inches might carry off a car.

Generally, upstream floods cause damage over relatively localized areas, but they can be quite severe. Urban flooding is a type of upstream flood, which involves the overflow of storm drain systems and can be the result of inadequate drainage combined with heavy rainfall or rapid snowmelt. Upstream or flash floods can occur at any time of the year in Minnesota, but they are most common in the spring and summer. 17 flash flood events have been recorded in Steele County since 1997.

Downstream floods, sometimes called riverine floods, refer to floods on large rivers at locations with large upstream catchments. Downstream floods are typically associated with precipitation events that are of relatively long duration and occur over large areas. Flooding on small tributary streams may be limited, but the contribution of increased runoff may result in a large flood downstream. The lag time between precipitation and the flood peak is much longer for downstream floods than for upstream floods, generally providing ample warning for people to move to safe locations and, to some extent, secure some property against damage.

4.4.5.1 Flood History in Steele County

Table C-4 lists Steele County's historical floods since 1997 as recorded by the NCEI. Although no deaths or injuries were recorded with these floods, property damage from just one flood in Ellendale resulted in over $28 million in losses. Nine of the 11 FEMA disaster declarations in Steele County have included flooding.

The last major flood in Steele County occurred on September 22, 2016. No injuries or deaths were reported by the National Centers for Environmental Information (NCEI). Between 3-6 inches of rain fell. Owatonna received the most profound impact from this event. A second rainfall increased the total by 2-4 inches. A flood in June of 2014 caused $2.4 million in damage in Steele County. Floodwaters from the Straight River impacted businesses in the city of Owatonna. The Minnesota State Emergency Operations Center was partially activated on June 16, and then was fully activated on June 18. On June 19, the Governor of Minnesota declared a State of Emergency for 35 counties. Steele County was included in presidential disaster declaration DR-4182.

Severe flooding also occurred in September of 2010. Numerous roads were closed in Steele County due to excessive rainfall that fell on September 22nd and 23rd. The major areal flooding did not recede until late Saturday when most of the small streams and creeks crested, only mainstream rivers remained flooded. Residents in Owatonna were fighting to save their homes along the flooded Maple Creek. 70 homes were evacuated in Owatonna due to the rising floodwaters. Friday morning was the first time that I-35 was closed due to floodwaters south of Owatonna. It re-opened during the afternoon as waters started to recede.

Figure 4.10. 2010 Owatonna Flood

The NCEI recorded $28 million in property damage in Steele County. A presidential disaster declaration was declared (DR-1941). FEMA Public Assistance (PA) for the State of Minnesota topped $33 million, while PA in Steele County alone was over $10 million. Steele County was also part of DR-1921 due to flooding, tornadoes, and severe storms in June of 2010. Public Assistance for the state reached $17 million, and Steele County received over $125,000 in PA.

In August 2007, another presidential disaster declaration was signed for Steele County in the wake of major flooding and damage. Large areas of Owatonna were reported under 2-3 feet of water. Water completely covered a few roads and was above car doors in some areas. Maple Creek at Dartt's Park three times as wide as normal and spread out into the parking lot. Some basement walls collapsed, and two hotels in Owatonna were evacuated.

The City of Medford experienced flooding on 9/22/10, 6/18/14, and 9/22/16. City records indicate claims were submitted to FEMA for all three of these floods. Approximately 6 homes' basements are flooded during most floods in Medford. Buyout of severely damaged homes or installation of berms to prevent flooding should be considered. The City's Straight River Park has also flooded several times. Picnic tables, electrical infrastructure, wood chips, baseball field, fencing, volleyball court sand & equipment, etc. has been damaged or washed away. The riverbank within the city is eroding. Streambank stabilization should be considered to prevent city stormwater infrastructure and private residential properties from falling into the river and washing away.

The National Oceanic and Atmospheric Administration (NOAA) Advanced Hydrologic Prediction Service provides information from gauge locations at points along various rivers across the United States. One NOAA gauging station downstream of Steele County is located in Rice County near Faribault on the Straight River. Its flood crest data for the top 10 gauge heights is recorded in Table C-9.

Automated gauges were installed in Steele County in 2015. The gauges are located in Owatonna on the Straight River and Maple Creek.

4.4.5.2 Vulnerability and Hazard Analysis

The total economic loss estimated for the flood is $33.7 million dollars, which represents 8% of the total replacement value of the parcels exposed. Building losses are broken into 2 categories: direct building losses and business interruption losses. Direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. Business interruption losses are associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The reported building counts should be interpreted as degrees of loss rather than an exact number of buildings exposed to flooding. The total estimated number of damaged buildings, total building losses, and estimated total economic losses are shown in Table C-4. The distribution of economic losses for Steele County is depicted in Map A-21.

Census blocks of concern should be reviewed in more detail to determine the actual percentage of facilities that fall within the flood hazard areas. The aggregate losses reported in this study may be overstated because values are distributed evenly in a census block. The 5 census blocks showing the highest estimated loss values are shown in Table C-9, with their spatial extents shown in Figure A-22 through Figure A-26.

The Hazus analysis for Steele County created the following conclusions:

- *Hazus-MH Essential Facility Loss Analysis*
    - Essential facilities encounter the same impacts as other buildings within the flood boundary: structural failure, extensive water damage to the facility, and loss of facility functionality (i.e. a damaged police station will no longer be able to serve the community). None of the essential facilities (care facilities, fire stations, police stations, and schools) included in the Hazus-MH analysis falls within the flood boundary.
- *Hazus-MH Shelter Requirement Analysis*
    - Hazus-MH estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. Hazus-MH also estimates those displaced people that may require accommodations in temporary public shelters. The model estimates 289 households may be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, the model estimates 476 people (out of a total population of 37,406) may seek temporary shelter in public shelters.
- *Hazus-MH Debris Generation Analysis*
    - Hazus estimates the amount of debris that may be generated by the flood. The model breaks debris into 3 general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.
    - The model estimates that a total of 4,950 tons of debris would be generated. Of the total amount, Finishes composes 50% of the total and Structural composes 28% of the total. If the debris tonnage is converted into an estimated number of truckloads, it would require 190 truckloads (@25 tons/truck) to remove the debris generated by the flood.

4.4.5.3 Flooding and Climate Change

As Minnesota's climate changes, the quantity and character of precipitation is changing. Average precipitation has increased in the Midwest since 1900, with more increases in recent years. The Midwest has seen a 45% increase in very heavy precipitation (defined as the heaviest 1% of all daily events) from 1958 to 2011 (National Climate Assessment Development Advisory Committee, 2013).

This precipitation change has led to amplified magnitudes of flooding. Increased precipitation may also show seasonal changes, trending toward wetter springs and drier summers and falls. In addition, the yearly frequency of the largest storms – those with 3 inches or more of rainfall in a single day – has more than doubled in just over 50 years. In the past decade, such dramatic rains have increased by more than 7% (MN Environmental Quality Board, 2014).

4.4.5.4 Plans and Programs in Place

Flood Warnings

Flood warnings are initiated by the National Weather Service. The emergency warning system is activated by the dispatch center as directed. Residents receive warnings by NOAA weather radio, the Everbridge Emergency Notification System and IPAWS. Areas prone to flooding are evacuated.

Floodplain Ordinances

Steele County and cities that have FEMA mapped high-risk areas have floodplain ordinances in place, which regulate development and setbacks on shorelines.

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. Steele County, the City of Medford, and the City of Owatonna all have FEMA mapped high risk areas and participate in the NFIP. The City of Ellendale and the City of Blooming Prairie do not have FEMA mapped high risk areas and therefore do not participate in the NFIP.

4.4.5.5 Program Gaps & Deficiencies

Emergency Notifications for Flood Prone Areas

There is not a specific Everbridge list created for flood prone areas in the county to receive flood warnings.

Automatic Flood Gauges

There are flood prone areas identified in the County near housing and camping/RV. The nearest gauge to monitor the Straight River upstream of this area is remote and must be manually measured. This creates a life safety risk for those areas for adequate warning.

4.4.6 Severe Winter Storms – Blizzards, Ice Storms

Blizzards are storms that contain heavy snowfall, strong winds, and cold temperatures. The combination of these elements creates blinding snow with near zero visibility, deep snowdrifts, and life-threatening wind chill temperatures. Blizzards are the most dramatic and destructive of all winter storms that occur within Steele County. Blizzards are generally characterized as storms bearing large amounts of snow accompanied by strong winds. They can completely immobilize travel in large areas and can be life-threatening to humans and animals in their path.

According to the National Weather Service (NWS), there is no fixed temperature requirement for blizzard conditions, but the life-threatening nature of low temperatures in combination with blowing snow and poor visibility increases dramatically when temperatures fall below 20° F. Blizzards typically occur between October and April; however, they occur most frequently from early November to late March.

Figure 4.11 2019 Winter Storm

The greatest numbers of blizzards historically have occurred in the months of January, followed by March and November, respectively. Steele County, along with all areas of Minnesota, is susceptible to blizzards. Damages from blizzards can range from human and livestock deaths to significant snow removal costs. Stranded drivers can make uninformed decisions, such as leaving the car to walk in conditions that put them at risk. Because of the blinding potential of heavy snowstorms, drivers are also at risk of collisions with snowplows or other road traffic.

Drivers and homeowners without emergency plans and kits are vulnerable to the life-threatening effects of heavy snowstorms such as power outages, cold weather, and inability to travel, communicate, obtain goods or reach their destinations. Heavy snow loads can cause structural damage, particularly in areas where there are no building codes or where residents live in manufactured home parks. The frequency of structural fires tends to increase during heavy snow events, primarily due to utility disruptions and the use of alternative heating methods by residents.

Between the years of 1975 and 1991, there were 49 deaths associated with blizzards statewide, or an average of 3 deaths per year. Deaths attributable to blizzards have dropped in recent years, primarily due to increased weather awareness and warning capabilities across the state. The economic costs of winter storms are generally not recorded by the NCEI; however, a winter storm in November 2001 resulted in property damage of $500,000.

Ice storms are described as occasions when damaging accumulations of ice occur due to freezing rain. The terms freezing rain and freezing drizzle warn the public that a coating of ice is expected on the ground and other exposed surfaces. Heavy accumulations of ice can bring down trees, electrical wires, telephone poles and lines, and communication towers.

Communications and power can be disrupted for days while utility companies work to repair extensive damage. Ice forming on exposed objects generally ranges from a thin glaze to coatings more than 1 inch thick. Even small accumulations of ice on sidewalks, streets, and highways may cause extreme hazards to Steele County motorists and pedestrians. Sleet does not stick to trees and wires, but sleet of sufficient thickness does cause hazardous driving conditions. Heavy sleet is a relatively rare occurrence, defined as an accumulation of ice pellets covering the ground to a depth of ½-inch or more.

Ice and sleet storms typically occur from October through April. The NWS notes that over 85% of ice storm-related deaths are the result of traffic accidents. The NCEI has recorded 2 ice storms in Steele County: in November 1996 and January 1998, but no deaths or injuries were reported.

Observing winter storm watches and warnings and adequate preparation can lessen the impact of blizzards in Minnesota. Technical advances made in transportation, including safer vehicles and improved construction and maintenance of roads, have also contributed to the decline in deaths related to blizzards. Historical estimates of dollar losses associated with blizzards were not available for the purposes of this analysis. However, costs incurred by state and local government for snow removal associated with disaster declaration DR-1158 (January 1997) totaled over $27,300,000 dollars. Blizzards rank 9th out of the 10 natural hazards economically impacting Minnesota according to the statewide risk analysis. The chance that another winter storm affecting Steele County will occur is highly probable.

4.4.6.1 Severe Winter Storm History in Steele County

The total of notable events defined as heavy snows, blizzards, winter weather, ice storms and winter storms in Steele County recorded by the NCEI for the period from 1996 to March 2022 is presented in Table C-5.

4.4.6.2 Severe Winter Storms and Climate Change

Historically, winter storms have had a large impact on public safety in Minnesota. This will continue, with a possible increase in snowstorm frequency and annual total snowfall. Winter weather is often a cause of power outages. Pressures on energy use, reduced reliability of services, potential outages, and the potential rise in household costs for energy are major climate change risks to public health.

According to the 2015 Minnesota Weather Almanac, a recent study of seasonal snowfall records across the state from 1890-2000 showed that 41 of 46 climate stations recorded an increase in average annual snowfall, by as much as 10 inches. Higher snowfall levels can result in greater runoff potential during spring snow melt, and many watersheds in Minnesota have shown more consistent measures of high-volume flows during spring, often at or above flood stage (Seeley, Mark, 2015).

4.4.6.3 Vulnerability

The number of heavy snowfall years for the Midwest has fluctuated between 1900 and 2006. The periods of 1900-1920 and 1960-1985 had numerous years with snowfall totals over the 90th percentile. In the past 3 decades, the number of heavy seasonal snowfall totals has been much lower. Despite these generally lower seasonal snowfall totals, some areas of the Midwest have still experienced significant snow totals in the most recent decade. The 100-year linear trends based on decadal values show that the upper Midwest had statistically significant (1% level) upward linear trends in snowstorm frequency from 1901 to 2000 (Kunkel, et al., 2013).

Winter storms affect Steele County each year, so there is a 100% probability that the county and its jurisdictions will be affected annually. The amount of snow and ice, number of blizzard conditions, and days of sub-zero temperatures each year are unpredictable and within Steele County the vulnerability of jurisdictions to winter storms does not vary geographically. Citizens living in climates such as these must always be prepared for situations that put their lives or property at risk. It is not always the size of the storm or the depth of the cold, but an unprepared individual with a vehicle breakdown or lack of a personal winter safety kit that are at risk. Rural citizens are more vulnerable to issues with deep snow. The vulnerability of each jurisdiction to severe winter storms has not changed due to any development in the last 5 years.

The leading cause of electric outages in Minnesota during 2008 to 2013 was Weather/Falling Trees. Between 2008 and 2013, the greatest number of electric outages in Minnesota occurred during the month of March (U.S. Department of Energy, 2015).

4.4.6.4 Plans and Programs in Place

Winter Weather Warnings

Winter weather warnings are issued by the National Weather Service. There is an I-35 closure plan for MN DOT and Steele County Emergency Management that addresses the closing plan, sheltering, parking and rescue of stranded motorists.

Winter Hazard Awareness Week

Steele County helps promote and participates in the National Weather Service's "Winter Hazard Awareness Week" held in November each year. The event seeks to educate residents on the dangers of winter weather and how to properly deal with it.

School Closings

All school districts within Steele County have a school closing policy and communications plan in place if inclement weather or temperatures create a hazardous situation for students or staff.

4.4.6.5 Program Gaps or Deficiencies

MN DOT I-35 Road Closure (Traffic Control; Sheltering)

During severe winter storms that require closure of I-35, better traffic control coordination and communication is needed between MN DOT, Steele County Emergency Management, and local law enforcement to direct all motorists to designated shelters and parking areas. Doing so will ensure the safety of stranded motorists until I-35 is re-opened.

Loss of Power

Above-ground power lines are susceptible to damage as a result of high wind events. Ice storms can coat power lines creating additional stress on the installations. Locating lines underground where it is feasible and cost effective, as is occurring in some parts of Steele County, can reduce damage and potential power outages. Specific vulnerabilities include:

- Not all county & city facilities have backup power in the event of a severe winter storm that takes out power.
- Life safety is critical for individuals requiring power for medical equipment.
- The age of some distribution equipment makes the system less reliable during high wind events.

4.4.7 Extreme Cold

Winter in Steele County can be severe, and especially dangerous for disabled citizens and outdoor workers. Record temperature lows and arctic-like wind chills can cause cold-related illnesses such as frostbite and hypothermia, which can be deadly. Hypothermia is the greatest and most life-threatening cold weather danger.

In Steele County cold winter weather can have severe or fatal impacts. Hypothermia occurs when the core body temperature drops below 96° F. Anyone who is exposed to severe cold without enough protection can develop hypothermia. Frostbite occurs when skin tissue and blood vessels are damaged from exposure to temperatures below 32° F. It most commonly affects the toes, fingers, earlobes, chin, cheeks, nose, and other body parts that are often left uncovered in cold temperatures. The NWS issues “Extreme cold” warnings when it feels like -30° F or colder across a wide area for several hours. Extreme cold watches are issued a day or two before the conditions are expected.

Below zero temperatures occur almost every winter in Minnesota. January is the coldest month, with daytime highs averaging 20° F and nighttime lows averaging 2° F. Steele County has had at least one extreme cold/wind chill weather event each year since 2018, which wind chills as low as -51F.
The average temperature for the year in Owatonna is 44.0°F (6.7°C). The warmest month, on average, is July with an average temperature of 72.0°F (22.2°C). The coolest month on average is January, with an average temperature of 13.0°F (-10.6°C). The lowest recorded temperature in Owatonna is -40.0°F (-40°C), which was recorded in January 2019. (https://www.weatherbase.com)

4.4.7.1 Extreme Cold and Climate Change

There is not yet any observable trend related to extreme cold events and climate change in Minnesota. Cold temperatures have always been a part of Minnesota’s climate and extreme cold events will continue. However, an increase in precipitation or storm events such as ice storms as the climate changes could lead to a higher risk of residents being exposed to cold temperatures during power outages or other storm-related hazards.

4.4.7.2 Severe Winter Storms and Climate Change

Historically, winter storms have had a large impact on public safety in Minnesota. This will continue, with a possible increase in snowstorm frequency and annual total snowfall. Winter weather is often a cause of power outages. Pressures on energy use, reduced reliability of services, potential outages and the potential rise in household costs for energy are major climate change risks to public health.

According to the 2015 Minnesota Weather Almanac, a recent study of seasonal snowfall records across the state from 1890-2000 showed that 41 of 46 climate stations recorded an increase in average annual snowfall, by as much as 10 inches. Higher snowfall levels can result in greater runoff potential during spring snow melt, and many watersheds in Minnesota have shown more consistent measures of high volume flows during spring, often at or above flood stage (Seeley M., 2015).

4.4.7.3 Vulnerability

Extreme cold temperatures affect the county nearly every year. The amount of snow and ice, number of blizzard conditions, and days of sub-zero temperatures each year are unpredictable.
Within Steele County the risk of extreme cold does not vary geographically. Citizens living in climates such as these must always be prepared for situations that put their lives or property at risk. It is not always the depth of the cold, but an unprepared individual with a vehicle breakdown or lack of a personal winter safety kit that are at risk. Rural citizens not connected to city gas lines are more vulnerable to issues with extreme cold. The vulnerability of each jurisdiction to extreme cold has not changed due to any development in the last 5 years.

4.4.7.4 Plans and Programs in Place

Emergency Temporary Shelter

If needed the Armory will be opened to people in need to provide emergency shelter from extreme cold.

School Closings

All school districts within Steele County have a school closing policy and communications plan in place if inclement weather or temperatures create a hazardous situation for students or staff.

4.4.7.5 Program Gaps or Deficiencies

Loss of Power

Extreme cold temperatures can result in a high demand for electricity. The utilities may implement rotating blackouts to protect the overall transmission system. Specific vulnerabilities include:

- Not all county & city facilities have backup power in the event of a severe winter storm that takes out power.
- Life safety is critical for individuals requiring power for medical equipment.
- The age of some distribution equipment makes the system less reliable during high wind events.

4.4.8 Extreme Heat

Humans need to maintain a constant body temperature if they are to stay healthy. Working in high temperatures induces heat stress when more heat is absorbed into the body than can be dissipated out. Heat illness such as prickly heat, fainting from heat exhaustion, or heat cramps are visible signs that people are working in unbearable heat. In the most severe cases, the body temperature control system breaks down altogether and body temperature rises rapidly. This is a heat stroke, which can be fatal. The NWS issues a heat advisory when, during a 24-hour period, the temperature ranges from 105° F to 114° F during the day and remains at or above 80° F at night.

Extreme heat events are linked to a range of illnesses, even death, and can exacerbate pre-existing chronic conditions such as cardiovascular, respiratory, liver, and neurological diseases, endocrine disorders, and renal disease or failure. Populations who are most vulnerable to extreme heat include persons over 65 or under 5 years old; living alone, without air-conditioning, or residing on the topmost floor of a building; and with an income at or below the poverty line. People who are exposed to heat because of recreational activities or job-related activities also are more vulnerable, including athletes, construction workers, and landscape/agricultural workers (Minnesota Pollution Control Agency - Adapting to Climate Change in Minnesota: 2013 Report of the Interagency Climate Adaptation Team, 2013).

4.4.8.1 Extreme Heat History in Steele County

July is the hottest month on average in Owatonna. The highest temperature ever recorded in Owatonna occurred in 1988, 1990, 1995, when it rose to 102° F (Intellicast, 2015). According to the High Plains Regional Climate Center, the average July maximum temperature (from 1961-February 2017) in Owatonna was 97° F.

Table C-7 summarizes extreme heat/heat events recorded by the NCEI, 1996-December 2022. There were 4 recorded instances of excessive heat in Steele County since 2011.

4.4.8.2 Extreme Heat and Climate Change

Minnesota's average temperature has increased more than 1.5°F since recordkeeping began in 1895, with increased warming happening in recent decades (International Climate Adaptation Team, 2013). Annual temperatures in the Midwest have generally been well above the 1901-1960 average since the late 1990s, with the decade of the 2000s being the warmest on record (Kunkel, et al., 2013). 7 of Minnesota's 10 warmest years occurred in the last 15 years. Projected increases are 2° F to 6° F more by 2050 and 5° F to 10° F by 2100 (MN Environmental Quality Board, 2014)

The Midwest has experienced major heat waves and their frequency has increased over the last 6 decades (Perera, et al., 2012). For the U.S., mortality increases 4% during heat waves compared with non-heat wave days (Anderson & Bell, 2011).

4.4.8.3 Vulnerability

Within Steele County the risk of extreme heat does not vary geographically. The vulnerability of each jurisdiction to extreme heat has not changed due to any development in the last 5 years.

4.4.8.4 Plans and Programs in Place

Emergency Temporary Shelter

If needed the Armory will be opened to people in need to provide emergency shelter from extreme heat.

School Closings

All school districts within Steele County have a school closing policy and communications plan in place if inclement weather or temperatures create a hazardous situation for students or staff.

4.4.8.5 Program Gaps or Deficiencies

Loss of Power

Extreme high temperatures can result in a high demand for electricity. The utilities may implement rotating blackouts to protect the overall transmission system. Specific vulnerabilities include:

- Not all county & city facilities have backup power in the event of a severe winter storm that takes out power.
- Life safety is critical for individuals requiring power for medical equipment.
- The age of some distribution equipment makes the system less reliable during high wind events.

4.4.9 Drought

A drought refers to an extended period of deficient rainfall relative to the statistical mean for a region. Drought can be defined according to meteorological, hydrological, socioeconomic, and agricultural criteria. Meteorological drought is qualified by any significant deficit of precipitation. Hydrological drought is manifest in noticeably reduced river and stream flow and critically low groundwater tables.

The term agricultural drought indicates an extended dry period that results in crop stress and harvest reduction. Socioeconomic drought refers to the situation that occurs when water shortages begin to affect people and their lives. It associates economic goods with the elements of meteorological, agricultural, and hydrological drought. Many supplies of economic goods (e.g., water, food grains, hydroelectric power) are greatly dependent on the weather. Due to natural variations in climate, water supplies are high in some years but low in others. Fluctuating long-term climate variations make drought difficult to predict.

4.4.9.1 Drought History in Steele County

National Centers for Environmental Information records show no droughts in Steele County. However, in the fall of 2012 a dry period that crossed the Midwest had significant consequences in Ellendale. The southwest corner of Steele County recognized slightly more significant impacts from drought conditions, which were reflected in agricultural practices.

On Oct. 17, 2012, Steele County was among 6 other counties that were declared as a primary natural disaster area and could receive assistance. This allowed farmers within Steele County to declare losses correlating to the drought. The USDA and FSA describe efforts derived from the USDA to supplement or limit agricultural losses through the purchase of up to $170 million of pork, lamb, chicken, and catfish; this came after Agriculture Secretary Tom Vilsack announced an extension for emergency grazing on Conservation Reserve Program (CRP). Additionally, the department transferred $14 million in unobligated program funds into the Emergency Conservation Program and lowered the penalty on CRP acres used for emergency haying or grazing, from 25% to 10%.

The hazard rank for drought in Steele County is medium. A drought may not have a severe impact on human life due to decreased water access; however, the economic impact on farmers would be significant. A drought would also have a detrimental impact on the local economy due to stunting growth of agriculture crops and negative impacts on livestock. Extended drought conditions may also make an area more prone to wildfire. Droughts can also be closely linked with insect infestation. Trees may be lost due to lack of moisture. In severe instances, a drought may cause wells to dry up entirely.

4.4.9.2 Drought and Climate Change

Drought results from an imbalance between water supply and water demand. The Standardized Precipitation Index (SPI) measures water supply, specifically precipitation. SPI captures how observed precipitation (rain, hail, snow) deviates from the climatological average over a given time period—in this case, over the 9 months leading up to the selected date. Red hues indicate drier conditions, while blue hues indicate wetter conditions. Available data from 1895–present is presented in graphical form below for Steele County.

Droughts have been happening throughout Minnesota's history and it is not yet clear how climate change may impact this (International Climate Adaptation Team, 2013). Even in areas where precipitation does not decrease, projected higher air temperatures will cause increased surface evaporation and plant water loss, leading to drier soils. As soil dries out, a larger proportion of the incoming heat from the sun goes into heating the soil and adjacent air rather than evaporating its moisture, resulting in hotter summers under drier climatic conditions (Mueller & Seneviratne, 2012).

Across the nation, drought is affecting water supplies, as ground and surface water levels are increasingly reduced due to growing consumption and withdrawal. These trends are expected to continue, with a higher likelihood of water shortages (Georgakakos, et al., 2014).

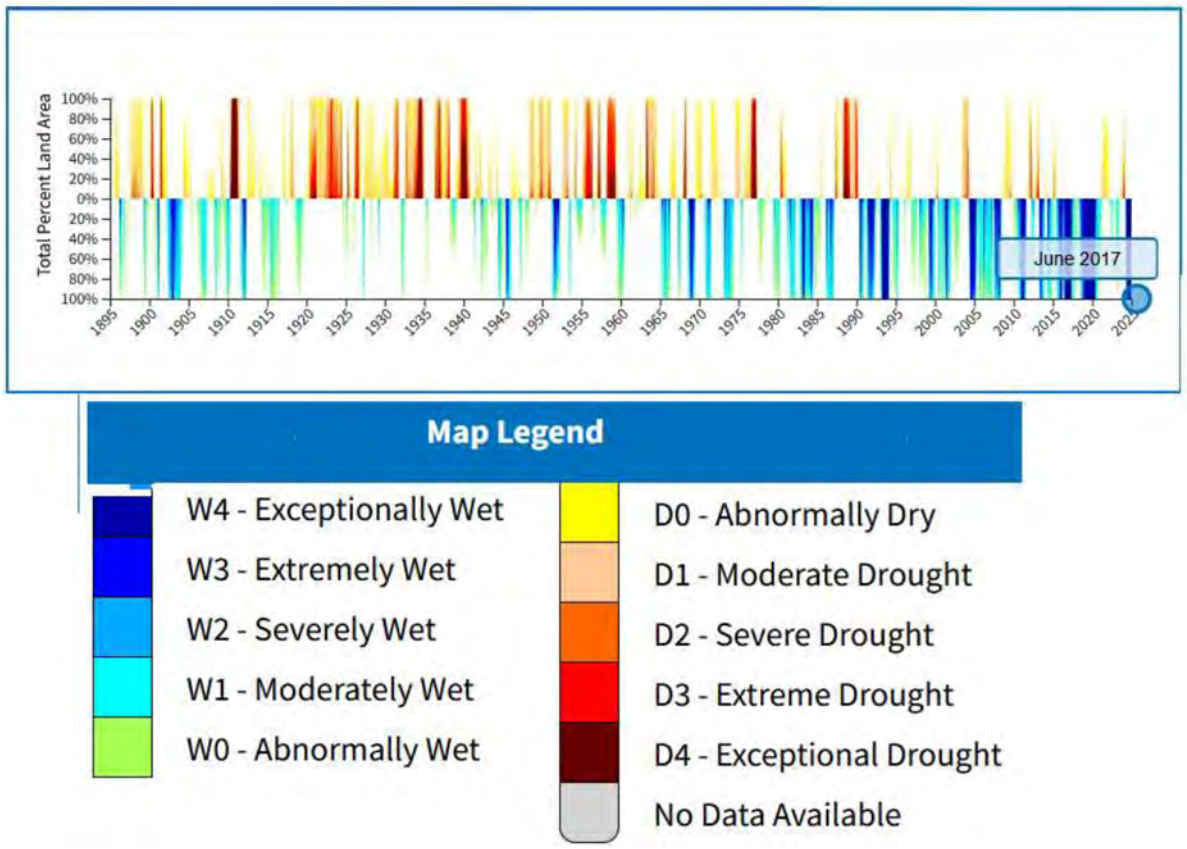

Figure 4.12 2019 SPI data from 1895–present

4.4.9.3 Vulnerability

Jurisdictions in Steele County do not vary in their vulnerability to drought. The vulnerability of each jurisdiction to drought has not changed due to any development in the last 5 years.

4.4.9.4 Plans and Programs in Place

Steele County SWCD Precipitation Monitoring

The SWCD has a network of 12 volunteers that record any precipitation that falls at their location, including during wintertime.

Steele County SWCD Aquifer Monitoring

The SWCD monitors aquifers by 8 wells. The data is reported to the MN DNR. The location of the wells is shown in Map A-31.

4.4.9.5 Program Gaps or Deficiencies

No program gaps or deficiencies identified.

4.4.10 Wildfire

A wildfire is an uncontrolled fire spreading through vegetative fuels, posing danger and destruction to property. Wildfires can occur in undeveloped areas and spread to urban areas where structures and other human developments are more concentrated. While some wildfires start by natural causes like lightning, humans cause 4 out of every 5 wildfires. Debris burns, arson or carelessness are the leading causes of wildfires. As a natural hazard, a wildfire is often the direct result of a lightning strike that may destroy personal property and public land areas, especially on national and state forest lands. The dangers from wildfire include the destruction of timber, property and wildlife, and injury or loss of life to people living in the affected area or using the area for recreational facilities.

4.4.10.1 Wildfire History in Steele County

Wildfire has been ranked as a low risk by Steele County. Only one wildfire has been recorded by the DNR in the county (Map A-20). It occurred on October, 8th 2012 and affected 27 acres in the southern part of the county.

According to MN DNR data, there are 308 acres of peat in Steele County. Peat is partially decayed plant matter found in ancient bogs and swamps. Minnesota has approximately 6 million acres of peatland, the highest total acreage in the contiguous United States. Peat fires are deep-rooted fires that burn underground, lasting for weeks, months, or even years. They can smolder during winter months beneath the snow, surfacing again in the spring to burn above ground.

Peat ignites when its moisture content is low, and then it supports combustion rather than flame. Once started, combustion is persistent because peat contains oxygen and needs little or no outside oxygen to continue burning. Peat's insulating qualities mean the fire loses little heat. As the peat dries, it becomes water repellent. These factors result in long-lasting fires that require extensive operations to extinguish. However, peat fires have not been an issue in Steele County.

4.4.10.2 Wildfire and Climate Change

Temperatures are predicted to rise in the state, which could lead to more extreme heat events and associated wildfire risks. As Minnesota's climate changes, weather fluctuations between drought and extreme rain events and increasing temperatures will result in changes to forest composition and/or distribution. These fluctuations can lead to dry conditions that may cause increased fire risk in both grassland and forest environments.

4.4.10.3 Vulnerability

Jurisdictions in Steele County do not vary in their vulnerability to wildfires. The vulnerability of each jurisdiction to wildfire has not changed due to any development in the last 5 years.

4.4.10.4 Plans and Programs in Place

Wildfire is not a significant problem in Steele County.

4.4.10.5 Program Gaps or Deficiencies

Fire Department Staffing and interdepartmental training

Steele County lacks fire department staffing, and interdepartmental training should a wildfire occur.

Water resources

Most of Steele County is rural, which can be a challenge to get adequate water resources to combat a wildfire.

4.4.11 Landslides and Soil Erosion

Erosion is the wearing away of land, such as the loss of a riverbank, beach, shoreline, or dune material. It is measured as the rate of change in the position or displacement of a riverbank or shoreline over a period of time. Short-term erosion typically results from periodic natural events, such as flooding, hurricanes, storm surges, and windstorms, but may be intensified by human activities. Long-term erosion is a result of multi-year impacts such as repetitive flooding, wave action, sea level rise, sediment loss, subsidence, and climate change. Death and injury are not typically associated with erosion; however, it can destroy buildings and infrastructure (FEMA, 2013).

The movement of a mass of rock, debris, or earth down a slope by the force of gravity is considered a landslide. They occur when the slope or soil stability changes from stable to unstable, which may be caused by earthquakes, storms, volcanic eruptions, erosion, fire, or additional human-induced activities. Slopes greater than 10 degrees are more likely to slide, as are slopes where the height from the top of the slope to its toe is greater than 40 feet. Slopes are also more likely to fail if vegetative cover is low and/or soil water content is high. Potential impacts include environmental disturbance, property and infrastructure damage, and injuries or fatalities (FEMA, 2013).

4.4.11.1 Soil Erosion/Landslides History in Steele County

The Steele County Soil Survey indicates in the Steele County Local Water Management Plan that 79,000 acres in the county have a potential toward slight to moderate water erosion and that 32,000 acres have a potential of moderate to severe erosion by water. Wind erosion is most severe in the 26,000 acres of sandy and peat soils in the county.

To reduce soil loss from wind erosion the Steele County Soil and Water Conservation District (SWCD) has established the objective in their 2015 annual plan of work to reduce wind erosion to tolerable levels on all land. The SWCD sponsors a Tree and Shrub Program and installs 5 acres of farmstead and field windbreaks to prevent wind erosion. The SWCD is a resource to landowners residing on 'High Priority Erosion Problem' regions by accessing the State Cost-Share funds and implementing conservation practices.

According to the Steele County Emergency Manager, the city of Medford struggles with erosion issues. Some local residents have bank erosion on their properties abutting the Straight River. As of yet there has not been any property damage, but the erosion is a concern because their backyards are disappearing as the erosion encroaches on the structures on their property. These homeowners have received funding from the MN DNR to correct the erosion problem on the river. However, the residents have not started any work because they have not attained matching funds needed for the project.

4.4.11.2 Soil Erosion/Landslides and Climate Change

In Minnesota, the wettest days are getting wetter, including Steele County. This can contribute to increased erosion in many locations due to flooding and saturation of soils. Reduced ice cover on lakes and shorelines (due to warmer temperatures) could potentially expose shorelines to increased erosion or damage during weather events when they previously may have been covered with ice (National Climate Assessment Development Advisory Committee, 2013).

4.4.11.3 Vulnerability

Map A-28 in Appendix A maps soil erodibility in Steele County using the Soil Erodibility Factor (KFactor), which is a quantitative description of soil's inherent erodibility, by measuring the susceptibility of soil particles to shift due to rainfall and runoff. The Soil Erodibility Factor ranges in value from 0.02 to 0.69; however, all areas in Steele County are 0.37 or less. The highly erodible areas in Steele County are primarily due to the very steep slopes that bound the Straight River valley and the tributaries entering that valley.

4.4.11.4 Plans and Programs in Place

Steele County SWCD Education Programs and Resources

The Steele County Land Use Model shows a wide variety of conservation practices that take place in Steele County. The model is based on Steele County townships and the terrain in the area. It is available for educational purposes to any group wishing to use it. The SWCD also offers information to farmers on cover crops, and additional public education programs and assistance, such as helping schools with tree planting projects.

SWCD & NRCS Partnership

Through a Memorandum of Understanding the Steele County Soil and Water Conservation District works in conjunction with the Natural Resource Conservation Service to conserve the natural resources of Steele County. Example projects include aiding farmers to implement erosion mitigation projects, such as reducing gully erosion through grassed waterways to safely transport stormwater in a non-erosive manner to a safe outlet, as well construction of water and sediment basins. Water and sediment basins are designed to reduce gully erosion, trap sediment and improve the ability to farm sloping lands.

4.4.11.5 Program Gaps or Deficiencies

Erosion due to Flooding

Steele County and many communities experience high erosion due to flooding, including impacts to bridge areas and streambanks being severely cut away.

4.4.12 Dam Failure

Dams are structures that retain or detain water behind a large barrier. When full or partially full, the difference in elevation between the water above the dam and below create large amounts of potential energy, allowing the chance for failure. Dams can fail due to either 1) water heights or flows above the capacity for which the structure was designed; or 2) deficiencies in the structure such that it cannot hold back the potential energy of the water.

If a dam fails, issues of primary concern include loss of human life/injury, downstream property damage, lifeline disruption (transportation routes and utility lines required to maintain or protect life), and environmental damage. Dams require constant monitoring and regular maintenance to insure their integrity.

4.4.12.1 Dam Failure History in Steele County

Table B-7 summarizes data on Steele County's dams based on data from the National Inventory of Dams. They are also mapped in Map A-11. None of Steele County's dams have Emergency Actions Plans. There are no levees in Steele County.

Table B-7 summarizes data on Steele County's dams based on data from the National Inventory of Dams. They are also mapped in Map A-11. None of Steele County's dams have Emergency Actions Plans. There are no levees in Steele County.

4.4.12.2 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 expected flow pattern. 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.

4.4.12.3 Vulnerability

Areas most susceptible to the effects of dam failure are the populated places downstream from a dam location. The vulnerability of each jurisdiction to dam failure has not changed due to any development in the last 5 years.

4.4.12.4 Plans and Programs in Place

Minnesota Department of Natural Resources, Division of Waters – Dam Safety Program

The MN DNR Dam Safety Program and current dam safety regulations require the safe design, construction, operation, and maintenance of dams in Minnesota. The state program includes review of design plans and plans for proposed dams, safety inspections of existing dams, and repair of

dams. The Dam Safety Program keeps a file on all dams that are subject to state dam safety regulations or have had information or reports generated on them for another purpose. A typical file contains construction plans, photos, inspection reports, and correspondence.

4.4.12.5 Program Gaps or Deficiencies

No program gaps or deficiencies were identified.

4.4.13 Earthquakes

Earthquakes occur after solid rock masses in a fault line move past each other causing internal friction. The earthquakes can cause the ground to shake and move, and can be felt many miles away from the epicenter. The direction, depth, and overall all strength are determined by analyzing the “magnitude and intensity” of the readings from a seismograph.

The first widely-used method of measuring earthquake magnitude is the Richter scale, developed by Charles F. Richter in 1934. It used a formula based on the amplitude of the largest wave recorded on a specific type of seismometer and the distance between the earthquake and the seismometer. Today the moment magnitude scale, abbreviated MW, is preferred because it works over a wider range of earthquake sizes and is applicable globally. The moment magnitude scale is based on the total moment release of the earthquake.

Magnitude	Earthquake Effects	Estimated Number Each Year
2.5 or less	Usually not felt, but can be recorded by seismograph.	Millions
2.5 to 5.4	Often felt, but only causes minor damage.	500,000
5.5 to 6.0	Slight damage to buildings and other structures.	350
6.1 to 6.9	May cause a lot of damage in very populated areas.	100
7.0 to 7.9	Major earthquake. Serious damage.	10-15
8.0 or greater	Great earthquake. Can totally destroy communities near the epicenter.	One every year or two

Figure 4.13. Earthquake Magnitude Scale

The effect of an earthquake on the Earth's surface is called the intensity. The intensity scale consists of a series of certain key responses such as people awakening, movement of furniture, damage to chimneys, and finally - total destruction.

The intensity scale currently used in the United States is the Modified Mercalli (MM) Intensity Scale (Figure 4.11). It was developed in 1931 by the American seismologists Harry Wood and Frank Neumann. This scale, composed of increasing levels of intensity that range from imperceptible shaking to catastrophic destruction, is designated by Roman numerals. It does not have a mathematical basis; instead it is an arbitrary ranking based on observed effects.

The Modified Mercalli Intensity value assigned to a specific site after an earthquake has a more meaningful measure of severity to the nonscientist than the magnitude because intensity refers to the effects actually experienced at that place.

Minnesota has experience multiple earthquakes in the last 100 years, most of them were not felt by those living in the area, but there were a few larger, natural occurring earthquakes. There is also many earthquakes caused by mining and explosions due to construction. However, there are many natural occurring earthquakes due to the ancient fault lines in Minnesota that are slowly moving. New Prague, MN felt a 4.7 magnitude in 1860. Morris, MN felt a 4.6 magnitude earthquake in 1975. The most recent earthquake was Mankato, MN measuring 2.8 magnitude. (CSE 2014). Map A-29 shows the fault lines in Minnesota.

Intensity	Shaking	Description/Damage
I	Not felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by a few persons at rest,especially on upper floors of buildings.
III	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Moderate	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Strong	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII	Very strong	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Severe	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Violent	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

Figure 4.14 Modified Mercalli intensity.
(Public domain.)

4.4.13.1 Earthquake History in Steele County

The U.S. Geological Survey National Earthquake Information Center does not have any documented earthquakes with an epicenter in Steele County. There have been reports of feeling earthquakes with epicenters from many miles away.

4.4.13.2 Earthquakes and Climate Change

Any amount of change in the heating or cooling of the Earth's crust can change how the fault line planes move. As the Earth warms up and water levels change, there is the possibility of the fault lines becoming stressed and moving. The fault lines in Minnesota are considered ancient and unlikely to move for a large earthquake during the next 100 years, but there is always a possibility. Minnesota has the hazard rank of low for the possibility of a severe earthquake and a medium possibility of a severe impact should one ever occur. (UofM College of Science and Engineering, 2014).

4.4.13.3 Vulnerability

Steele County is directly on a fault line, although a severe earthquake has not been documented. The vulnerability of Steele County is low as there has not been any development of an earthquake or regional earthquakes in the last 5 years.

4.4.13.4 Plans and Programs in Place

There are not plans or programs in place.

4.4.13.5 Plan Gaps and Deficiencies

There are not warnings prepared or safety education for the public should an earthquake occur.

Section 5 – Mitigation Strategy

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The goal of mitigation is to protect lives and reduce the future impacts of hazards 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 4 of this plan. Mitigation should be an ongoing process adapting over time to accommodate a community's needs.

5.1 Community Capability Assessment

The capability assessment identifies current activities 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 to reduce the impact of future hazards more effectively. The following sections identify existing plans and mitigation capabilities within all the communities. Appendix J lists the plans and programs in place in Steele County as related to hazard mitigation. As part of the Steele County MHMP update, the county, its cities, and townships were asked to participate in filling out a "Local Mitigation Capabilities Assessment" (LMCA) form to report on their current mitigation capabilities and program gaps. Appendix K lists the LMCA reports gathered for Steele County.

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 M-21 shows which jurisdictions in Steele County participate in the National Flood Insurance Program (NFIP). The cities of Blooming Prairie and Ellendale do not participate in the NFIP; however, they do not have FEMA mapped high risk areas.

According to FEMA Repetitive loss properties are defined as properties that have had 2 or more paid flood insurance claims of $1,000 or more in any rolling 10-year period since 1978. 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. (https://www.fema.gov/node/405233)

There are nine (9) repetitive loss properties in Steele County. All are single family residences located in Owatonna.

No homes are classified as "Severe Repetitive Loss" (SRL). An SRL property is defined as a residential property that is covered under an NFIP flood insurance policy and:

- That has four or more separate NFIP claim payments (including building and contents) exceeding $5,000 each, and the cumulative amount of such claims payments exceeds $20,000; or
- For which at least 2 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.
- For both (a) and (b) above, at least 2 of the referenced claims must have occurred within any 10-year period, and must be greater than 10 days apart.

For more on the areas that flood repeatedly in Steele County, see section 4.4.5 *Flash Flood and Riverine Flood.*

5.1.2 Plans and Ordinances

Steele 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, Capital Improvements Plan, and participates in the One Watershed Plan.

Steele County adopted the Minnesota State Building Code in 2003. Municipalities within Steele County may enter into an agreement with Steele County to provide enforcement of the code. Building code information is stated in Section 1.1.4 page 1.4

In Section 4.4 of this plan (Hazard Profiles) a review of the plans and programs in place was included as related to each of the hazards addressed in the plan. See Appendix J for a list of all plans and programs in place in Steele County, and Appendix K for the local mitigation capabilities assessment reports.

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.

5.2 Mitigation Goals

In Section 4.0 of this plan, the risk assessment identified Steele County as prone to several natural hazards. The steering committee members understand that although hazards cannot be eliminated, Steele County can work toward building disaster-resistant communities.

Regarding the goals and strategies being developed for the 2023 Steele County All-Hazard Mitigation Plan, the steering committee members decided to keep the goals from the previous plan to continue in this plan update (Table M-22).

5.3 Mitigation Actions and Project Strategies

The mitigation actions in this plan are summarized into 4 main strategy types, as described in the FEMA publications *Local Mitigation Planning Handbook* (2023) and *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* (2013). Also included are the FEMA Climate Resilient Mitigation Actions (CRMA) released in 2016. Minnesota HSEM recommends the use of these mitigation strategies to be in alignment with the state plan and those recommended by FEMA. A fifth strategy type was determined by Minnesota HSEM for use within the state. They are listed in Table M-23.

In the review and discussion of selected mitigation strategies and actions, steering committee members and the public were asked to consider the ranking of mitigation actions by priority for implementation. Guidance for ranking mitigation activities is drawn from FEMA evaluation criteria. The evaluation criteria (STAPLE+E) involved the following categories and questions:

Social:

- Will the proposed action adversely affect one segment of the population?
- Will the action disrupt established neighborhoods, break up voting districts, or cause the relocation of lower-income people?

Technical:

- How effective is the action in avoiding or reducing future losses?
- Will it create more problems than it solves?

- Does it solve the problem or only a symptom?
- Does the mitigation strategy address continued compliance with the NFIP?

Administrative:
- Does the jurisdiction have the capability (staff, technical experts, and/or funding) to implement the action, or can it be readily obtained?
- Can the community provide the necessary maintenance?
- Can it be accomplished in a timely manner?

Political:
- Is there political support to implement and maintain this action?
- Is there a local champion willing to help see the action to completion?
- Is there enough public support to ensure the success of the action?
- How can the mitigation objectives be accomplished at the lowest cost to the public?

Legal:
- Does the community have the authority to implement the proposed action?
- Are the proper laws, ordinances, and resolutions in place to implement the action
- Are there any potential legal consequences?
- Is there any potential community liability?
- Is the action likely to be challenged by those who may be negatively affected?
- Does the mitigation strategy address continued compliance with the NFIP?

Economic:
- Are there currently sources of funds that can be used to implement the action?
- What benefits will the action provide?
- Does the cost seem reasonable for the size of the problem and likely benefits?
- What burden will be placed on the tax base or local economy to implement this action?
- Does the action contribute to other community economic goals such as capital improvements or economic development?
- What proposed actions should be considered but be “tabled” for implementation until outside sources of funding are available?

Environmental:
- How will this action affect the environment (land, water, endangered species)?
- Will this action comply with local, state, and federal environmental laws and regulations?
- Is the action consistent with community environmental goals?

5.3.1 Hazard Mitigation Actions

Steele County and its included municipalities share a common Multi-Hazard Mitigation Plan and worked closely to develop it. Local leaders work together with the Steele County Emergency Management Director to ensure that the hazards and mitigation actions included in this plan are accurate and addressed in their jurisdictions. The jurisdictions responsible for each action are Blooming Prairie, Ellendale, Medford, Owatonna, and Steele County.

Appendix G contains separate mitigation action tables for each jurisdiction. Each of these mitigation action charts detail the hazard, the mitigation action to address it, the priority ranking for implementation (1 = High Priority; 2 = Moderate Priority; 3 = Low Priority, see Table M-24), its current stage of implementation, the timeframe for implementation going forward, the jurisdictions who have identified they will work to implement the action, the responsible parties to carry through with implementation, and comments on how the plan will be implemented through existing planning mechanisms and potential funding to make implementation happen.

Mitigation actions that have been completed or deleted from the 2017 Steele County Multi 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.

In addition to ranking the hazard mitigation actions using STAPLE+E, the steering committee also reports on the status of the mitigation action. Completed and deleted mitigation actions are denoted in Appendix H. Ongoing mitigation actions from the initial review were incorporated into annual reviews by the mitigation team. The status designations are:

- New – New actions that have been identified since the last plan
- Ongoing – Actions from the last plan that require continuing application
- In Progress – Actions from the last plan that are currently being acted upon

The mitigation types are defined as follows:

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

5.3.2 Mitigation Actions by Community

This plan is a multi-jurisdictional plan that covers Steele County, townships, its school districts and the cities of Blooming Prairie, Ellendale, Medford and Owatonna. The Steele County risks and mitigation activities identified in this plan also incorporate the concerns and needs of townships and other entities participating in this plan.

Mitigation actions are separated by jurisdiction in Appendix G.

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Section 6 – Plan Maintenance

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6.1 Monitoring, Evaluation, and Updating the Plan

The Steele County Multi-Hazard Mitigation Plan (MHMP) should be considered a living document. The plan should be updated and approved by FEMA at a minimum of every 5 years. The guidance in this section will function as the primary tool when reviewing progress on the implementation of the Steele County MHMP.

The Steele County Emergency Management Director is the individual responsible for leading all efforts to monitor, evaluate, and update the hazard mitigation plan within the 5-year window. Throughout the 5-year planning cycle, the Steele County Emergency Management Director will review the plan and meet with the partners to discuss progress and possible funding opportunities. The planning team members from the County and each jurisdiction meet quarterly to monitor, review, evaluate, and update the Multi-Hazard Mitigation Plan. Feedback will be gathered on actions that have been completed or ideas for future mitigation actions that should be incorporated into the next update of the plan. This will be done during the 4th quarter of each year to coincide with annual update to the County's Emergency Operations Plan (EOP). Additional stakeholders will be added based on subject matter expertise.

If needed, the Steele County Emergency Management Director 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 annually, or 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 team will meet to update pertinent mitigation strategies. Depending on Steele County opportunities and fiscal resources, mitigation projects may be implemented independently by individual communities or through local partnerships.

The committee will review the MHMP goals and objectives to determine their relevance to changing situations in Steele County. In addition, state and federal policies will be reviewed to ensure they are addressing current and expected conditions. The committee 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 MHMP during the 5-year planning process will require a public notice and a meeting prior to submitting revisions to the individual jurisdictions for approval. The plan will be updated via written changes, submissions as the committee deems appropriate and necessary, and as approved by county commissioners.

6.2 Implementation

Steele County and its included municipalities share a common Multi-Hazard Mitigation Plan and work together closely to develop, revise, and implement it. This MHMP provides a comprehensive chart of mitigation actions for Steele County and its jurisdictions (see Section 5.3.1, *Hazard Mitigation Actions*). Jurisdictions participated in the MHMP planning process and identified the specific mitigation strategies that they would seek to implement in their communities during the 5-year planning cycle. These mitigation actions are provided in *Appendix G: Mitigation Actions by Jurisdiction*.

Several implementation tools are available to address hazards. Many of these tools are below, however, in some cases additional discussion is needed to identify what strategies are most appropriate to use. This will be part of an ongoing discussion as Steele County looks for opportunities for plan implementation. The following tools will be considered:

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

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

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

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

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

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

6.3 Continued Public Involvement

Continued public involvement is critical to the successful implementation of the Multi-Hazard Mitigation Plan (MHMP). The Steele County Emergency Management Director and the steering committee members from the participating jurisdictions including the townships, the cities of Blooming Prairie, Ellendale, Medford, and Owatonna continue to engage new public stakeholders in planning discussions and project implementation during the 5-year cycle of this plan.

In order to seek continued public participation after the plan has been approved and during the 5-year window of implementation for this plan, the County will take the following measures:

1. The plan will be posted on the Steele County website for the public to read and provide feedback. Collected feedback will be reviewed and the plan will be amended as necessary.
2. Information will regularly be posted on the Steele County Emergency Management Facebook Page on current mitigation projects and topics and public feedback will be encouraged.
3. Following major storms or natural disasters, Steele 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 or news releases via local media (online, newspaper, radio).
4. Each city participating in the plan will be responsible to keep their city councils, city departments, schools, and community members updated and engaged in the implementation of their respective mitigation action charts (see *Appendix G: Mitigation Actions by Jurisdiction*). Each respective jurisdiction will report their progress in this area to the Steele County Emergency Management Director.
5. Jurisdictions will use numerous means of public outreach to engage new public stakeholders in providing input on mitigation efforts or concerns on hazards by sharing information at bi-annual township association meetings, city council meetings, sharing information at special events, working with local schools and partner organizations, and posting information on relevant local or social media that their communities use to inform and engage the public. As mitigation projects are implemented, jurisdictions will work to keep the public updated and engaged in those local efforts.

Appendix A
Steele County Maps
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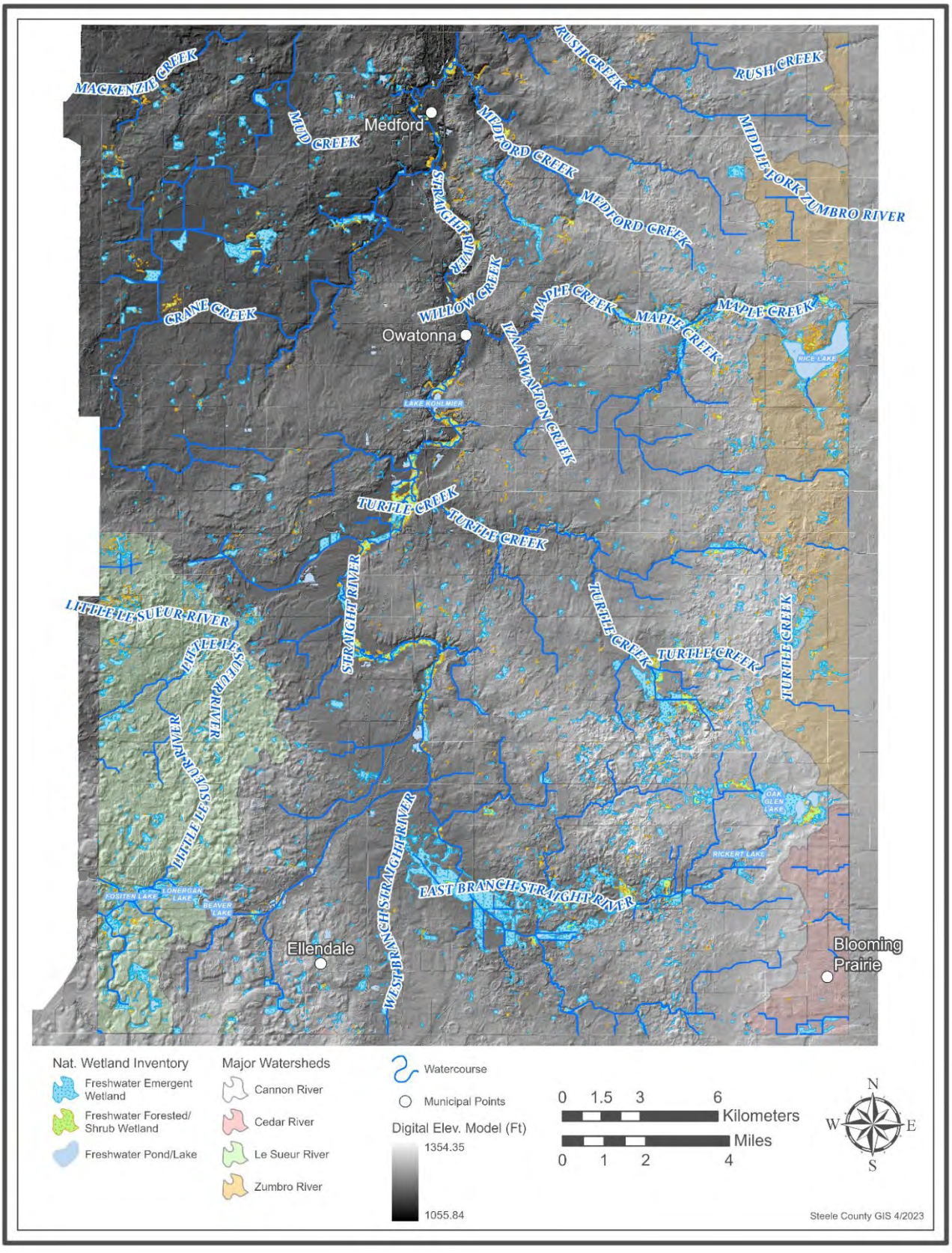
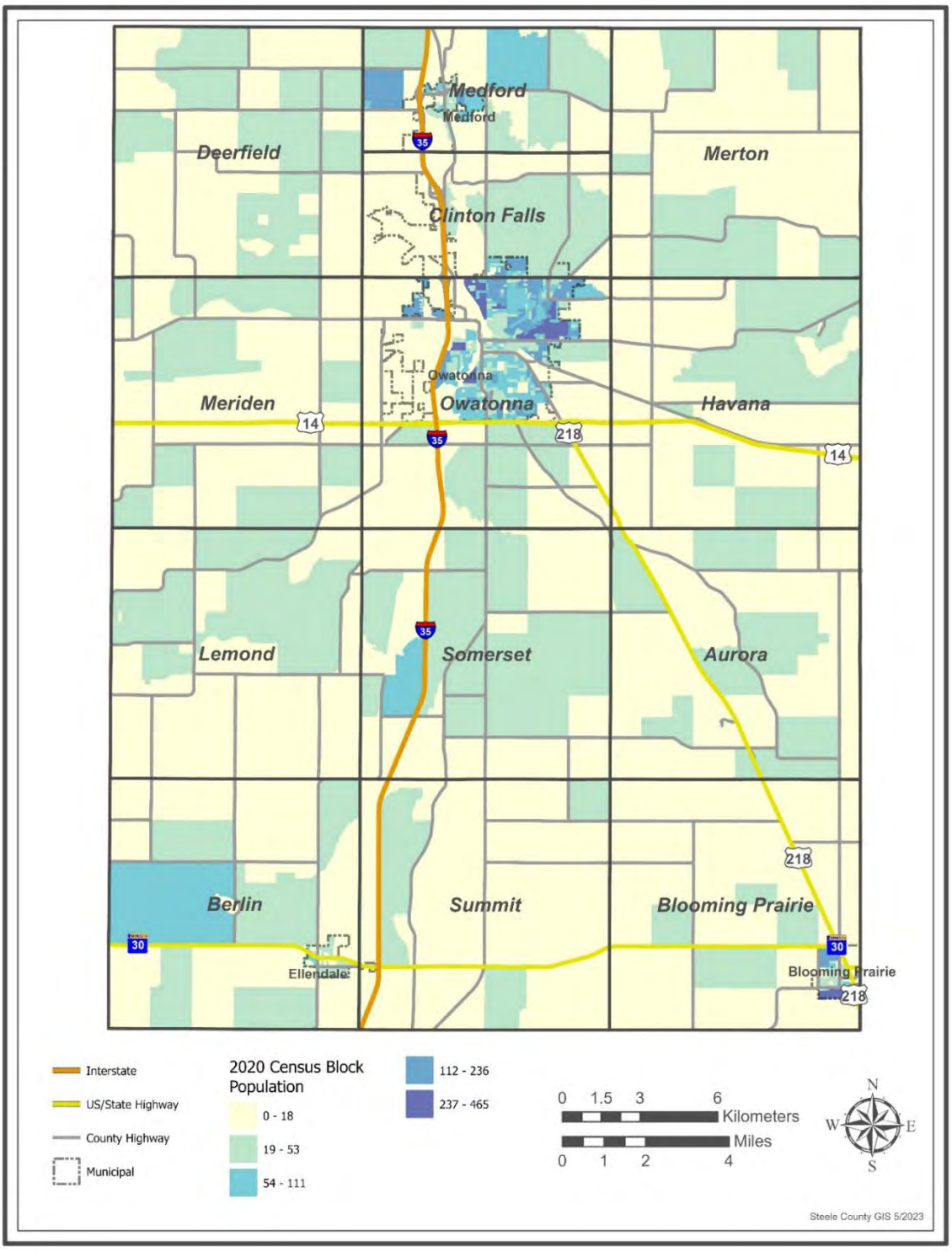
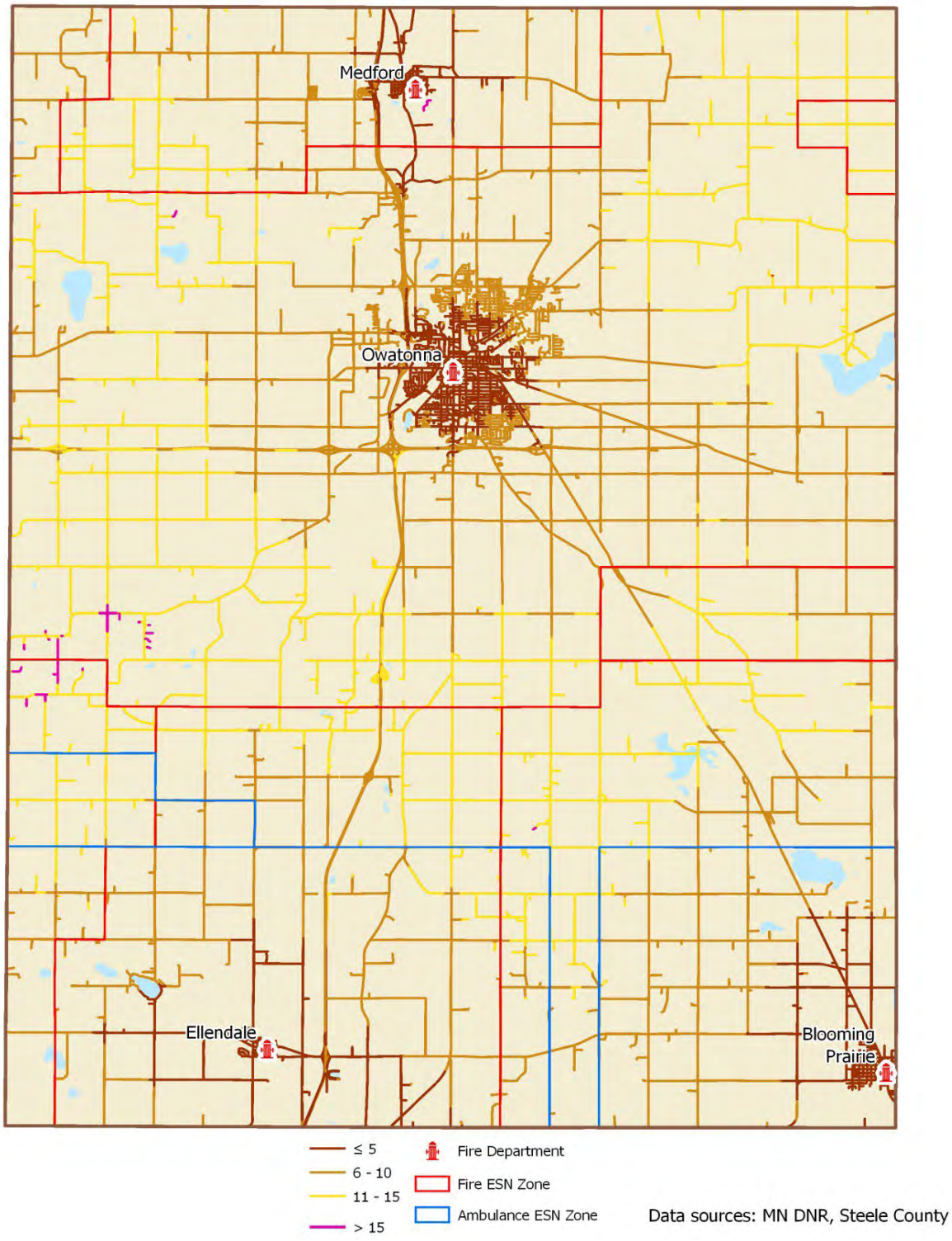
Map A - 1. Hydrography of Steele County



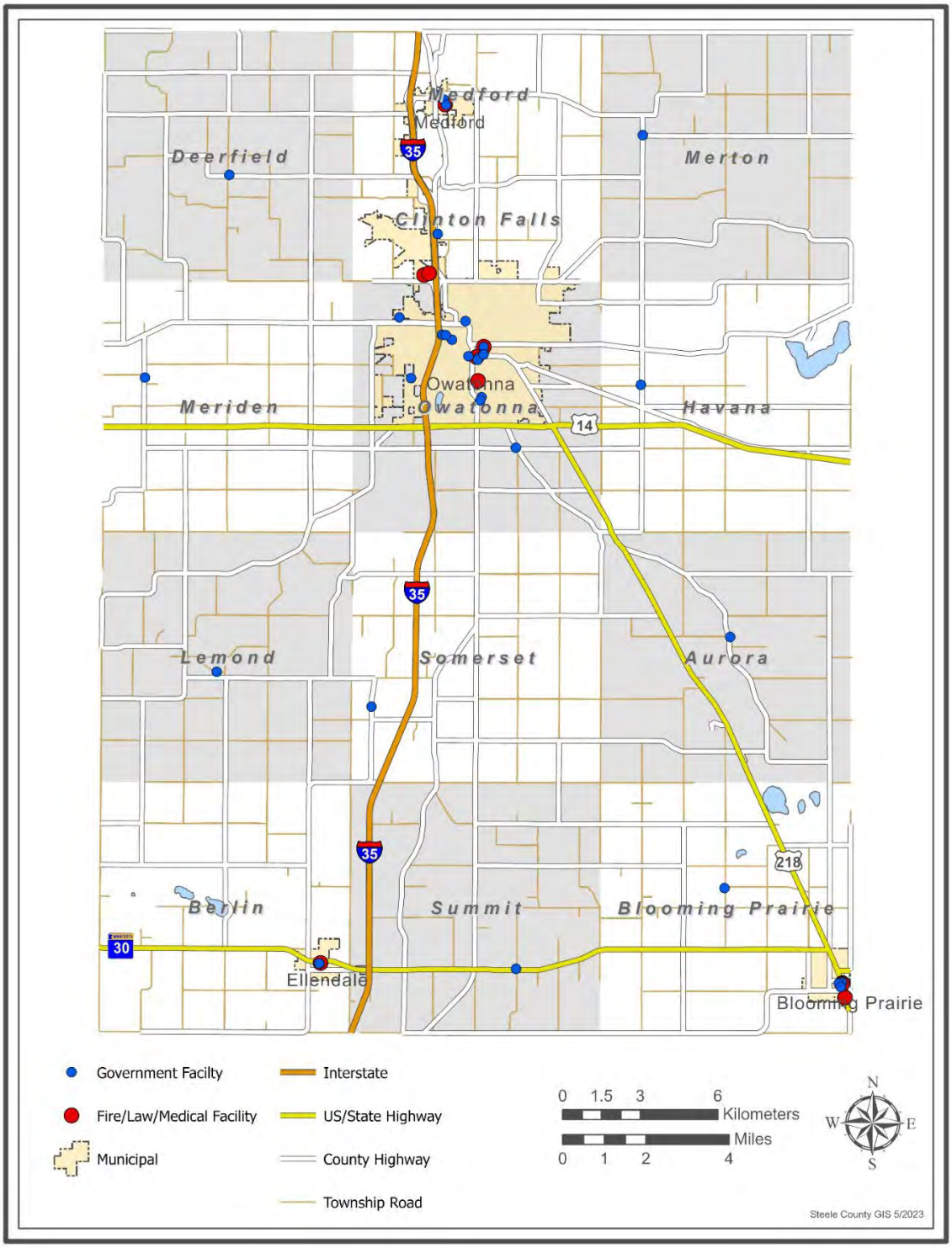
Map A - 2. Steele County Population by Census Block, 2023



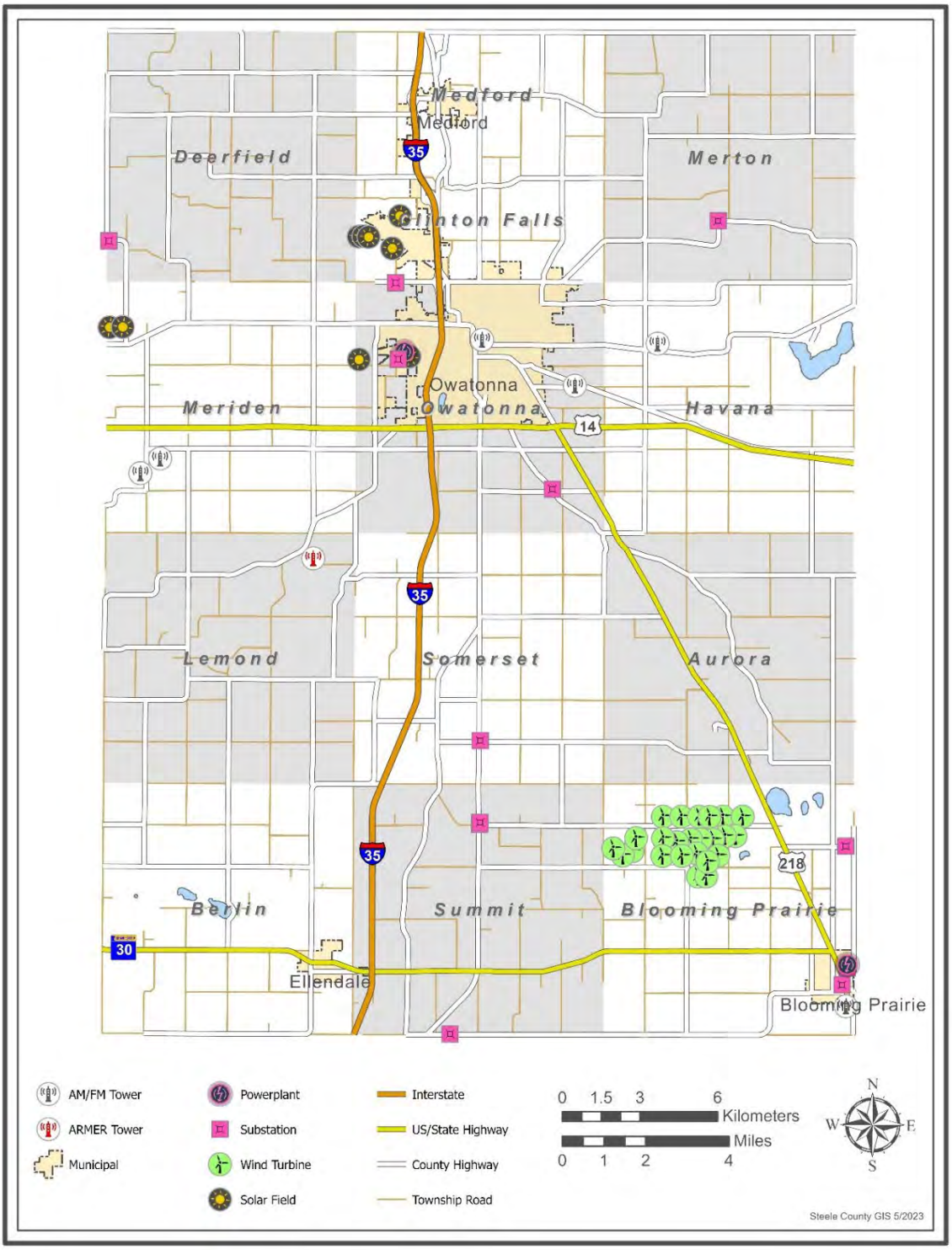
Map A - 3. Fire Departments and Fire Response Times in Minutes in Steele County



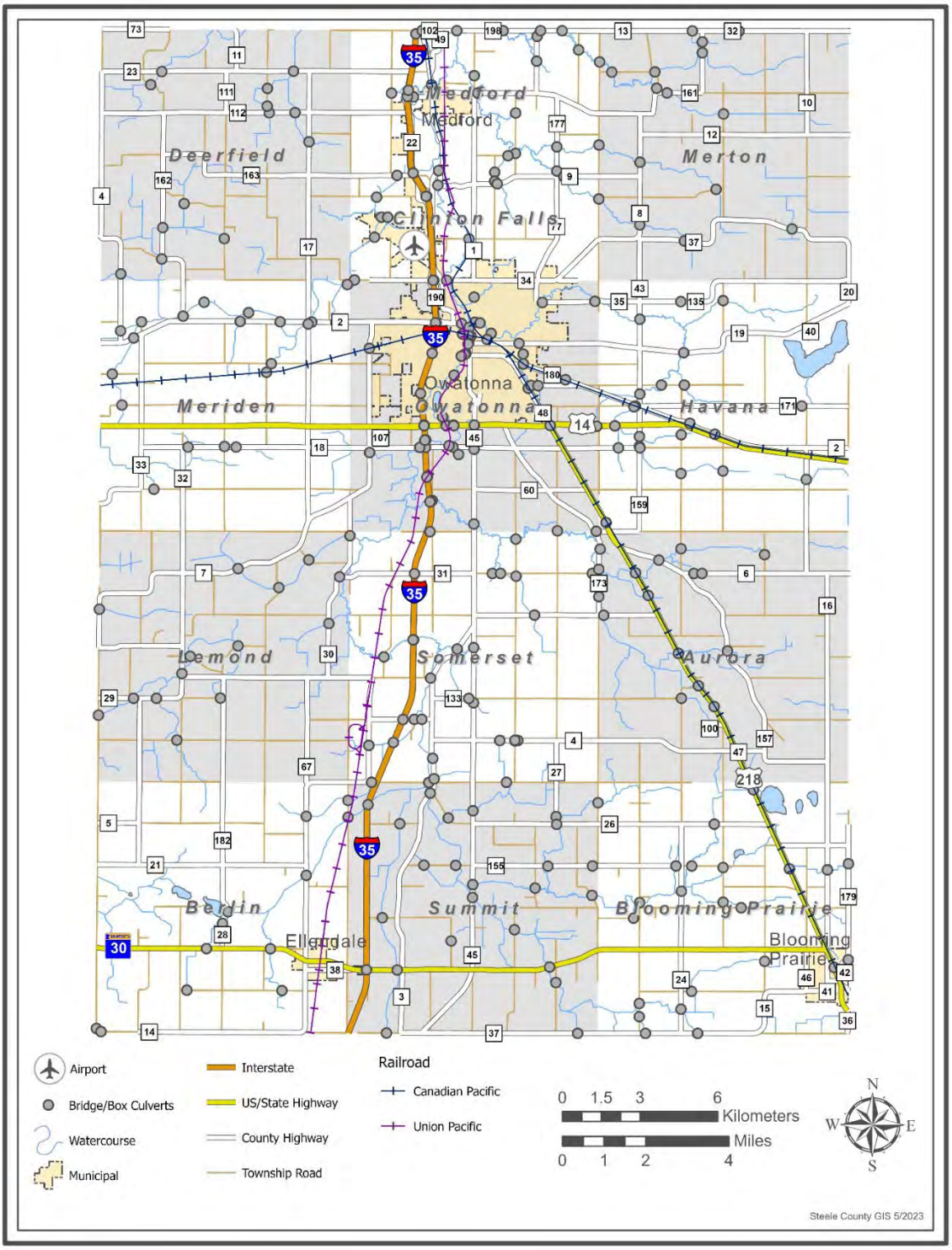
Map A - 4. Steele County Public Safety and Government Services



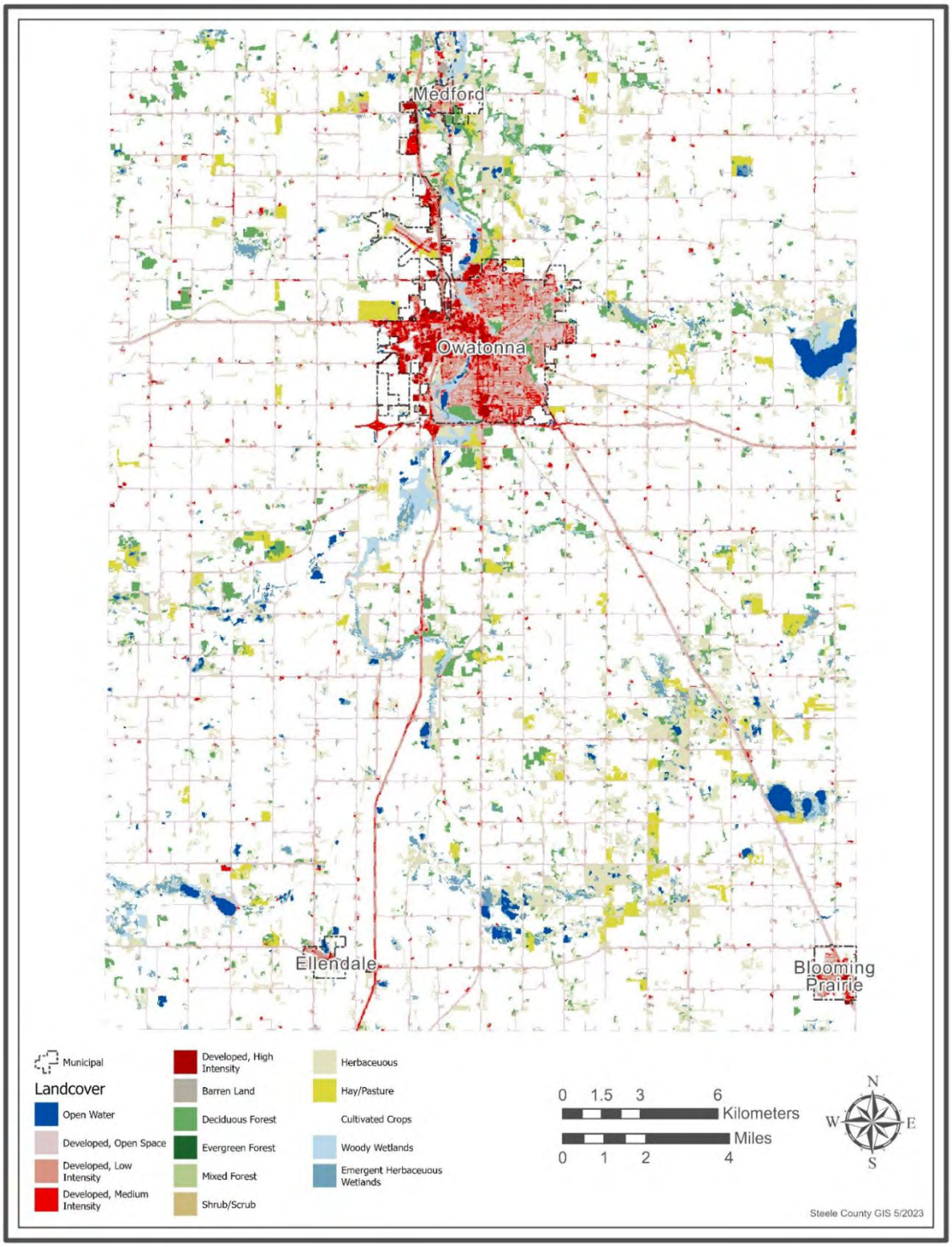
Map A - 5. Steele County Utilities and Communication Infrastructure



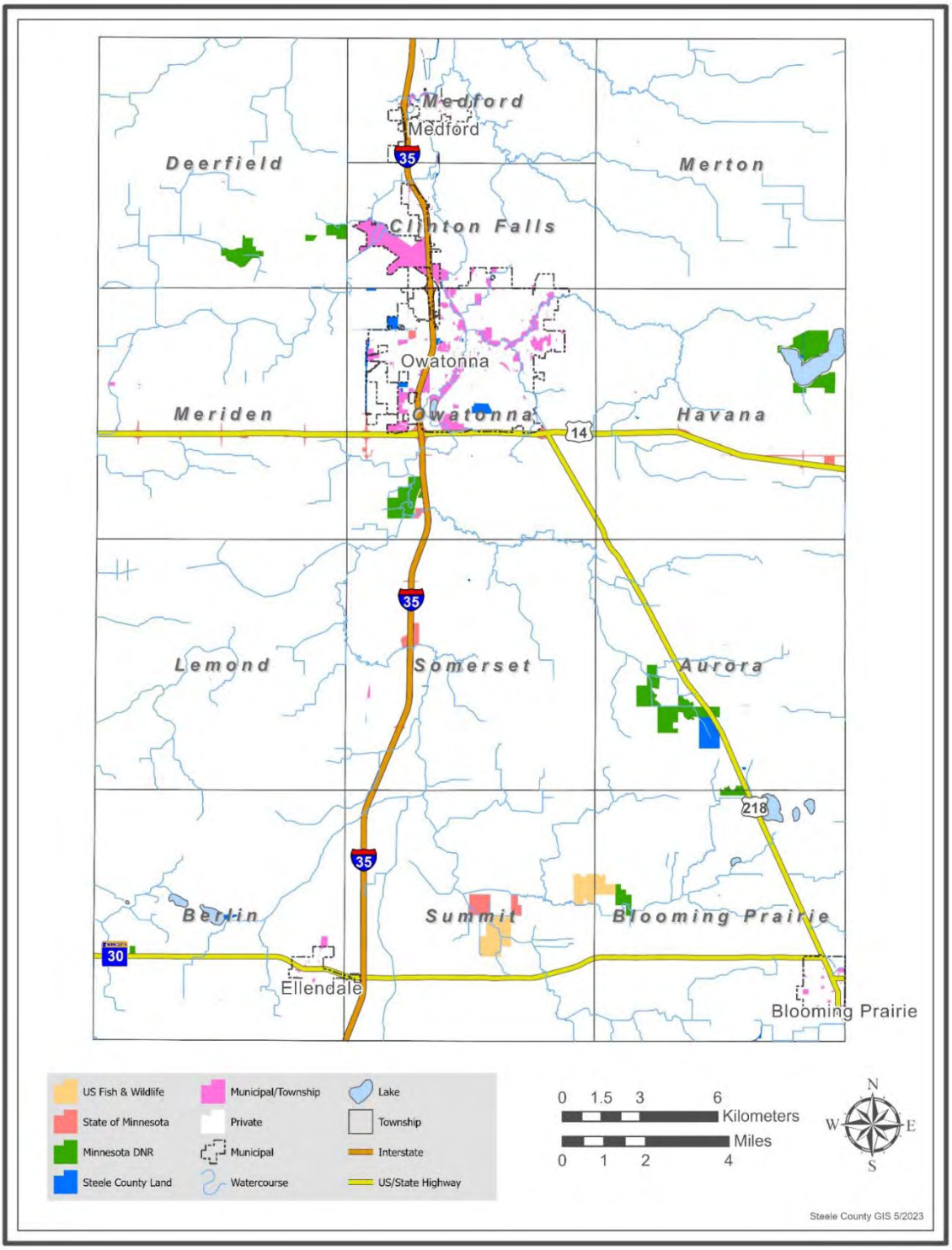
Map A - 6. Steele County Transportation Infrastructure



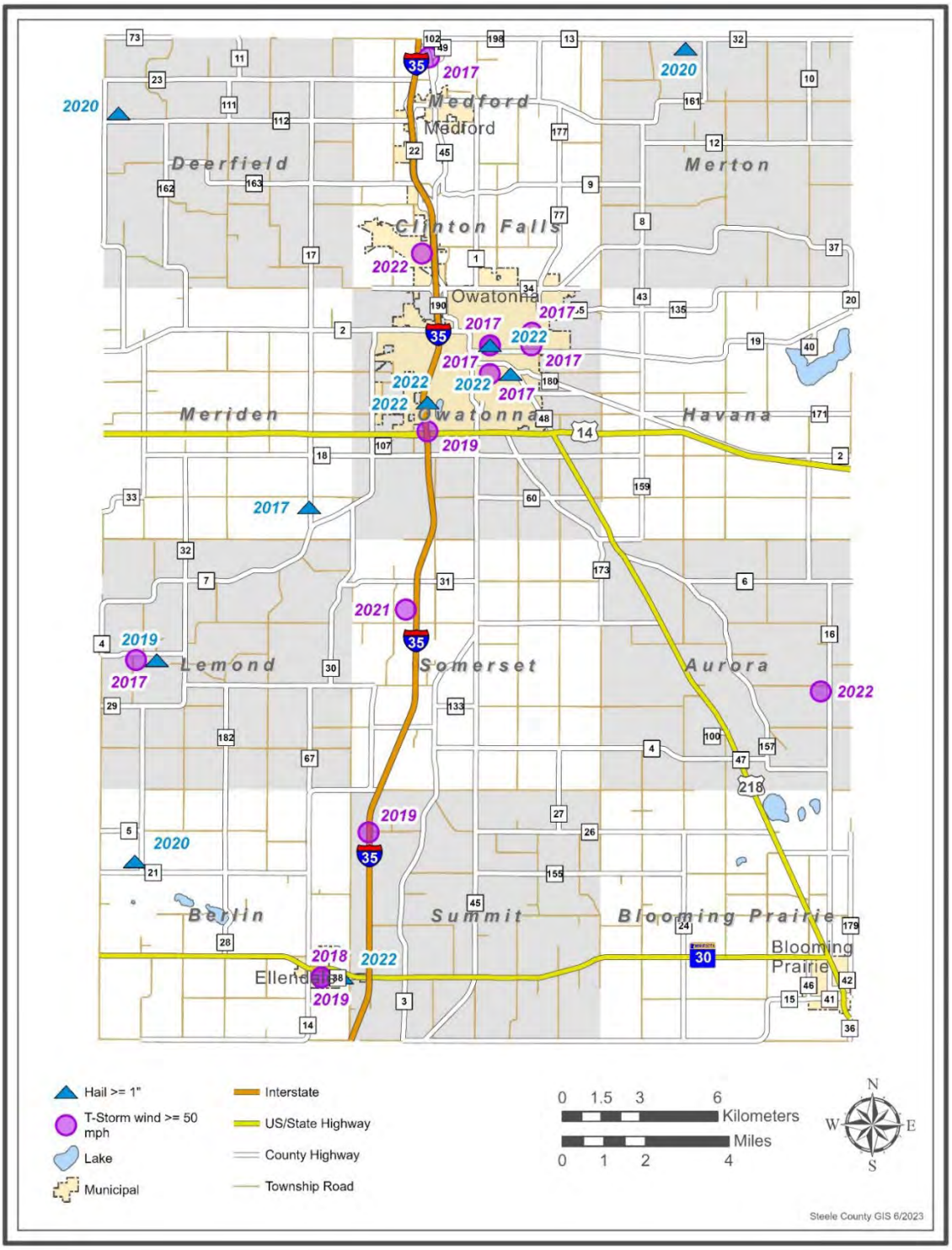
Map A - 7. Steele County Land Cover, National Land Cover Database, 2023



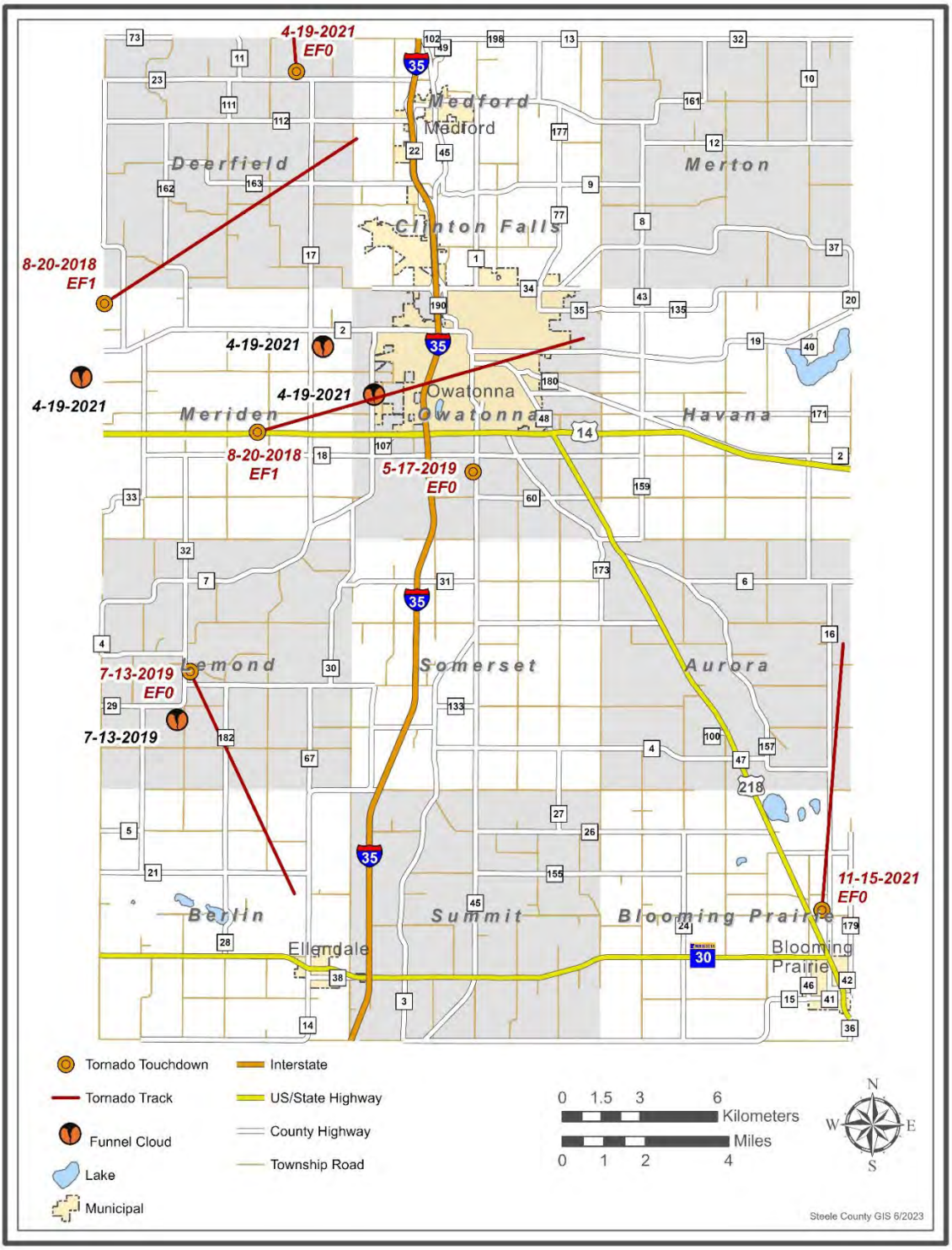
Map A - 8. Steele County Land Ownership by Agency



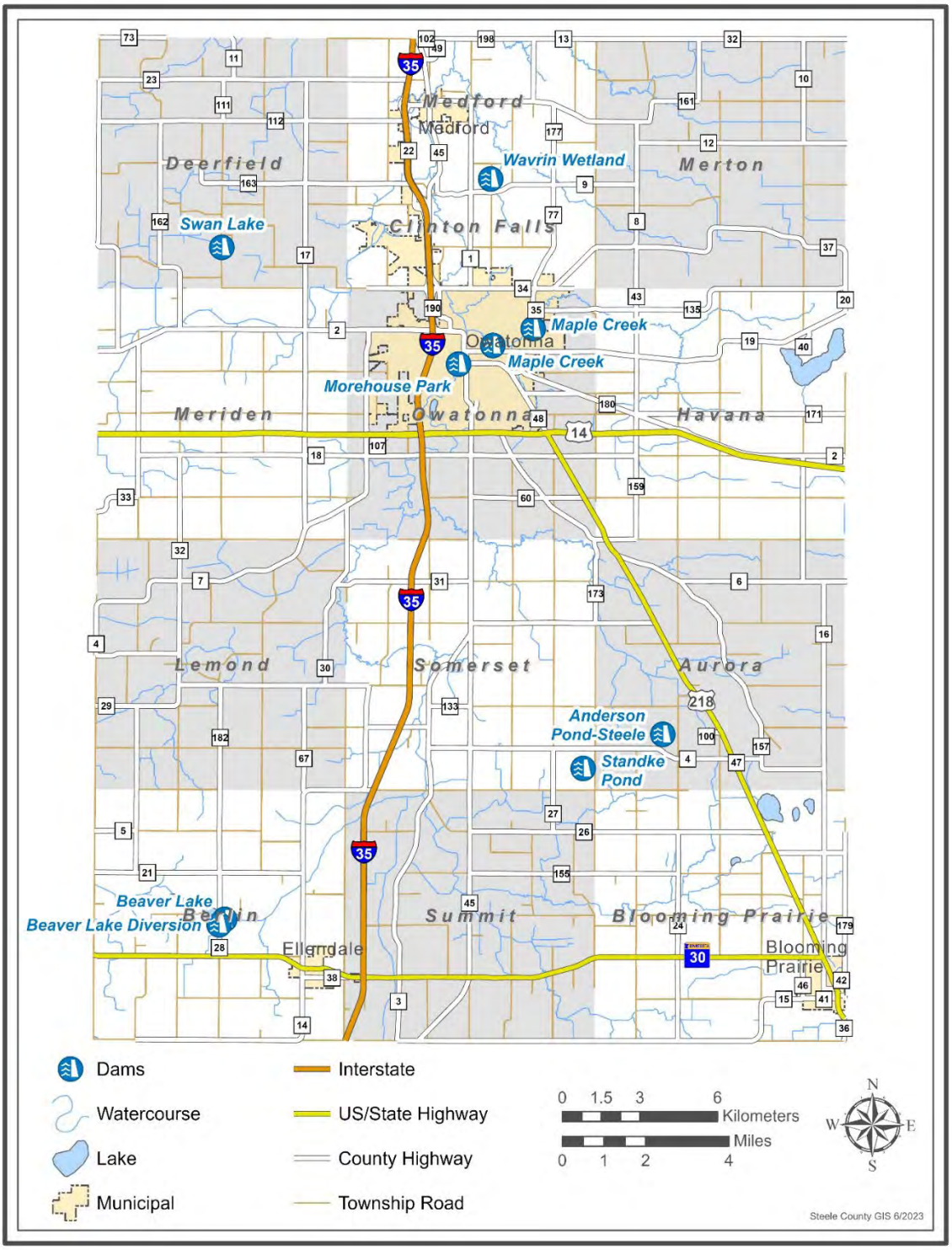
Map A - 9. Severe Wind and Hailstorms in Steele County



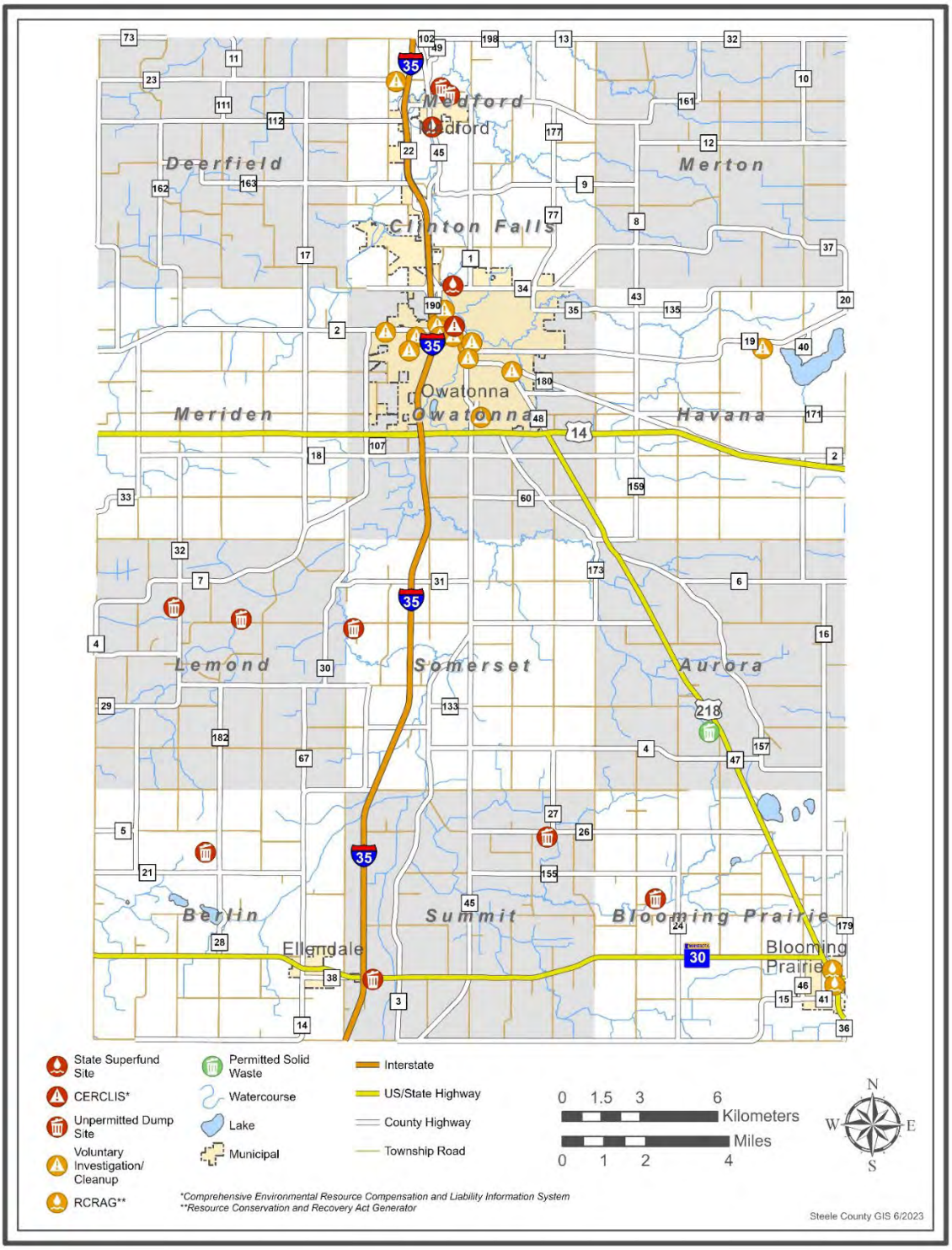
Map A - 10. Tornado Touchdowns and Paths in Steele County



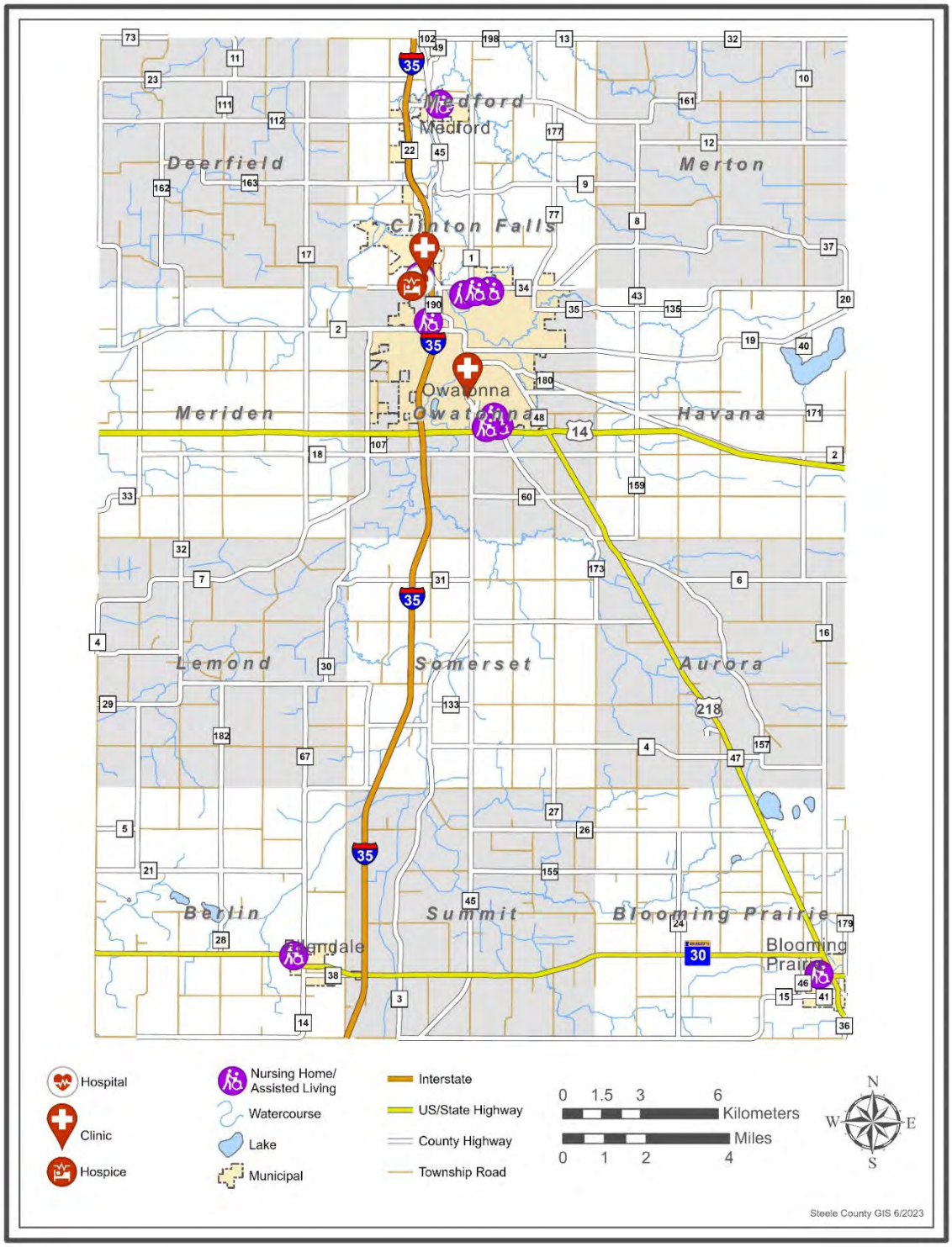
Map A - 11. Dams in Steele County



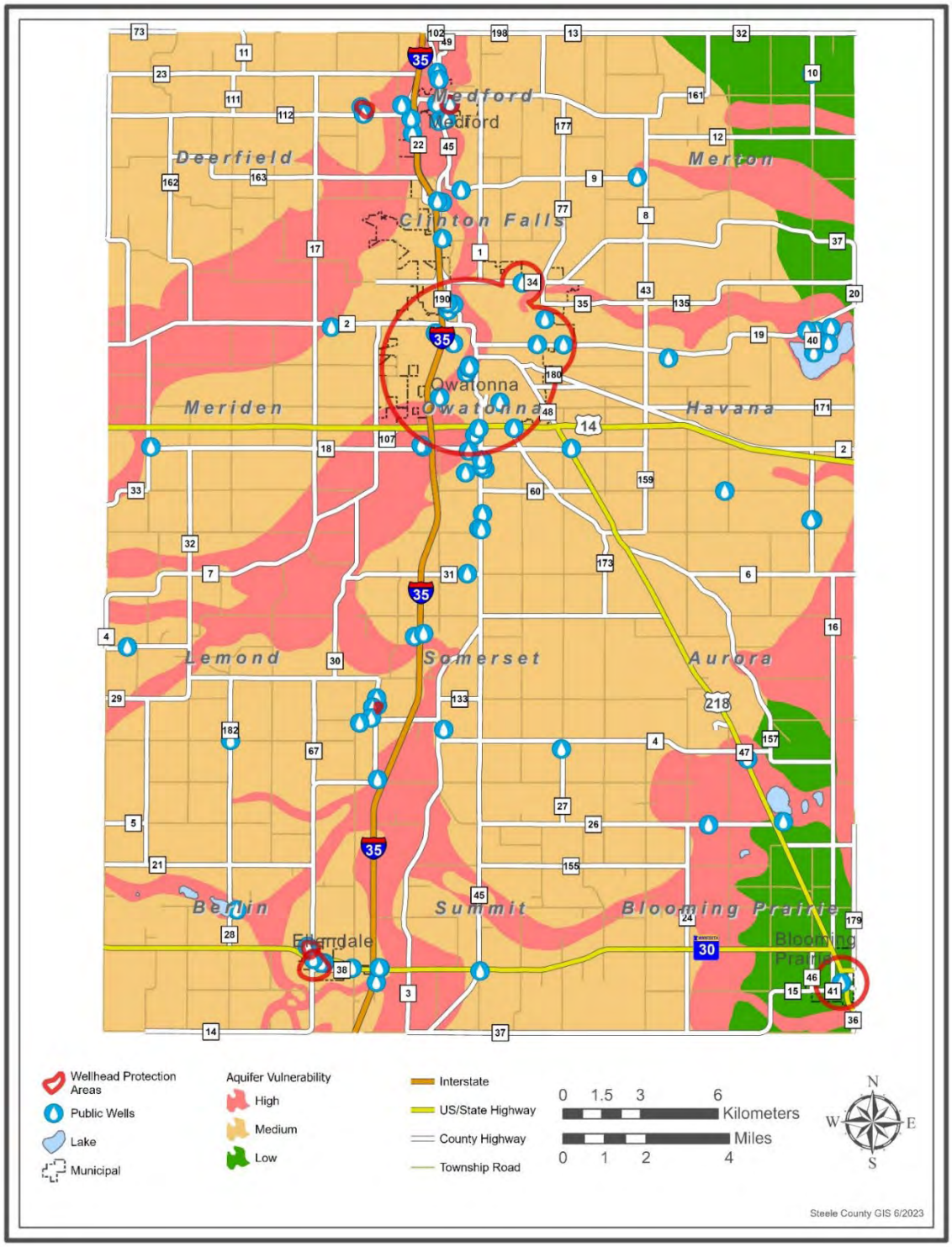
Map A - 12. Sites with Hazardous or Chemical Waste in Steele County



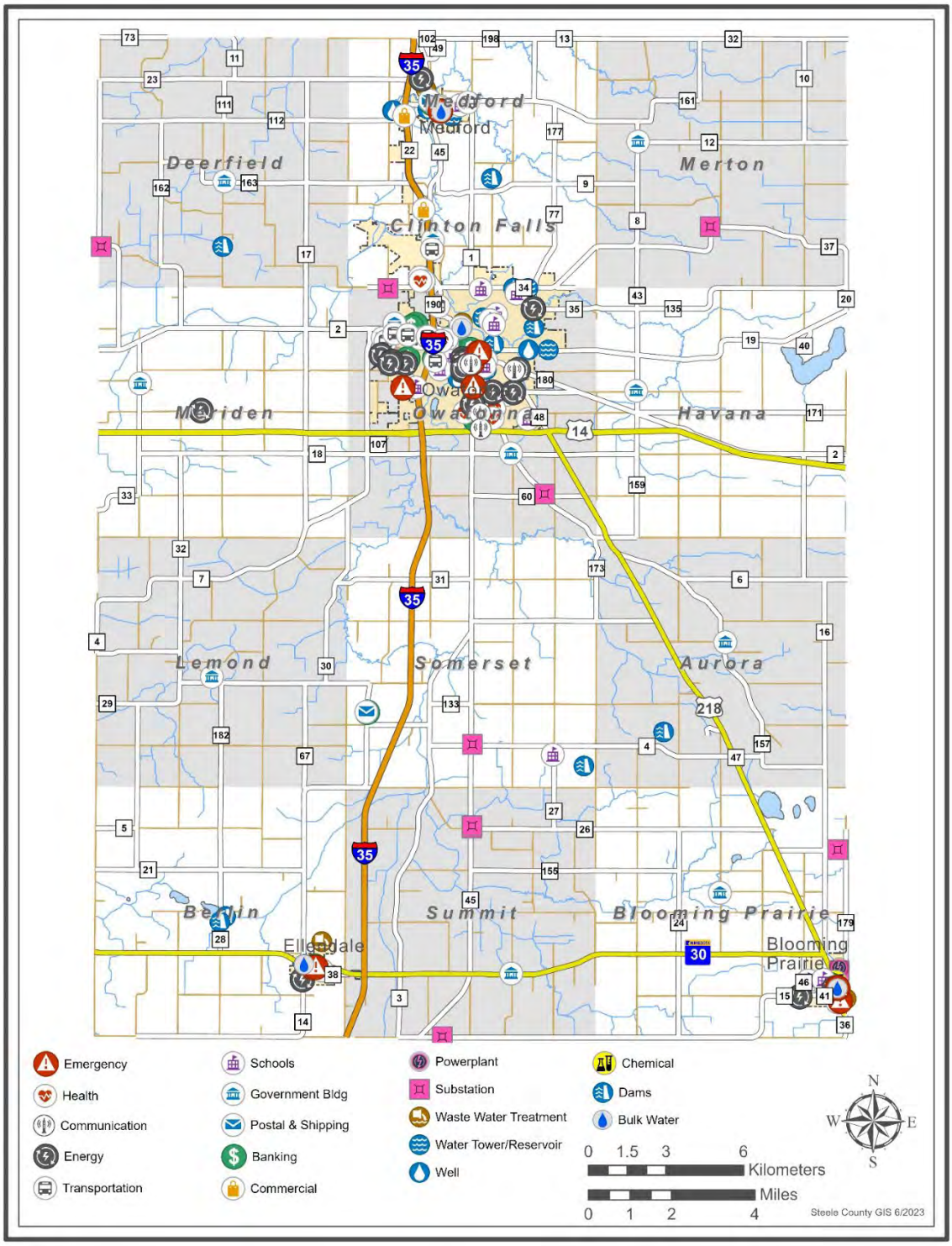
Map A - 13. Health Care Providers in Steele County



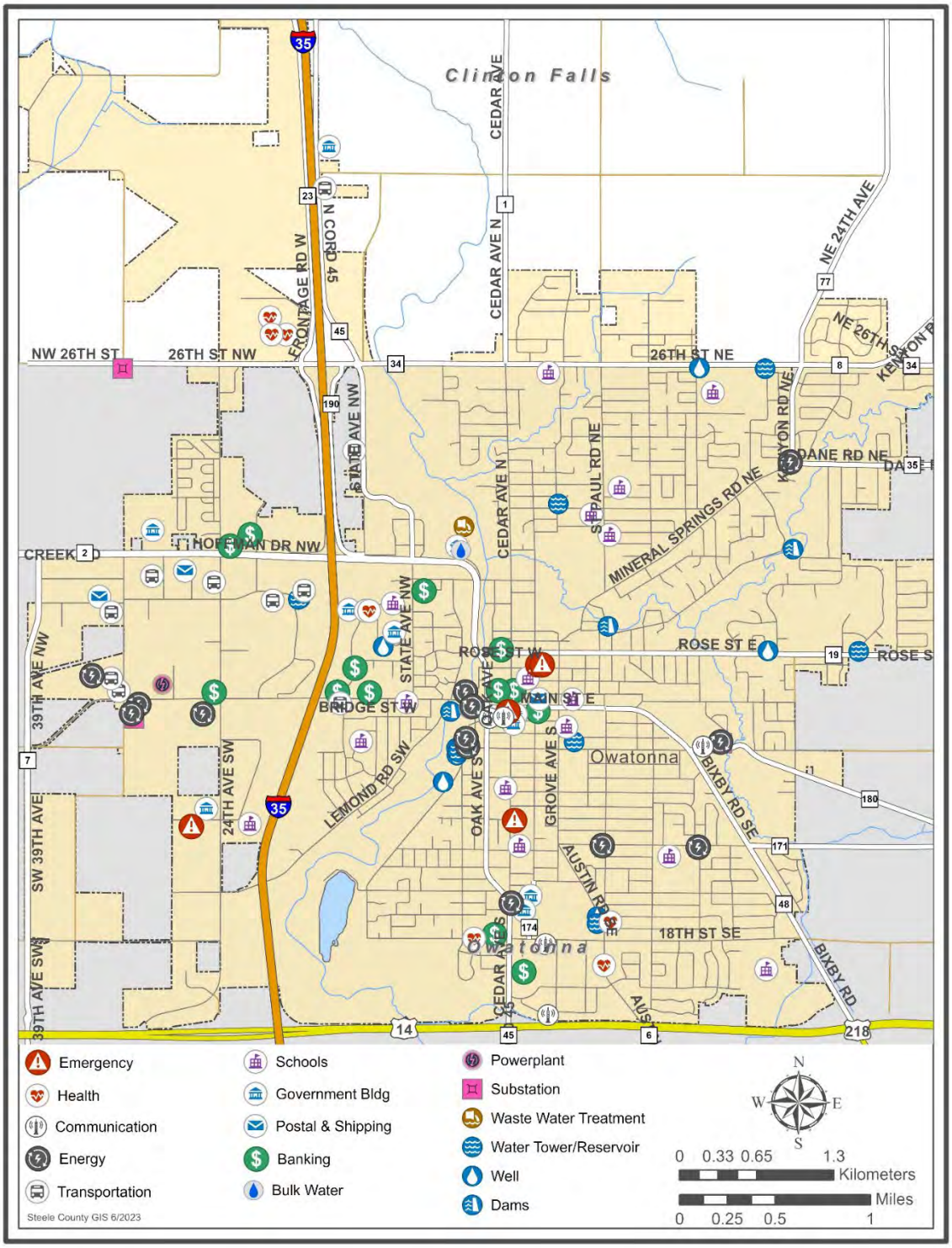
Map A - 14. Steele County Aquifer Vulnerability and Public Wells



Map A - 15. Critical Facilities in Steele County

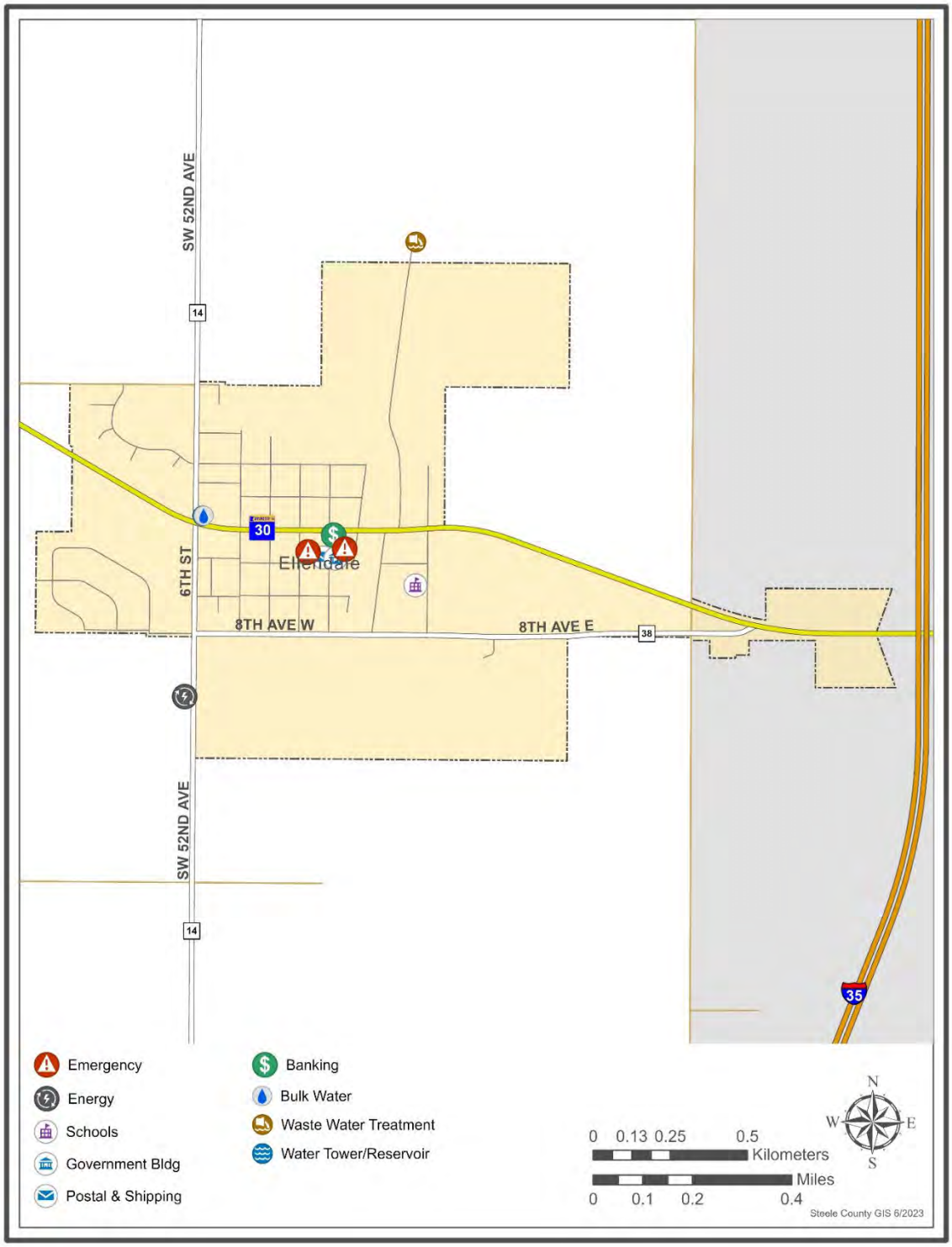


Map A - 16. Critical Facilities in Owatonna

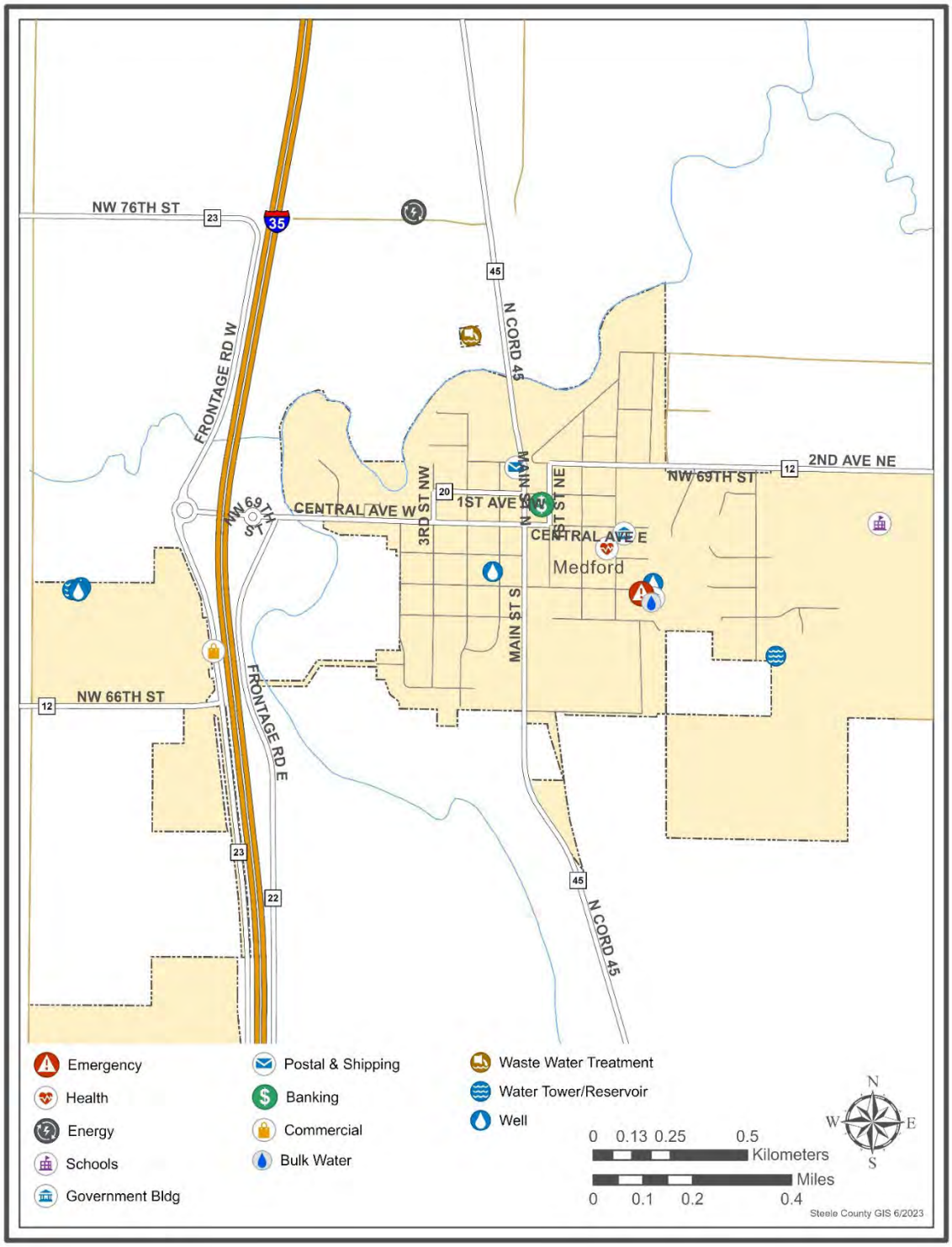


Map A - 17. Critical Facilities in Blooming Prairie

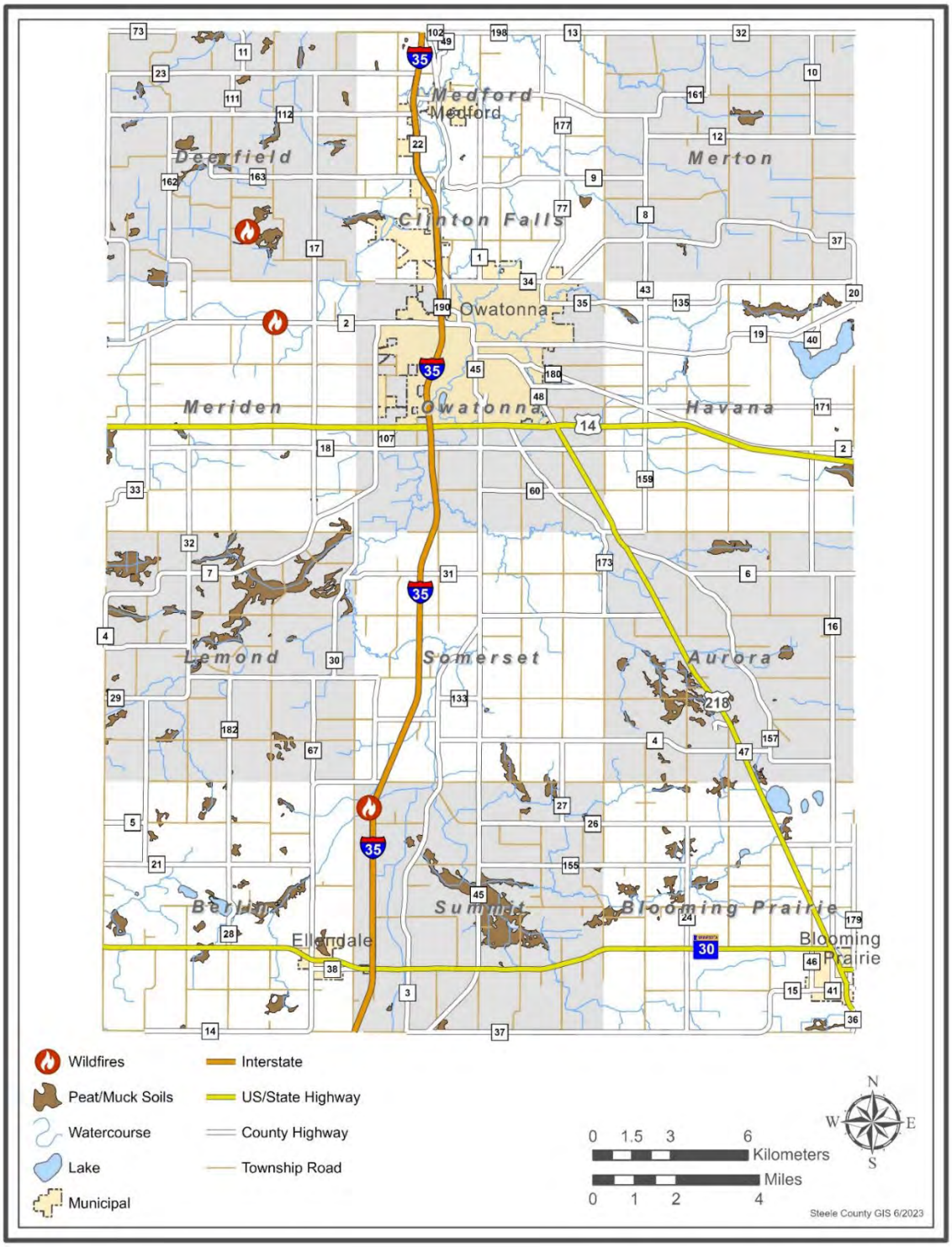
Map A - 18. Critical Facilities in Ellendale



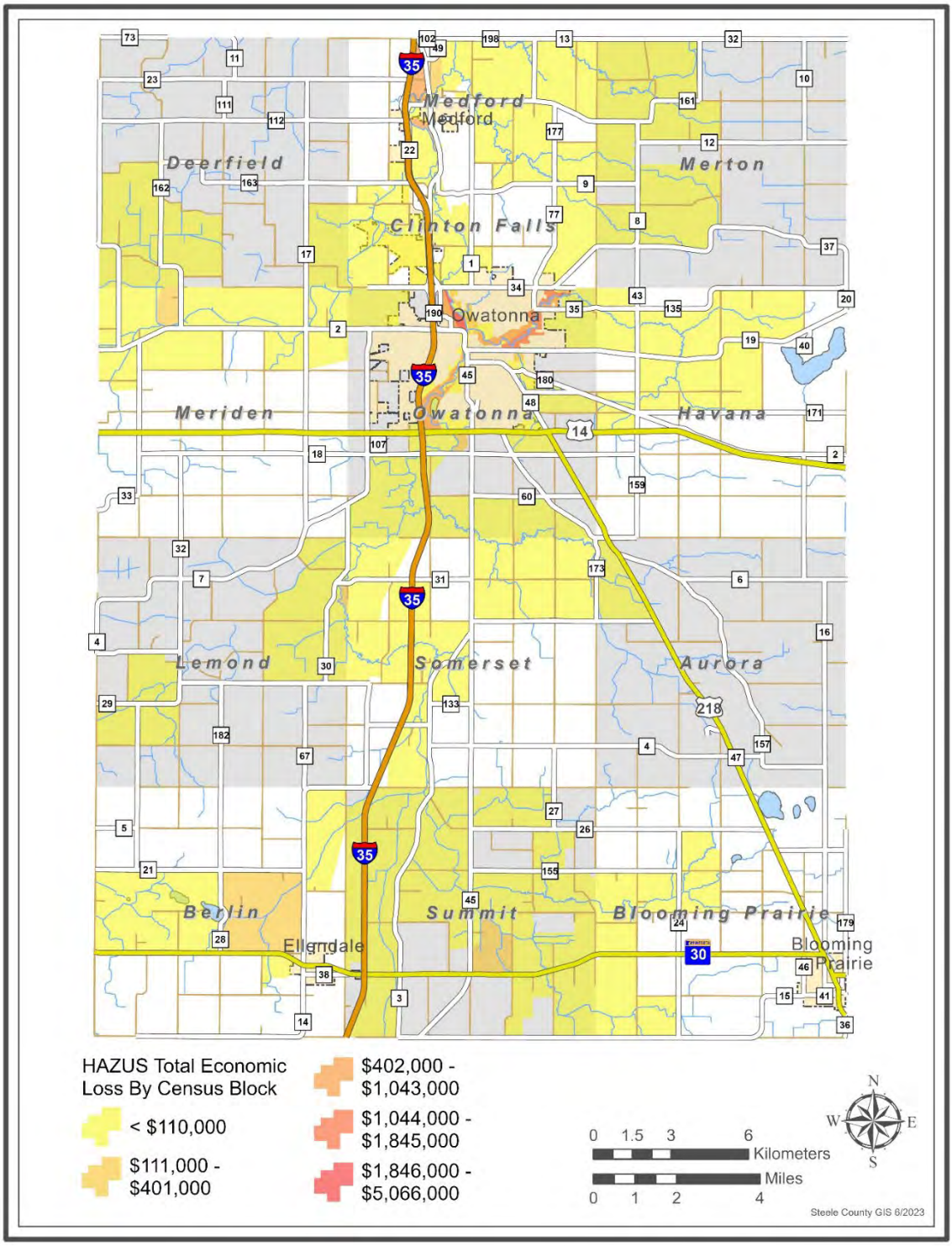
Map A - 19. Critical Facilities in Medford



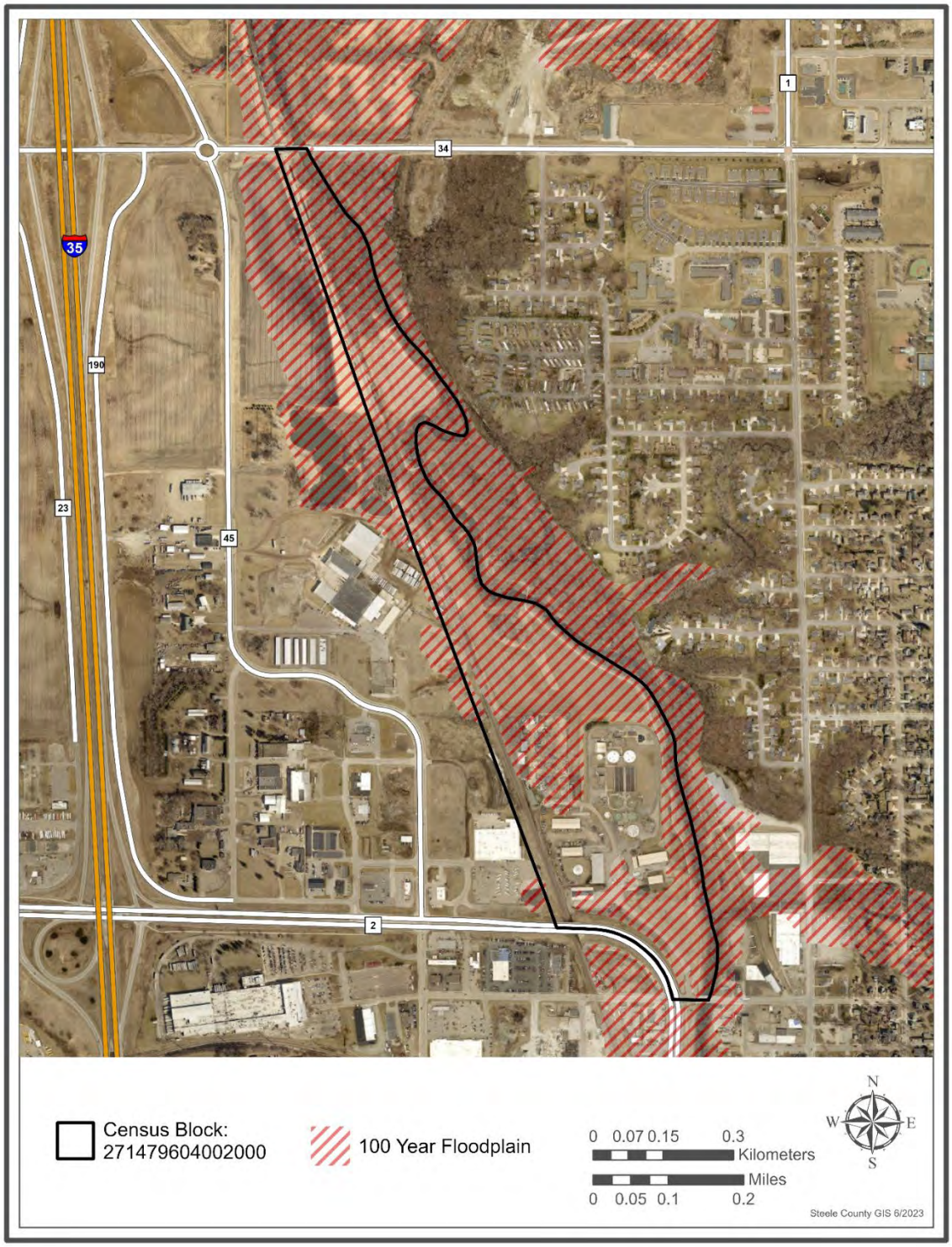
Map A - 20. Wildfires (1985-April 2017) and Peat Soil Areas in Steele County



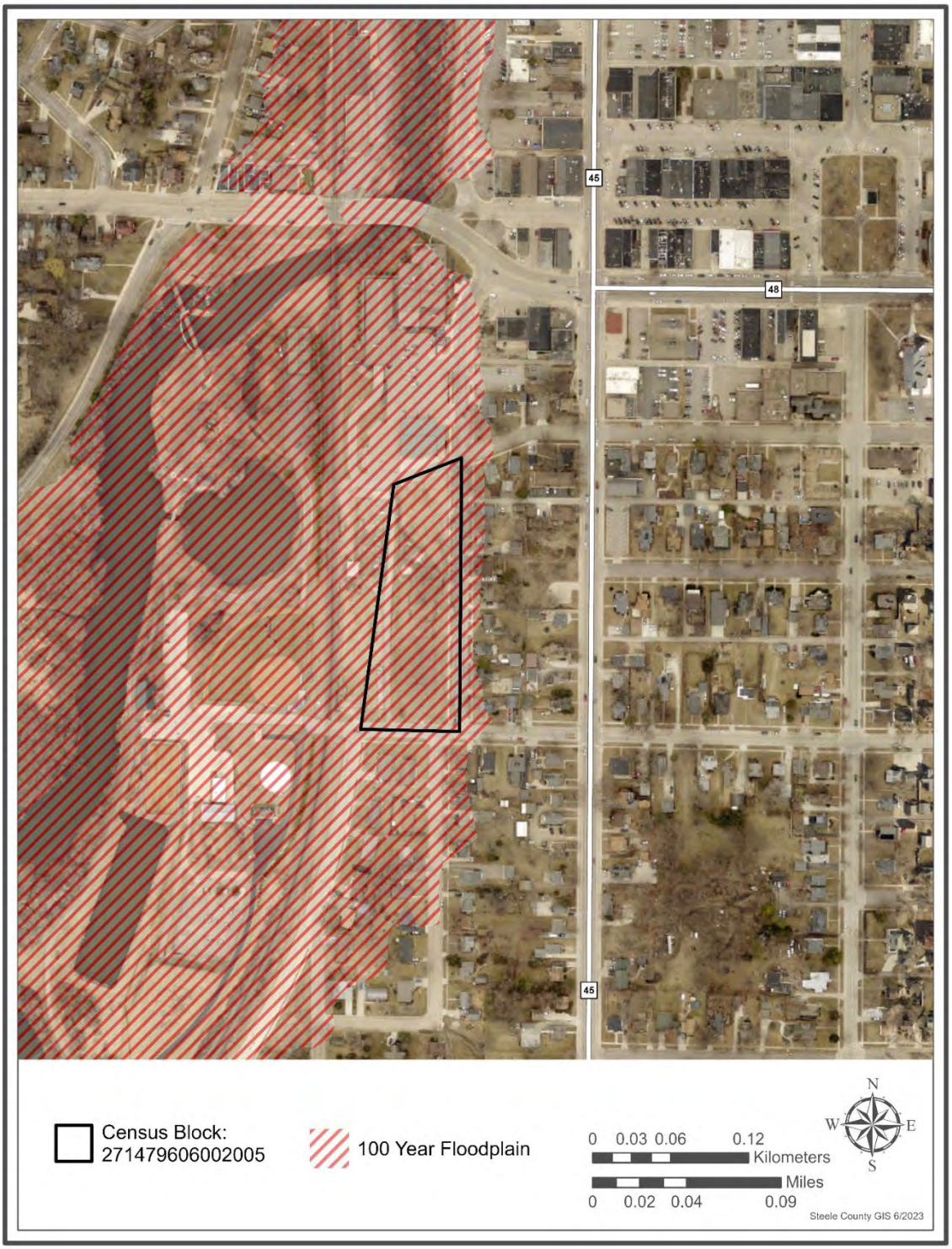
Map A - 21. Distribution of Estimated Economic Loss for Steele County in 100-Year Flood



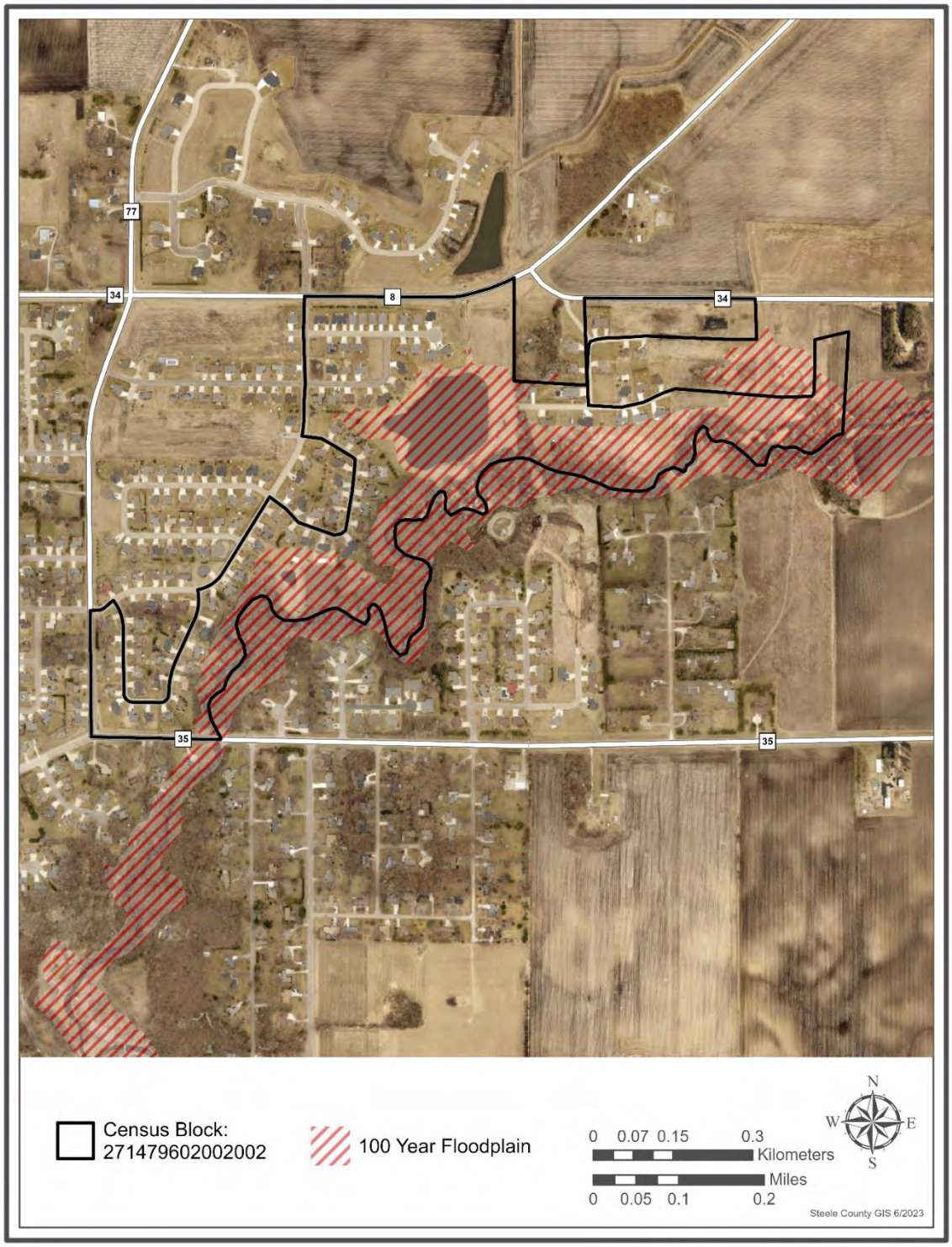
Map A - 22. Census Block #271479604002000 and 100-Year Floodplain in Owatonna



Map A - 23. Census Block #271479606002005 and 100-Year Floodplain in Owatonna

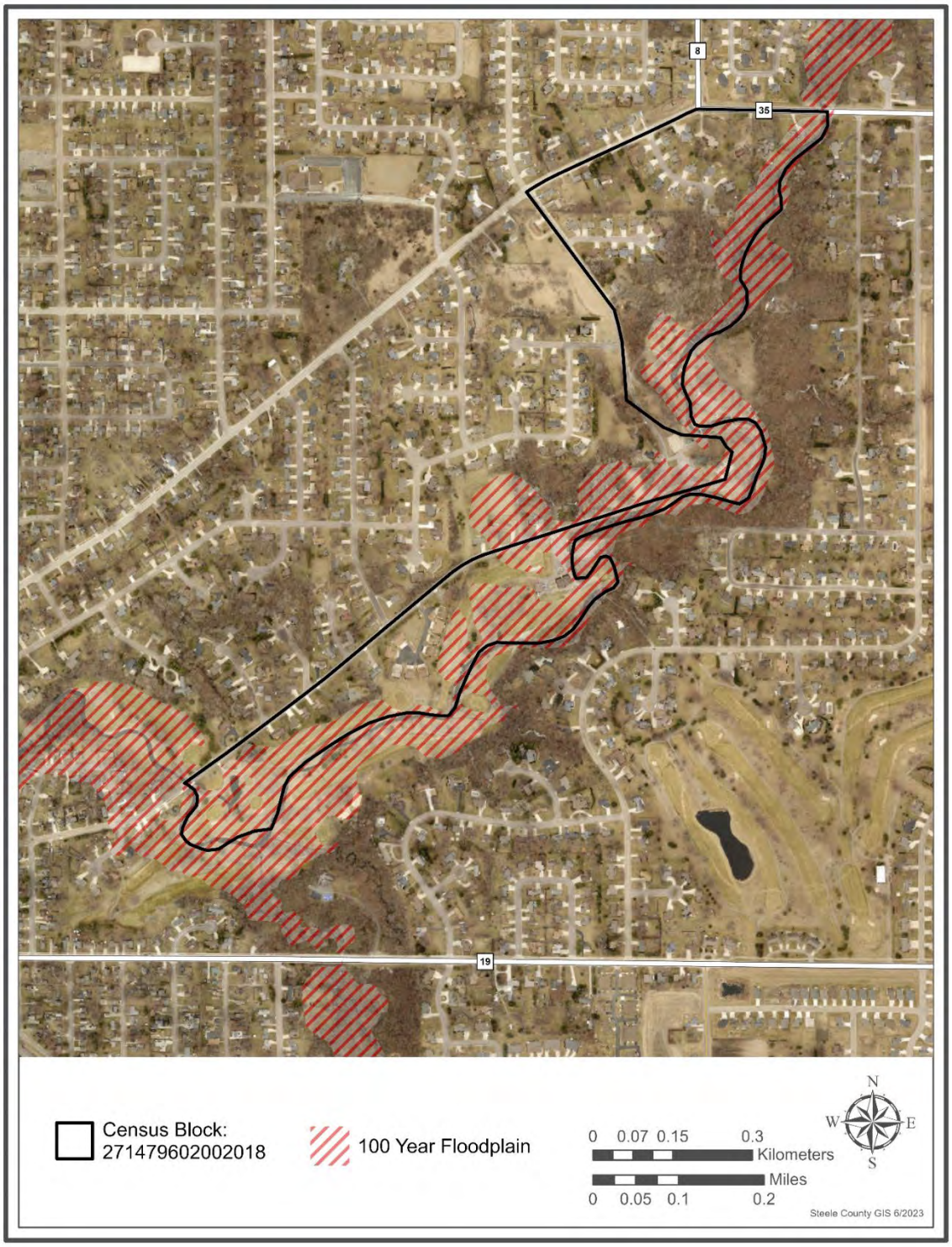


Map A - 24. Census Block #271479602002002 and 100-Year Floodplain in Owatonna

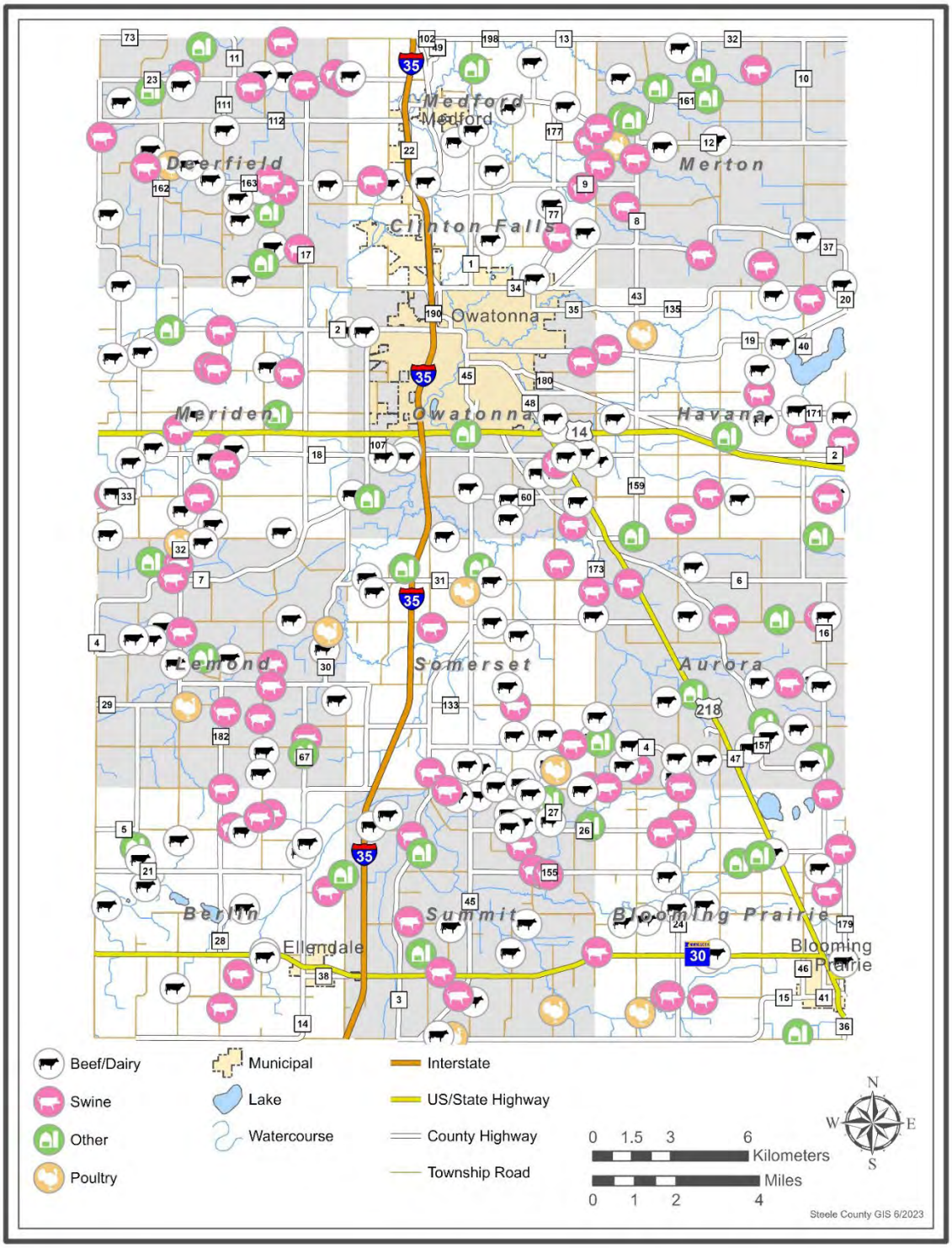


Map A - 25. Census Block #271479602002016 and 100-Year Floodplain in Owatonna

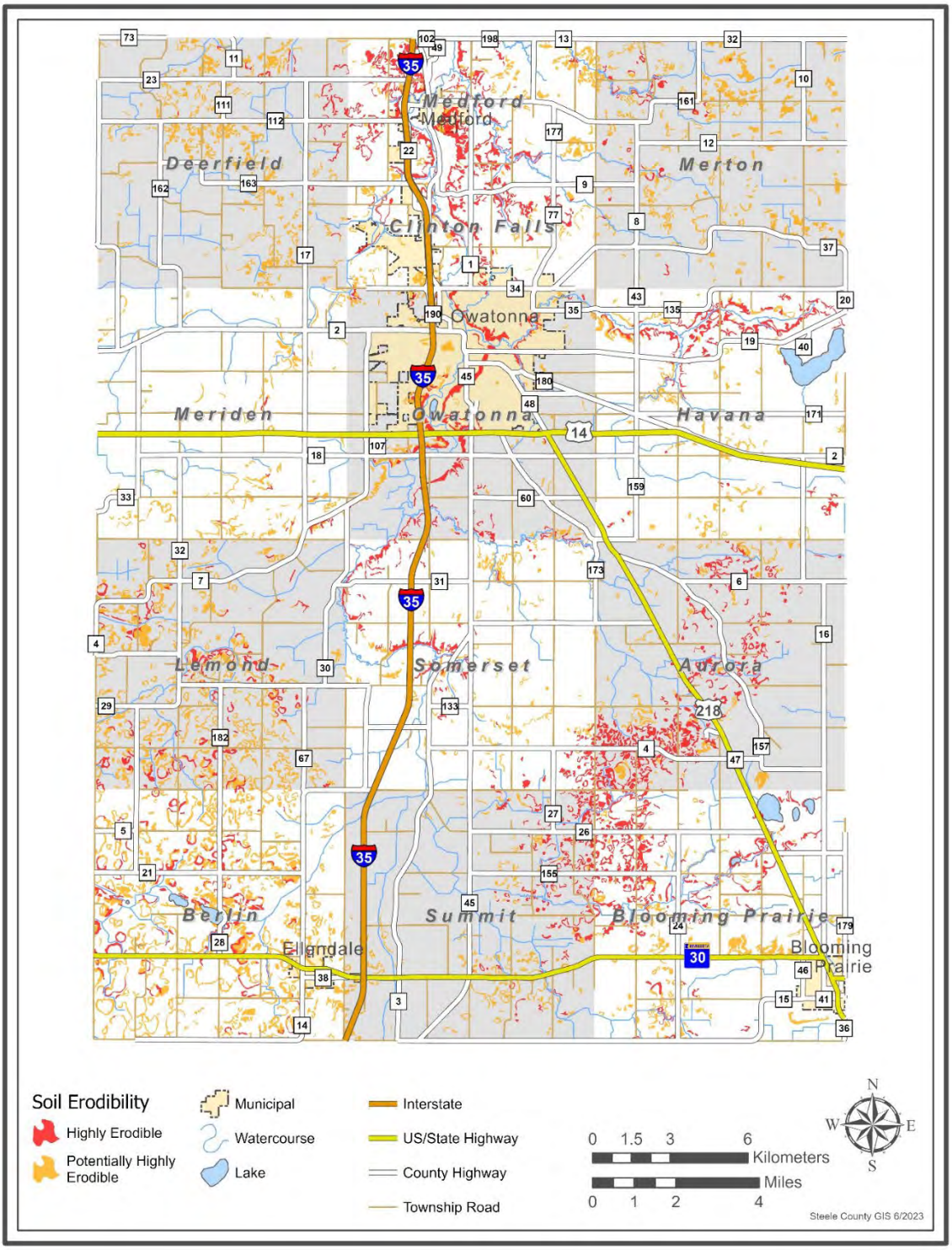
Map A - 26. Census Block #271479602002018 and 100-Year Floodplain in Owatonna



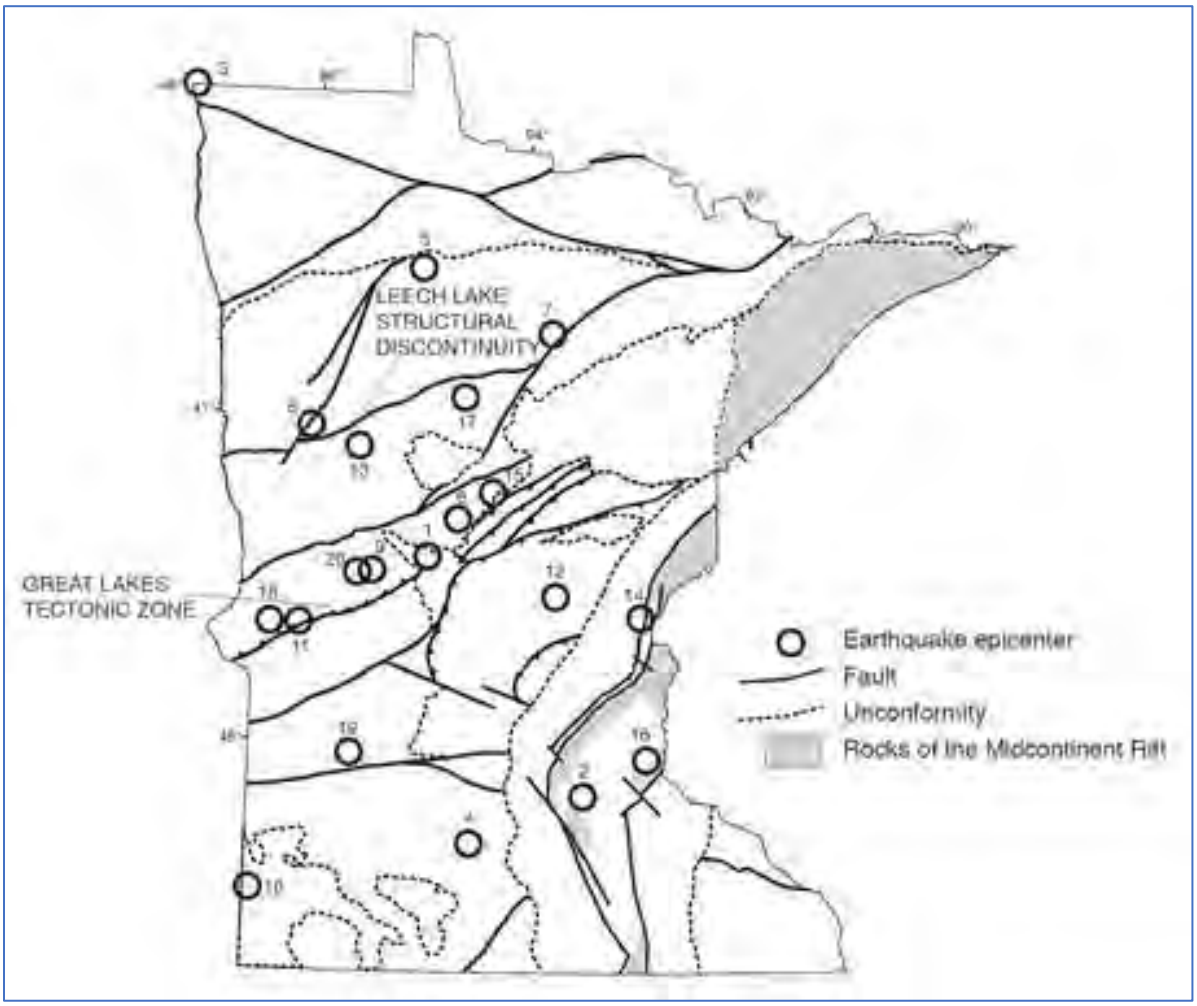
Map A - 27. Feedlots in Steele County



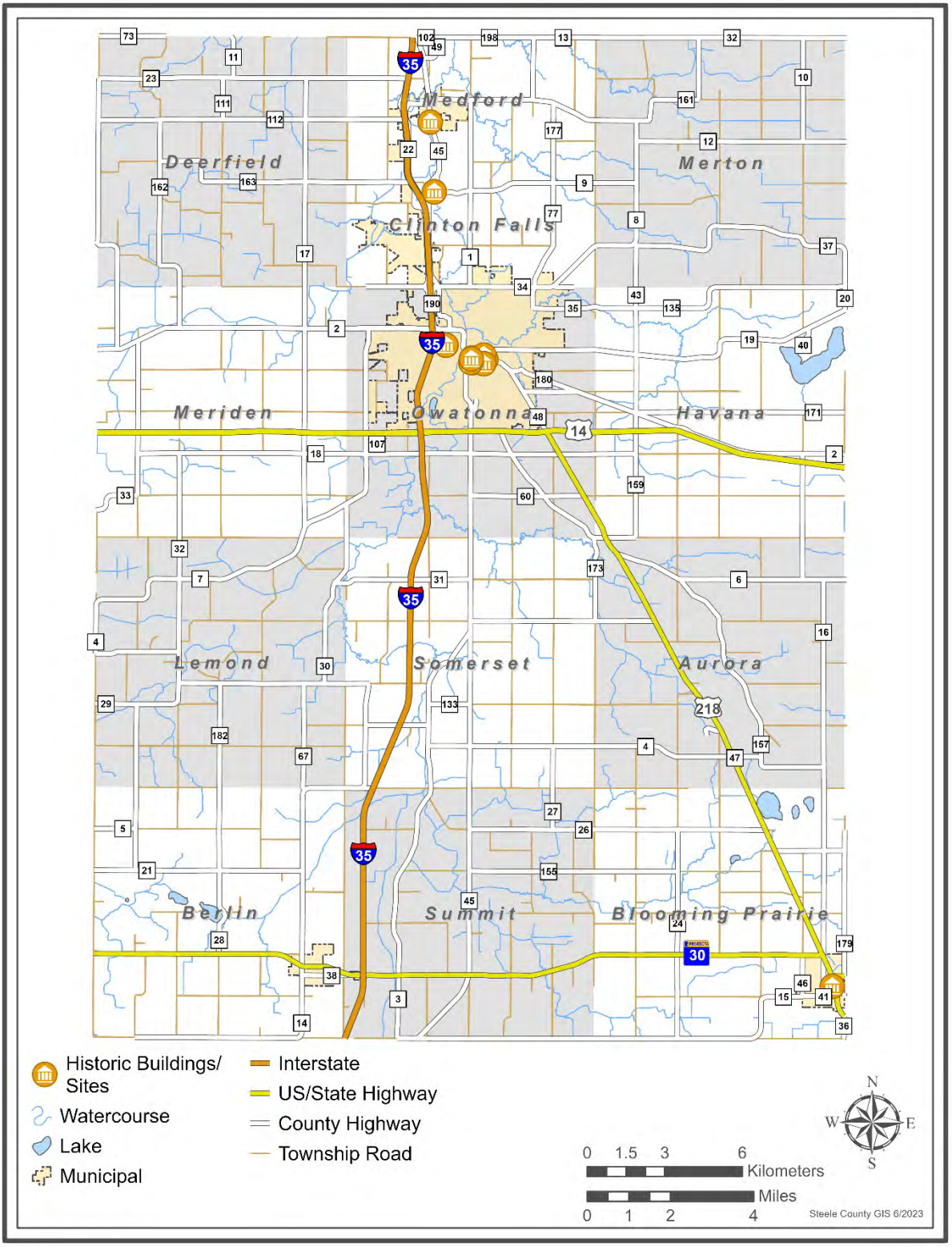
Map A - 28. Soil Erodibility (K Factor, Rock Free) in Steele County



Map A – 29. Fault lines in Minnesota

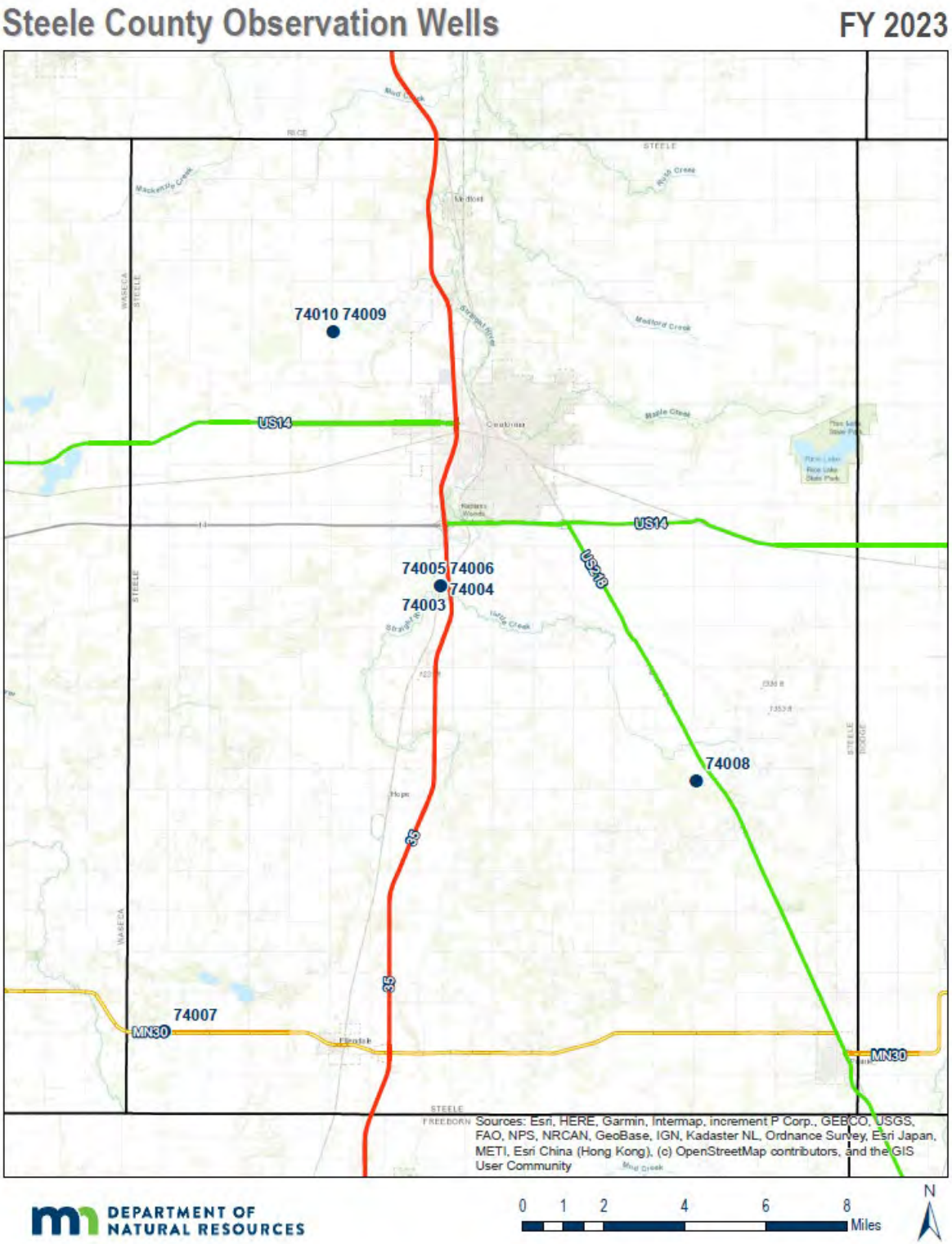


Map A-30. Historical Buildings and Structures in Steele County

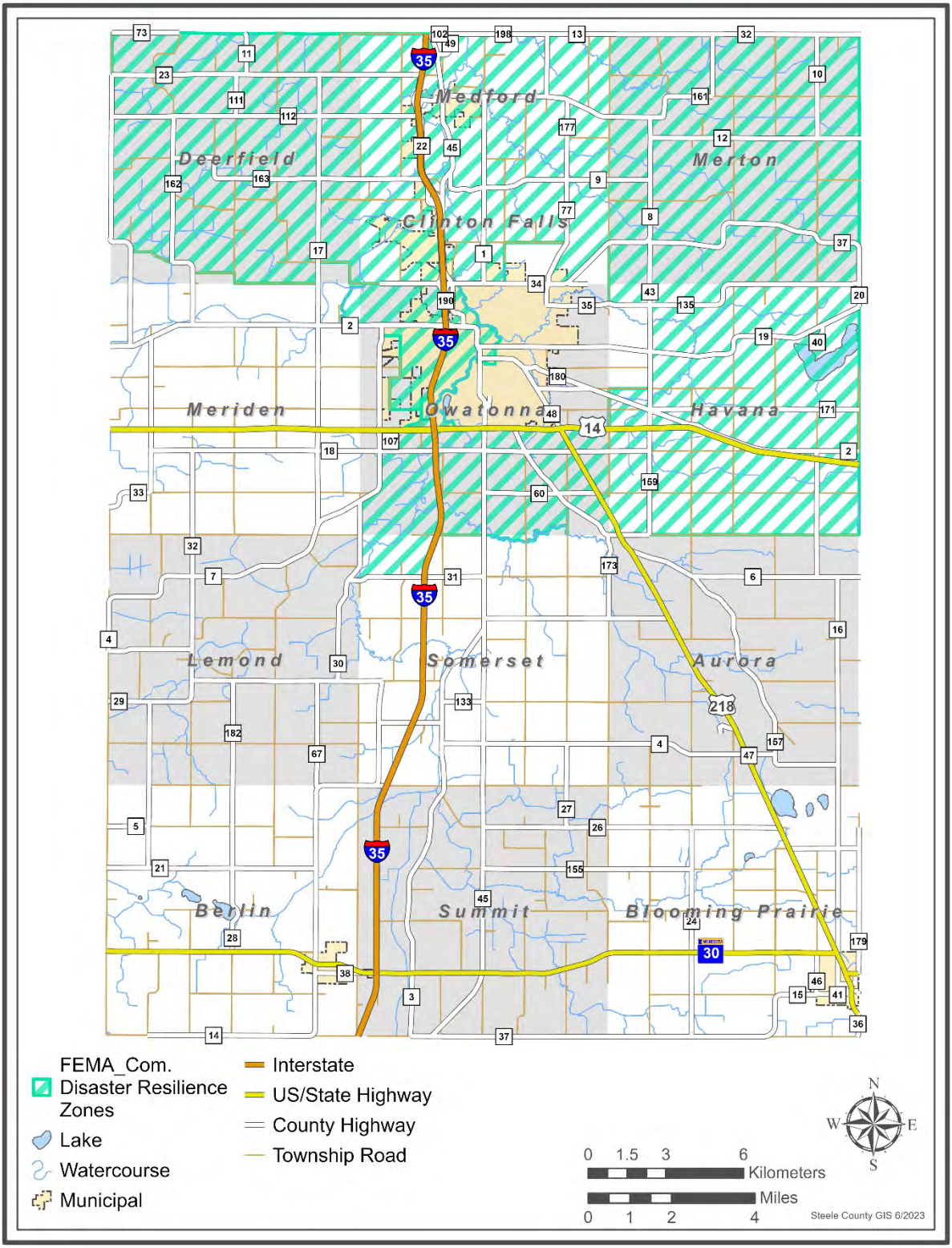


Data reference Table B-13

Map A-31. Aquifer Observation Wells in Steele County

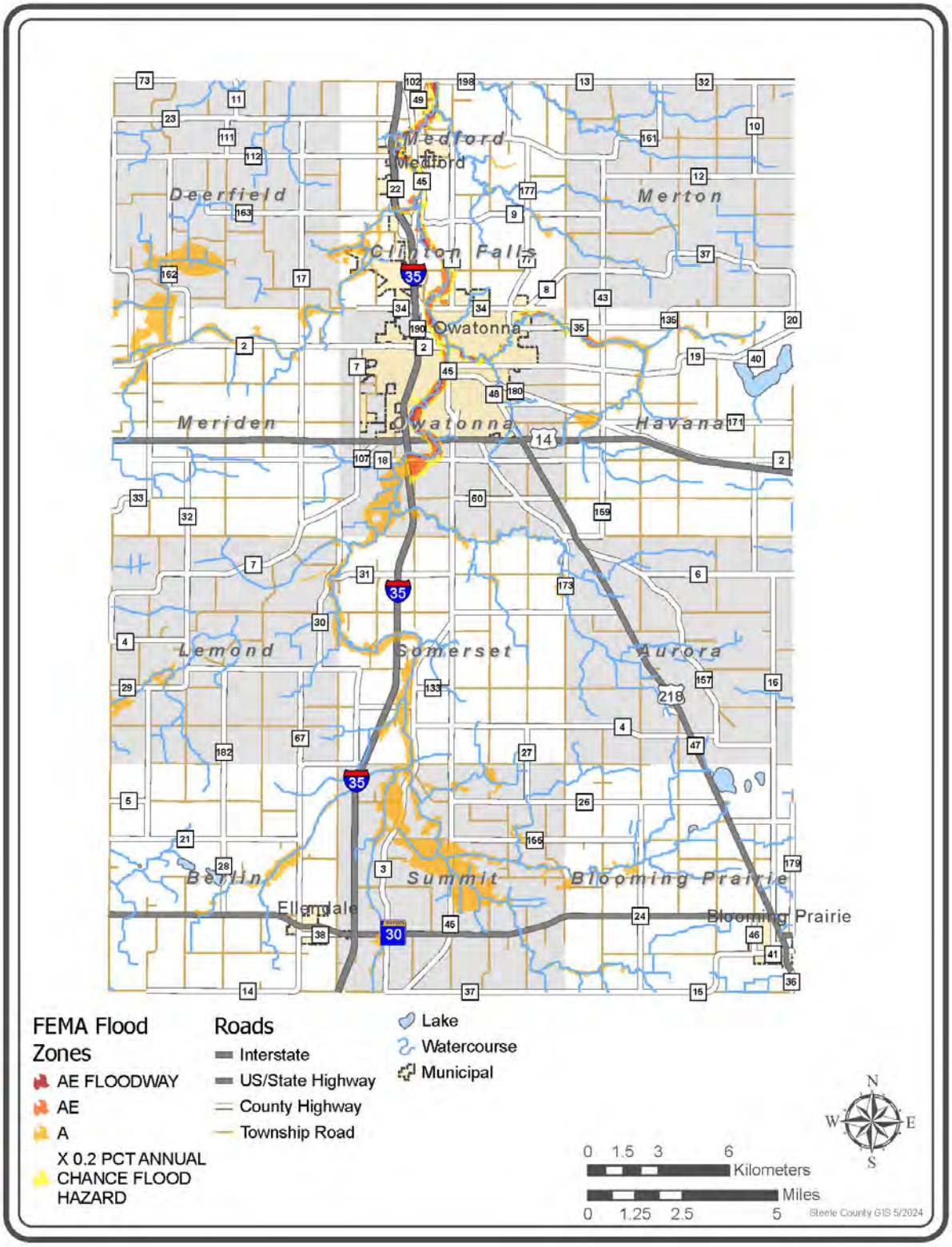


Map A-32. FEMA Community Resilience Zone

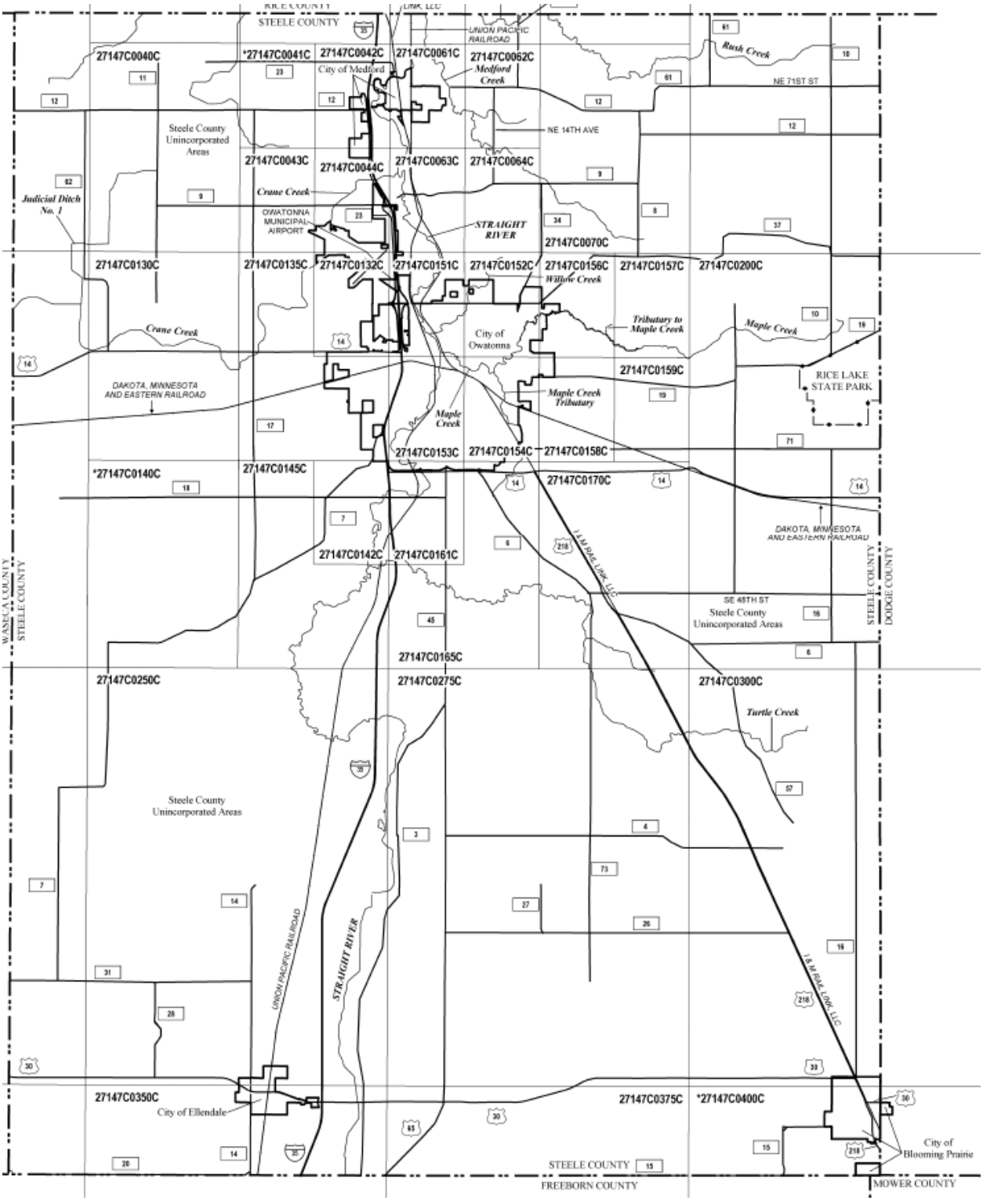


Source: FEMA Community Resilience Zone Viewer

Map A-33. NFIP Steele County Flood Zones Map



Map A-34. NFIP Steele County FIRM INDEX



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Appendix B
Steele County Critical Facilities

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Table B-1 Agriculture & Food				
Facility	**Address**	**City**	**ST**	**Zip**
Bushel Boy Farms	215 NW 32nd Ave	Owatonna	MN	55060
Central Farm Service	900 30th Place NW	Owatonna	MN	55060
Coca-Cola Enterprises	2505 Alexander St SW	Owatonna	MN	55060
Farmers Feed & Pet Supply	616 N Cedar Ave	Owatonna	MN	55060
Gandy Company	815 Rice Lake St	Owatonna	MN	55060
Lakeside Foods	900 N Cedar Ave	Owatonna	MN	55060
Pro Pet	800 24th Ave NW	Owatonna	MN	55060
SunOpta Grains & Foods	3824 SW 93rd St	Hope	MN	56046
The Food and Agriculture Sector, almost entirely under private ownership, is composed of farms, restaurants, and registered food manufacturing, processing, and storage facilities, according to the Cybersecurity and Infrastructure Security Agency.				

Table B-2 Banking & Finance				
Facility	**Address**	**City**	**ST**	**Zip**
Farmers & Merchants State Bank	245 Main St E	Blooming Prairie	MN	55917
U.S. Bank Branch	236 Main St E	Blooming Prairie	MN	55917
Keen Bank	119 5th Ave	Ellendale	MN	56026
First National Bank	9087 SW 37th Ave	Hope	MN	56046
First State Bank	115 1st St NE	Medford	MN	55049
Bremer Bank	730 W Bridge St	Owatonna	MN	55060
Community Bank Owatonna	640 W Bridge St	Owatonna	MN	55060
Federated Employees Credit	1929 S Cedar Ave	Owatonna	MN	55060
First United Bank	495 W North St	Owatonna	MN	55060
Hometown Credit Union	2400 W Bridge St	Owatonna	MN	55060
Hometown Credit Union	1620 S Cedar Ave	Owatonna	MN	55060
Premier Bank Owatonna	209 E Main St H	Owatonna	MN	55060
Profinium, Inc.	1080 Frontage Rd W	Owatonna	MN	55060
United Prairie Bank	110 W Rose St	Owatonna	MN	55060
United Prairie Bank	1801 S Cedar Ave	Owatonna	MN	55060
Wells Fargo Bank	101 N Cedar Ave	Owatonna	MN	55060
Wells Fargo Bank	1400 S Oak Ave	Owatonna	MN	55060
Wells Federal Bank	496 W North St	Owatonna	MN	55060
U.S. Bank Branch	132 W Broadway St	Owatonna	MN	55060
The Financial Services Sector represents a vital component of our nation's critical infrastructure. Large-scale power outages, recent natural disasters, and an increase in the number and sophistication of cyberattacks demonstrate the wide range of potential risks facing the sector, according to the Cybersecurity and Infrastructure Security Agency.				

Table B-3 Chemical and Hazardous Materials				
Facility	**Address**	**City**	**ST**	**Zip**
Arkema Inc.	157 Hwy Ave N	Blooming Prairie	MN	55917
Bosch Automotive Service Solutions	1605 State Avenue NW	Owatonna	MN	55060
Bosch Automotive Service Solutions	655 Eisenhower Drive	Owatonna	MN	55060
Bosch Automotive Service Solutions	370 Festal Place NW	Owatonna	MN	55060
Bushel Boy Farms	215 32nd Ave SW	Owatonna	MN	55060
Yule Transport Inc.	2957 NW 76TH ST	Medford	MN	55049
Truth Hardware	700 W Bridge ST	Owatonna	MN	55060
Wenger Corporation	555 Park Drive	Owatonna	MN	55060
Jostens, Inc – Southtown	1900 Hartle Ave	Owatonna	MN	55060
Owatonna Central Water Works	349 W. School Street	Owatonna	MN	55060
Amerigas Eagle LP #2318	700 N. Elm Street	Owatonna	MN	55060
Thompson Gas, LLC (DBA Pirkl Gas)	204 Mineral Springs Rd 1558 92nd Avenue SW	Owatonna	MN	55060
Century Link – Owatonna CO	122 W. Mill Street	Owatonna	MN	55060
Owatonna Well #5	1115 Park Drive	Owatonna	MN	55060
Owatonna Well #6	West Hills – 440 Dunnell Drive	Owatonna	MN	55060
Owatonna Well #7	1600 Austin Road	Owatonna	MN	55060
Owatonna Well #8	1390 E. Rose Street	Owatonna	MN	55060
Owatonna Well #9	2595 Hemlock Drive	Owatonna	MN	55060
Cabela's Owatonna Retail #003	3900 Cabela Drive	Owatonna	MN	55060
Crown Food Packaging	2929 West Bridge Street	Owatonna	MN	55060
Century Link – Owatonna POP	517 Riverside Drive	Owatonna	MN	55060
Medford Swimming Pool	205 2nd Ave NW	Medford	MN	55049
Medford Water Treatment Facility	410 2nd Ave SE	Medford	MN	55049
MnDOT Owatonna	1010 21st Ave NW	Owatonna	MN	55060
Great Lakes Coca-Cola Distribution Owatonna	2505 Alexander Street SW	Owatonna	MN	55060
Truth Hardware Paint Plant	205 24th Ave SW	Owatonna	MN	55060
Owatonna Hospital	2250 26th Street NW	Owatonna	MN	55060
City of Blooming Prairie Wastewater Treatment Plant	10023 750th Street	Blooming Prairie	MN	55917
Pine Springs Pool	400 First Avenue NW	Blooming Prairie	MN	55917

Table B-3 Chemical and Hazardous Materials (continued)				
Facility	**Address**	**City**	**ST**	**Zip**
Federated Mutual Insurance ATA	1929 South Cedar Ave	Owatonna	MN	55060
Kibble Equipment, LLC	3555 SW 18th Street	Owatonna	MN	55060
XPO Logistics Freight, Inc – XOW	1020 28th Ave NW	Owatonna	MN	55060
Rayven LLC OWA	405 24th Ave SW	Owatonna	MN	55060
Huber Supply, Co	385 Saint John Drive	Owatonna	MN	55060
CCM Rice-Steele	433 W. North Street	Owatonna	MN	55060
CCM – Owatonna	639 Riverside Avenue	Owatonna	MN	55060
Central Farm Service – Ellendale	106 5th Avenue	Ellendale	MN	55060
Crystal Valley Coop (10) HP	3829 SW 93rd Street	Hope	MN	56046
Ferrell Gas – Medford	6445 N County Road 45	Medford	MN	55049
Central Farm Service – Owatonna Station	350 32nd Ave NE 712 N Cedar Street	Owatonna	MN	55060
Owatonna Bus Company	1145 Park Drive	Owatonna	MN	55060
Fleet Farm	2121 W Bridge Street	Owatonna	MN	55060
Central Farm Service – Ellendale	4277 West Highway 30	Ellendale	MN	56026
Life Fitness, LLC	1975 24th Avenue SW	Owatonna	MN	55060
Cargill, Inc	157 Hwy Ave N	Blooming Prairie	MN	55917
Costco Wholesale #1376/1377	3601 10th Street SW	Owatonna	MN	55060
Daikin Applied – Owatonna	1001 21st Ave. NW	Owatonna	MN	55060
CCM – Medford	8044 21st Ave NW	Medford	MN	55049
Kerry Americas	220 24th Ave NW	Owatonna	MN	55060
Lowe's of Owatonna, MN (#2518)	1280 21st Ave NW	Owatonna	MN	55060
TCC Materials – Medford	8005 21st Ave NW	Medford	MN	55049
AT7T Corp MN 1310	3843 NW 66th Street	Medford	MN	55049
House Chevrolet Buick Cadillac	3700 Frontage Road West	Owatonna	MN	55060
Century Link Communications	6391 SW 68th Street	Owatonna	MN	55060
Charter Communications 23107	1110 East School Street	Owatonna	MN	55060
Water Treatment Plant	510 5th Ave W	Ellendale	MN	56026
Schwan's Home Service – 101640	2795 Park Drive	Owatonna	MN	55060

The Chemical Sector, an integral component of the U.S. economy, manufactures, stores, uses, and transports potentially dangerous chemicals on which other critical infrastructure sectors rely, according to the Cybersecurity and Infrastructure Security Agency.

Table B-4 Commercial Facilities				
Facility	**Address**	**City**	**ST**	**Zip**
Northwoods Cinema 10	300 Allen Avenue	Owatonna	MN	55060
Medford Outlet Center	6750 W Frontage Rd #315	Medford	MN	55049
Country Inn and Suites	130 Allan Avenue	Owatonna	MN	55060
Baymont Inn	245 Florence Avenue	Owatonna	MN	55060
Super 8 Hotel	1150 W. Frontage Road	Owatonna	MN	55060
Comfort Inn	2345 NW 43rd Street	Owatonna	MN	55060
Courtyard by Marriott	225 N. Cedar Avenue	Owatonna	MN	55060
Executive Inn	745 State Avenue	Owatonna	MN	55060
Oakdale Motel	1418 S. Oak Avenue	Owatonna	MN	55060
Best Budget Inn	1180 W. Frontage Road	Owatonna	MN	55060
Quality Inn	150 Saint John Drive	Owatonna	MN	55060
Reptile & Amphibian Discovery Zoo (RAD Zoo)	3297 N. County Road 45	Owatonna	MN	55060
Steele County Fairgrounds	1525 S. Cedar Avenue	Owatonna	MN	55060
The Commercial Facilities Sector includes a diverse range of sites that draw large crowds of people for shopping, business, entertainment, or lodging, according to the Cybersecurity and Infrastructure Security Agency.				

Table B-5 Communications				
Facility	Address	City	ST	Zip
KOWZ/KRUE Radio	255 Cedardale Avenue	Owatonna	MN	55060
KRFO Radio	245 18th St. SE	Owatonna	MN	55060
Metronet	213 Oak Ave S	Owatonna	MN	55060
Owatonna Internet Providers	1011 Hoffman Dr NW	Owatonna	MN	55060
Spectrum	641 Bridge St W	Owatonna	MN	55060
Metro by T-Mobile	1232 S Oak St	Owatonna	MN	55060
T-Mobile	660 W Bridge St #200	Owatonna	MN	55060
Verizon	685 W Bridge St #11B	Owatonna	MN	55060
Verizon	1100 Frontage Rd W #100	Owatonna	MN	55060
The communication sector is primarily responsible for protecting sector infrastructure and assets. CISA helps the private sector predict, anticipate, and respond to sector outages, according to the Cybersecurity and Infrastructure Security Agency.				

Table B-6 Critical Manufacturing				
Facility	**Address**	**City**	**ST**	**Zip**
Viracon	800 Park Drive	Owatonna	MN	55060
Bosch Tools	655 Eisenhower Drive	Owatonna	MN	55060
Cybex	151 24th Avenue NW	Owatonna	MN	55060
Daikin	1001 21st Avenue NW	Owatonna	MN	55060
Wenger	555 Park Drive	Owatonna	MN	55060
Amesbury Truth Hardware	700 W. Bridge Street	Owatonna	MN	55060
Stinar, LLC	500 Stinar Way	Blooming Prairie	MN	55917
Metal Services of Blooming Prairie	605 5th Street NE	Blooming Prairie	MN	55917
Minimizer	2701 SW 18th Street	Owatonna	MN	55060
Merdot, Inc	643 3rd Street NE	Blooming Prairie	MN	55917
Crown Cork and Seal	2929 W. Bridge Street	Owatonna	MN	55060
The Cybersecurity and Infrastructure Securing Agency identifies the Critical Manufacturing Sector identified several industries to serve as the core of the sector: Primary Metals Manufacturing, Machinery Manufacturing, Electrical Equipment, Appliance, and Component Manufacturing, Transportation Equipment Manufacturing.				

	Table B-7 Dams				
Facility	**Storage**	**Location**	**City**	**ST**	**Zip**
Anderson Pond	242 Acres	Latitude : 43.954829 Longitude : -93.13345	Bixby	MN	55917
Morehouse Park	150 Acres	Latitude : 44.084029 Longitude : -93.230651	Owatonna	MN	55060
Standke Pond	58 Acres	Latitude : 43.94598 Longitude : -93.174152	Blooming Prairie	MN	55917
Swan Lake	423 Acres	Latitude : 44.123199 Longitude : -93.347161	Medford	MN	55049
Wavrin Wetland	94 Acres	Latitude : 44.148449 Longitude : -93.217547	Clinton Falls	MN	56060
Beaver Lake Outlet	21410 Acres	Latitude : 43.889007 Longitude : -93.343666	Ellendale	MN	56026
The Dams Sector delivers critical water retention and control services in the US, supporting multiple critical infrastructure sectors and industries, according to the Cybersecurity and Infrastructure Security Agency.					

Table B-8 Education Facilities				
Facility	**Address**	**City**	**ST**	**Zip**
Area Learning Center	338 East Main Street	Owatonna	MN	55060
Community Services - Roosevelt Bldg.	515 W Bridge St	Owatonna	MN	55060
Educational Services Center	515 W Bridge St	Owatonna	MN	55060
El Shaddai Private School	509 12th St NE	Owatonna	MN	55060
Kid's Korner EduCare	600 Florence Ave	Owatonna	MN	55060
Owatonna Christian School	265 26th St NE	Owatonna	MN	55060
St. Mary's Catholic School	730 S Cedar	Owatonna	MN	55060
Blooming Prairie Elementary School	123 2nd St NW	Blooming Prairie	MN	55917
Blooming Prairie High School	202 4th Ave NW	Blooming Prairie	MN	55917
Medford Public School	750 2nd Ave. SE	Medford	MN	55049
Lincoln Elementary School - Owatonna	747 Havanna Road	Owatonna	MN	55060
McKinley Elementary School	1050 22nd Street NE	Owatonna	MN	55060
Owatonna Alternative Learning Center	130 East Vine St.	Owatonna	MN	55060
Owatonna High School	1455 18th St SE	Owatonna	MN	55060
Owatonna Middle School	500 15th St. NE	Owatonna	MN	55060
Riverland Community College - Owatonna	965 Alexander Drive Sw	Owatonna	MN	55060
Washington Elementary School - Owatonna	423 14th Street NE	Owatonna	MN	55060
Wilson Elementary School - Owatonna	325 Meadow Lane	Owatonna	MN	55060
Litomysl School	9946 Se 24th Ave	Owatonna	MN	55060
St. Columbanus Catholic School	107 Main St E	Blooming Prairie	MN	55917
Ellendale Public School	600 School St	Ellendale	MN	56026
CHOICE Technical Academy	315 S. Grove Avenue	Owatonna	MN	55060

The Cybersecurity and Infrastructure Security Agency (CISA) also manages the Federal School Safety Clearinghouse and its corresponding website, SchoolSafety.gov, which offers resources from CISA and other federal agencies to help schools prevent, protect against, mitigate, respond to, and recover from emergency situations.

Table B-9 Emergency Services				
Facility	**Address**	**City**	**ST**	**Zip**
Blooming Prairie Ambulance Service	501 4th St SE, Box 363	Blooming Prairie	MN	55917
Blooming Prairie Fire Department	138 Hwy Ave S	Blooming Prairie	MN	55917
Blooming Prairie Police Dept.	Hwy 218 South	Blooming Prairie	MN	55917
Ellendale Ambulance Service	201 3rd Street	Ellendale	MN	56026
Ellendale Fire Department	705 2nd. Street	Ellendale	MN	56026
Mayo Clinic Ambulance	1005 South Cedar Ave	Owatonna	MN	55060
Owatonna Fire Department	107 West Main Street	Owatonna	MN	55060
Owatonna Police Dept.	204 East Pearl	Owatonna	MN	55060
Steele Co. Sheriff's Office	204 East Pearl Street	Owatonna	MN	55060
Steele County Emergency Management	107 West Main Street	Owatonna	MN	55060
Steele County Sheriff	204 E. Pearl	Owatonna	MN	55060
Medford Fire Department	408 2nd Ave SE	Medford	MN	55049
Steele County Emergency Mgmt	630 Florence Ave	Owatonna	MN	55060
The emergency services sector supports millions of skilled personnel with physical and cyber resources, the Emergency Services Sector helps save lives, protect property and the environment, and assist in recovery efforts, according to the Cybersecurity and Infrastructure Security Agency.				

Table B-10 Energy				
Facility	**Address**	**City**	**ST**	**Zip**
Northern Gas Company	7702 Southwest 18 St.	Owatonna	MN	55060
Bixby Substation		Bixby	MN	55917
Blooming Prairie Public Utilities	146 3rd Ave. SE	Blooming Prairie	MN	55060
Blooming Prairie Substation		Blooming Prairie	MN	55917
East Owatonna Substation	1200 Main St E	Owatonna	MN	55917
Mansfield Substation		Bixby	MN	55917
North Storage Facility	280 Bridge St W	Owatonna	MN	55060
Owatonna A	7702 Southwest 18 St.	Owatonna	MN	55917
Owatonna Public Utilities	208 South Walnut Ave.	Owatonna	MN	55060
Owatonna Substation		Owatonna	MN	55060
Pratt Substation		Pratt	MN	55060
Pressure Monitoring Station #30	1810 Kenyon Rd	Owatonna	MN	55060
Propane Plant	350 32nd Ave NW	Owatonna	MN	55060
Regulator Station # 10	133 Vine St W	Owatonna	MN	55060
Regulator Station #11	216 Grove Ave N	Owatonna	MN	55060
Regulator Station #20	1062 Lincoln Ave S	Owatonna	MN	55060
Regulator Station #21	316 School St W	Owatonna	MN	55060
Regulator Station #22	1068 Smith Ave S	Owatonna	MN	55060
Regulator Station #23	1409 Cedar Ave S	Owatonna	MN	55060
Regulator Station #31	2575 4th Ave NW	Owatonna	MN	55060
Regulator Station #32	1895 Cedar Ave N	Owatonna	MN	55060
Regulator Station #33	485 14th St NE	Owatonna	MN	55060
South Storage Facility	309 School St W	Owatonna	MN	55060
South Storage Facility	309 School St W	Owatonna	MN	55060
South Town Border Station	104 18th St SW	Owatonna	MN	55060
Steele-Waseca Coop Electric	2411 W. Bridge St.	Owatonna	MN	55060
West Owatonna - Substation		Owatonna	MN	55060
West Owatonna Regulator Station	3141 Bridge St W	Owatonna	MN	55060
West Owatonna Substation	3141 Bridge St W	Owatonna	MN	55060
West Town Border Station	7702 18th St SW	Owatonna	MN	55060
Northern Gas Company	2412 76th St NW	Medford	MN	55060
MN Energy	15432 52nd Ave SW	Ellendale	MN	55060
Blooming Prairie Electric	146 3rd Ave SE	Blooming Prairie	MN	55049
Blooming Prairie Natural Gas	8301 158th St SE	Blooming Prairie	MN	56026
The energy sector protects a multifaceted web of electricity, oil, and natural gas resources and assets to maintain steady energy supplies and ensure the overall health and wellness of the nation, according to the Cybersecurity and Infrastructure Security Agency.				

Table B-11 Government Facilities				
Facility	**Address**	**City**	**ST**	**Zip**
Medford City Hall	408 2nd Ave Se	Medford	MN	55049
Owatonna Airport	3400 Frontage Rd	Owatonna	MN	55060
Owatonna City Hall	540 West Hills Circle	Owatonna	MN	55060
Owatonna Library	105 Elm Ave	Owatonna	MN	55060
Owatonna National Guard Armory	2323 W Bridge St	Owatonna	MN	55060
Steele County Administration	630 Florence Ave	Owatonna	MN	55060
Steele County Courthouse	111 East Main St.	Owatonna	MN	55060
Steele County Detention Center	2500 Alexander Dr	Owatonna	MN	55060
Steele County Four Season Centre	1525 S Elm Ave.	Owatonna	MN	55060
Steele County Attorney	303 S Cedar Ave	Owatonna	MN	55060
Steele County Highway Department	3000 Hoffman Dr NW	Owatonna	MN	55060
Steele County Annex	635 Florence Ave	Owatonna	MN	55060
Steele County Community Building	1380 Elm Ave S	Owatonna	MN	55060
Blooming Prairie City Hall	138 Hwy Ave S	Blooming Prairie	MN	55917
Blooming Prairie Post Office	450 2nd St Se	Blooming Prairie	MN	55917
Ellendale City Hall	106 6th Ave W	Ellendale	MN	56026

The Government Facilities Sector includes a wide variety of buildings, located in the United States and overseas, that are owned or leased by federal, state, local, and tribal governments, according to the Cybersecurity and Infrastructure Security Agency.

Table B-12 Healthcare and Public Health				
Facility	**Address**	**City**	**ST**	**Zip**
Mayo Health System Mobile Health Clinic	4th St SE	Blooming Prairie	MN	55917
Bonnerup Funeral and Cremation Service - Ellendale Chapel	308 7th Ave.	Ellendale	MN	56026
Brick-Meger Funeral Home	1603 Austin Rd.	Owatonna	MN	55060
St. Benedictine Living Community	2255 30th St NW	Owatonna	MN	55060
Homestead Hospice House (1)	2350 26th St NW	Owatonna	MN	55060
Medford Funeral Home	310 Central Ave.	Medford	MN	55049
Michaelson Funeral Home - Owatonna	1930 Austin Rd.	Owatonna	MN	55060
Owatonna Clinic - Mayo Health System	2200 26th St. NW	Owatonna	MN	55060
Owatonna Hospital Allina	2250 NW 26th Street	Owatonna	MN	55060
Steele County Public Health and Human Services	635 Florence Ave.	Owatonna	MN	55060
Worlein Blooming Prairie Funeral Home	418 Highway Ave. S	Blooming Prairie	MN	55917
Medford Senior Care Center	108 3rd St NE	Medford	MN	55049
Traditions of Owatonna	195 24th Pl NW	Owatonna	MN	55060
Traditions of Owatonna	150 24th St NE	Owatonna	MN	55060
Brooks on St. Paul	2480 St. Paul Rd NE	Owatonna	MN	55060
Countryside Senior Living	650 El Dorado St SE	Owatonna	MN	55060
Valley View Assisted Living	1212 Frontage Road W	Owatonna	MN	55060
Timberdale Trace	334/364 Cedardale Dr SE	Owatonna	MN	55060
Kaplan Woods Care Home	285 Cedardale Dr	Owatonna	MN	55060
Heather House	223 4th St NW	Blooming Prairie	MN	55917
Prairie Manor Care Center	220 3rd St NW	Blooming Prairie	MN	55917
Whispering Oaks Care Center	903 Calvary Ct	Ellendale	MN	56026
Comp Care Urgent Care	1232 S Oak St	Owatonna	MN	55060
Olmsted Medical Center(2)		Owatonna	MN	55060
The Healthcare and Public Health Sector protects all sectors of the economy from hazards such as terrorism, infectious disease outbreaks, and natural disasters, according to Cybersecurity and Infrastructure Security Agency.				
(1) Homestead Hospice House is in the process of closing. (2) Olmsted Medical Center will open in 2024.				

Table B-13 Historical Buildings and Structures				
Facility	**Address**	**City**	**ST**	**Zip**
Northwestern National Bank of Owatonna	101 N. Cedar St	Owatonna	MN	55060
Piper Daniel S. House	County Hwy 45	Medford	MN	55049
Administration Building Minnesota State Public School for Dependent and Neglected Children	Bounded by West Hills Drive, State Ave, and Florence Ave	Owatonna	MN	55060
Abbott Ezra House	345 E. Broadway	Owatonna	MN	55060
Owatonna Free Public Library	105 N. Elm Street	Owatonna	MN	55060
Steele County Courthouse	139 E. Vine Street	Owatonna	MN	55060
Adair Doctor John H. House	322 E. Vine Street	Owatonna	MN	55060
Pillsbury Academy Campus Historic District	Grove Avenue/Main Street	Owatonna	MN	55060
Blooming Prairie Commercial Historic District	Main St between Highway Ave and 2nd Ave NE	Blooming Prairie	MN	55917
Bridge No. L-5573	Twp. Rd 95 over Straight River east of US 65 Clinton Falls Township	Owatonna	MN	55060
Owatonna City and Fireman's Hall	107 W. Main Street	Owatonna	MN	55060
Owatonna Commercial Historic District	Bounded by N. Cedar Ave W., E. Broadway, W. Bridge, & W. Main Streets	Owatonna	MN	55060
According to North American Industry Classification System, industries in the Museums, Historical Sites, and Similar Institutions subsector engage in the preservation and exhibition of objects, sites, and natural wonders of historical, cultural, and/or educational value.				

Information obtained from National Register Listings in Minnesota / Minnesota State Historic Preservation Office (mn.gov)

Table B-14 Postal and Shipping				
Facility	**Address**	**City**	**ST**	**Zip**
United States Postal Service	450 2nd St SE	Blooming Prairie	MN	55917
United States Postal Service	514 S 2nd St	Ellendale	MN	56026
United States Postal Service	9064 SW 37th Ave	Hope	MN	56046
United States Postal Service	221 N Main St	Medford	MN	55049
United States Postal Service	209 E Broadway St	Owatonna	MN	55060
FedEx	1060 26th Pl NW	Owatonna	MN	55060
UPS	3350 Park Dr	Owatonna	MN	55060
Postal and Shipping moves about 720 million letters and packages each day and includes large integrated carriers, regional and local courier services, mail services, mail management firms, and chartered and delivery services. According to the Cybersecurity and Infrastructure Security Agency, postal and shipping is one of the Transportation Systems Sector key subsectors.				

Table B-15 Retail Trade				
Facility	**Address**	**City**	**ST**	**Zip**
Walmart Supercenter	1130 W Frontage Road	Owatonna	MN	55060
Target	301 Park Drive	Owatonna	MN	55060
Lowes	1280 21st Avenue NW	Owatonna	MN	55060
Cash Wise	496 W. North Street	Owatonna	MN	55060
Hy-Vee	1620 S. Cedar Avenue	Owatonna	MN	55060
Vandals	237 Highway Avenue S	Blooming Prairie	MN	55917
Lerbergs Foods	120 5th Avenue	Ellendale	MN	56026
Cabelas	3900 Cabela Drive	Owatonna	MN	55060
Aldi	2414 Hoffman Drive	Owatonna	MN	55060
Fareway Foods	831 S. Oak Avenue	Owatonna	MN	55060
Fleet Farm	2121 W. Bridge Street	Owatonna	MN	55060
Holiday Gas Station	659 W. Bridge Street	Owatonna	MN	55060
Holiday Gas Station	330 W. North Street	Owatonna	MN	55060
Hy-Vee Gas	1720 S. Cedar Avenue	Owatonna	MN	55060
Kwik Trip Gas	2270 NW 46th Street	Owatonna	MN	55060
Kwik Trip Gas	410 Hoffman Drive	Owatonna	MN	55060
Kwik Trip Gas	1075 W. Frontage Road	Owatonna	MN	55060
Kwik Trip Gas	1220 S. Oak Avenue	Owatonna	MN	55060
Kwik Trip Gas	135 Landmark Drive NE	Owatonna	MN	55060
Kwik Trip Gas	320 Mineral Springs Road	Owatonna	MN	55060
Casey's Gas	590 State Avenue	Owatonna	MN	55060
Casey's Gas	475 18th Street SE	Owatonna	MN	55060
Casey's Gas	3959 Hwy 30 W	Ellendale	MN	56026
Casey's Gas	101 Riverview Court	Medford	MN	55049
Casey's Gas	328 Hwy Avenue S.	Blooming Prairie	MN	55917
Cennex	712 N. Cedar Avenue	Owatonna	MN	55060
Cennex	347 Hwy Avenue S.	Blooming Prairie	MN	55917
Anhorns Gas and Tire	216 S. Main Street	Medford	MN	55049
BP Gas	401 N. Cedar Avenue	Owatonna	MN	55060
Auto Zone	1055 State Avenue	Owatonna	MN	55060
Carquest	114 E. Rose Street	Owatonna	MN	55060
O'Reilly Auto Parts	755 State Avenue	Owatonna	MN	55060
NAPA	122 W. Pearl Street	Owatonna	MN	55060
NAPA	441 4th Street SE	Blooming Prairie	MN	55917

According to the North American Industry Classification System, the Retail Trade sector comprises establishments engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. This includes motor vehicle and parts dealers; clothing and clothing accessories stores; food and beverage stores; and gasoline stores.

Table B-16 Transportation Systems				
Facility	**Address**	**City**	**ST**	**Zip**
ABF Freight System	1870 State Ave NW	Owatonna	MN	55060
CPKC & UP RR - MSAS 119	Riverside Ave	Owatonna	MN	55060
CPKC & UP RR MSAS 118	Oak Ave	Owatonna	MN	55060
CPKC & UP RR, CR 80		Owatonna	MN	55060
CPKC & UP RR; CSAH 56	Hoffman Dr	Owatonna	MN	55060
Greyhound Bus Transportation (Stop only, no station)	735 W Bridge St	Owatonna	MN	55060
CPKC & UP RR, MSAS 136		Owatonna	MN	55060
Jefferson Lines Bus Service (Passenger stop only, no station)	735 W. Bridge Street	Owatonna	MN	55060
SMART Transit	3325 9th Street NW	Owatonna	MN	55060
Yellow Freight - Owatonna	200 32nd Ave NW	Owatonna	MN	55060
Owatonna Bus Company	1145 Park Drive	Owatonna	MN	55060
Owatonna Degner Regional Airport	3400 W. Frontage Road	Owatonna	MN	55060
The Transportation Systems Sector is identified as the quick, safe, and secure moving of people and goods through the country and overseas. According to the Cybersecurity and Infrastructure Security Agency, the Postal and Shipping Sector was consolidated within the Transportation Systems Sector in 2013 under Presidential Policy Directive 21. Subsectors include aviation, highway and motor carrier, mass transit and passenger rail, freight rail, and postal and shipping.				

Table B-17 Water				
Facility	**Address**	**City**	**ST**	**Zip**
Blooming Prairie Municipal Utilities	333 2nd Ave NE	Blooming Prairie	MN	55917
Ellendale Municipal Utilities	106 6th Ave W	Ellendale	MN	56026
Medford Water Supply	209 1ST ST SW	Medford	MN	55049
Owatonna Wastewater Treatment	1200 Industrial Road	Owatonna	MN	55060
Academy Street Tower	337 Academy St	Owatonna	MN	55060
Booster #7	1604 Austin Rd	Owatonna	MN	55060
Central Water Works	309 School St W	Owatonna	MN	55060
Circulating Pump Station	3175 County Rd 45 N	Owatonna	MN	55060
Well #10	311 School St W	Owatonna	MN	55060
Well #3	208 Walnut Ave S	Owatonna	MN	55060
Well #1	349 School St W	Owatonna	MN	55060
Well #5	1115 Park Dr	Owatonna	MN	55060
Well #6	440 Dunnell Dr	Owatonna	MN	55060
Well #7	1600 Austin Rd	Owatonna	MN	55060
Well #7 Tower	1602 Austin Rd	Owatonna	MN	55060
Well #8	1390 Rose St E	Owatonna	MN	55060
Well #9	2595 Hemlock Ave	Owatonna	MN	55060
Well #9 Tower	1395 26th St NE	Owatonna	MN	55060
Well #8 Tower	1750 Rose St E	Owatonna	MN	55060
14th St Tower	306 14th St NE	Owatonna	MN	55060
Well #4	349 School St W	Owatonna	MN	55060
Well #2	349 School St W	Owatonna	MN	55060
Protecting the systems that provide water is of vital importance to the stability and health of the nation and is the mission of the Water and Wastewater Systems Sector, according to Cybersecurity and Infrastructure Security Agency.				

Table B-18 Mobile Home Parks				
Facility	**Address**	**City**	**ST**	**Zip**
Lazy U Mobile Home Park	4100 NW 66th St.	Medford	MN	55049
Colonial Manor	100 Clark Dr.	Owatonna	MN	55060
Skyline Gardens	2126 3rd Ave. NW	Owatonna	MN	55060
Mobile home parks are included due to the inherent risk these types of structures can suffer from severe weather events.				

Table B-19 RV and Camping Resorts				
Facility	**Address**	**City**	**ST**	**Zip**
Brookside Campground	52482 320th Ave,	Blooming Prairie	MN	55917
Crystal Springs RV Resort	15649 SW 35th Ave.	Ellendale	MN	55026
Hope Oak Knoll Campground	9545 County Road 3	Owatonna	MN	55060
Rice Lake State Park	8485 Rose St.	Owatonna	MN	55060
Riverview Campground	2554 SW 28th St	Owatonna	MN	55060
RV and Camping Resorts are included due to the inherent risk camping tents and recreational vehicles can be affected by severe weather events. In some locations, flash flooding may be also be an enhanced risk. Customers from out of the area may not be familiar with the local hazards.				

Appendix C
Steele County Hazard Events

Table of Contents

Table C - 1. All tornadoes recorded by the NCEI, 1950-December 2022					
Location or County	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**
Blooming Prairie	12/15/2021	EF0	0	0	$105,000
Medford	5/19/2021	EF0	0	0	0
Meriden	5/19/2021	Funnel Cloud	0	0	0
Meriden	5/19/2021	Funnel Cloud	0	0	0
Meriden	5/19/2021	Funnel Cloud	0	0	0
Lemond	8/13/2019	Funnel Cloud	0	0	0
Lemond	8/13/2019	EF0	0	0	$100,000
Owatonna	6/17/2019	EF0	0	0	0
Meriden	9/20/2018	EF1	0	0	0
Meriden	9/20/2018	EF1	0	0	0
Ellendale	3/6/2017	EF0	0	0	0
Ellendale	6/17/2010	EF2	0	0	0
Ellendale	6/17/2010	EF1	0	0	0
Blooming Prairie	6/17/2010	EF3	0	0	0
Blooming Prairie	6/17/2010	EF2	0	1	0
Blooming Prairie	6/17/2010	EF0	0	0	0
Medford	7/18/2002	F1	0	0	0
Hope	5/1/2001	F0	0	0	0
Merton	8/9/1999	F0	0	0	0
Blooming Prairie	7/20/1997	F0	0	0	0
Morristown	9/6/1995	F0	0	0	0
Clinton Falls	9/6/1995	F0	0	0	0
Steele Co.	5/24/1989	F0	0	0	0
Steele Co.	7/16/1984	F1	0	0	$25,000
Steele Co.	6/7/1984	F1	0	0	$2,500,000
Steele Co.	5/17/1982	F3	0	0	$250,000
Steele Co.	5/17/1982	F3	0	0	$250,000
Steele Co.	7/23/1973	F0	0	0	$2,500
Steele Co.	5/15/1968	F1	0	0	$25,000
Steele Co.	4/30/1967	F1	0	0	$25,000,000
Steele Co.	4/30/1967	F4	2	0	$25,000,000
Steele Co.	5/22/1962	F1	0	0	$250,000
Highest Value Property Damage					**$25,000,000**

Data obtained from:
Storm Events Database - Search Results
National Centers for Environmental Information (noaa.gov)

Table C - 2. All severe hailstorm events recorded by the NCEI, 1950-December 2022					
Location or County	**Date**	**Size (inches)**	**Deaths**	**Injuries**	**Property Damage**
Hope	5/15/2017	1.75	0	0	0
Owatonna	8/31/2018	0.88	0	0	0
Lemond	8/13/2019	1.75	0	0	0
Lemond	8/10/2020	1.0	0	0	0
Merton	8/10/2020	1.50	0	0	0
Merton	9/5/2020	1.25.	0	0	0
Owatonna	4/12/2022	1.0	0	0	0
Owatonna	4/12/2022	1.0	0	0	0
Ellendale	5/19/2022	1.75	0	0	0
Owatonna	6/13/2022	1.0	0	0	0
Owatonna	6/13/2022	1.25	0	0	0
Meriden	8/18/2014	0.88	0	0	0
Ellendale	5/7/2014	0.75	0	0	0
Ellendale	5/21/2011	0.88	0	0	0
Ellendale	5/10/2011	1	0	0	0
Blooming Prairie	9/21/2010	0.88	0	0	0
Owatonna	9/15/2010	0.75	0	0	0
Medford	7/24/2009	1.25	0	0	0
Blooming Prairie	6/17/2009	3.25	0	0	0
Blooming Prairie	6/17/2009	1.75	0	0	0
Meriden	6/17/2009	2.75	0	0	0
Owatonna	6/17/2009	0.88	0	0	0
Owatonna	6/17/2009	1.5	0	0	0
Owatonna	8/11/2007	0.75	0	0	0
Owatonna	6/21/2007	1	0	0	0
Owatonna	6/20/2007	1	0	0	0
Steele Center	3/21/2007	1.25	0	0	0
Medford	8/24/2006	0.75	0	0	0
Meriden	7/19/2006	1	0	0	0
Owatonna	7/19/2006	0.88	0	0	0
Deerfield	7/19/2006	1.75	0	0	0
Owatonna	7/19/2006	0.88	0	0	0
Merton	6/7/2005	0.75	0	0	0
Steele Center	3/30/2005	0.75	0	0	0
Bixby	6/11/2004	0.75	0	0	0
Lemond	7/30/2002	0.75	0	0	0
Blooming Prairie	7/30/2002	0.75	0	0	0
Owatonna	6/12/2002	0.88	0	0	0
Owatonna	5/27/2002	0.75	0	0	0

Table C - 2. Continued					
Location or County	**Date**	**Size (inches)**	**Deaths**	**Injuries**	**Property Damage**
Hope	5/27/2002	0.88	0	0	0
Blooming Prairie	5/27/2002	1	0	0	0
Owatonna	6/18/2001	1	0	0	0
Owatonna	5/9/2001	0.75	0	0	0
Meriden	5/1/2001	0.88	0	0	0
Owatonna	9/7/1999	1.75	0	0	0
Owatonna	9/7/1999	1.75	0	0	0
Blooming Prairie	6/20/1998	0.75	0	0	0
Owatonna	3/29/1998	1	0	0	0
Blooming Prairie	3/27/1998	0.75	0	0	0
Merton	6/29/1996	0.75	0	0	0
Medford	9/6/1995	1	0	0	0
Merton	9/6/1995	1.75	0	0	0
Owatonna	5/30/1994	0.75	0	0	$500
Steele Co.	8/4/1989	1.75	0	0	0
Steele Co.	8/21/1987	1.75	0	0	0
Steele Co.	4/3/1981	1.75	0	0	0
Steele Co.	7/15/1978	0.75	0	0	0
Steele Co.	5/11/1973	1.75	0	0	0
Steele Co.	5/15/1968	1.75	0	0	0
Steele Co.	6/15/1967	1.75	0	0	0
Steele Co.	6/8/1967	0.75	0	0	0
Steele Co.	10/14/1966	1.75	0	0	0
Steele Co.	8/25/1965	1	0	0	0
Highest Value Property Damage					**$500**

Data obtained from:
Storm Events Database - Search Results
National Centers for Environmental Information (noaa.gov)

Table C - 3. All severe thunderstorm wind events recorded by NCEI, 1950-December 2023						
Location or County	Date	Type	Magnitude (knots)	Deaths	Injuries	Property Damage
Bixby	7/23/2022	Thunderstorm Wind	56	0	0	0
Owatonna Airport	5/11/2022	Thunderstorm Wind	53	0	0	0
Steele County	12/15/2021	Thunderstorm Wind	65	0	0	0
Steele County	12/15/2021	High Wind	56	0	0	0
Steele County	6/11/2021	High Wind	54	0	0	0
Steele County	4/6/2021	High Wind	56	0	0	$50,000
Hope	9/24/2019	Thunderstorm Wind	57	0	0	0
Owatonna	7/20/2019	Thunderstorm Wind	52	0	0	0
Ellendale	7/20/2019	Thunderstorm Wind	52	0	0	0
Steele County	8/31/2018	Strong Wind	43	0	0	$10,000
Ellendale	8/20/2018	Thunderstorm Wind	50	0	0	0
Owatonna	9/4/2017	Thunderstorm Wind	56	0	0	0
Owatonna	8/1/2017	Thunderstorm Wind	52	0	0	0
Owatonna	07/19/2017	Thunderstorm Wind	56	0	0	0
Medford	06/12/2017	Thunderstorm Wind	50	0	0	0
Lemond	6/3/2017	Thunderstorm Wind	56	0	0	0
Merton	6/22/2016	Thunderstorm Wind	52	0	0	0
Ellendale	5/26/2016	Thunderstorm Wind	56	0	0	0
Lemond	7/24/2015	Thunderstorm Wind	52	0	0	0
Hope	6/17/2015	Thunderstorm Wind	52	0	0	0
Ellendale	6/17/2015	Thunderstorm Wind	52	0	0	0
Owatonna Airport	8/18/2014	Thunderstorm Wind	50	0	0	0
Lemond	6/16/2014	Thunderstorm Wind	52	0	0	0
Hope	6/16/2014	Thunderstorm Wind	52	0	0	0
Hope	6/16/2014	Thunderstorm Wind	52	0	0	0
Hope	6/16/2014	Thunderstorm Wind	54	0	0	0
Bixby	5/19/2013	Thunderstorm Wind	52	0	0	0
Lemond	9/4/2012	Thunderstorm Wind	50	0	0	0
Ellendale	7/1/2011	Thunderstorm Wind	52	0	0	0
Steele (Zone)	10/26/2010	High Wind	55	0	0	0
Owatonna	9/15/2010	Thunderstorm Wind	52	0	0	$5,000
Ellendale	8/13/2010	Thunderstorm Wind	56	0	0	$50,000
Ellendale	6/17/2010	Thunderstorm Wind	55	0	0	0
Steele (Zone)	10/26/2008	High Wind	50	0	0	0

Table C - 3. Continued (2 of 3)						
Location or County	Date	Type	Magnitude (knots)	Deaths	Injuries	Property Damage
Owatonna	7/31/2008	Thunderstorm Wind	62	0	0	0
Owatonna	7/31/2008	Thunderstorm Wind	63	0	0	0
Medford	7/31/2008	Thunderstorm Wind	64	0	0	0
Owatonna	7/31/2008	Thunderstorm Wind	52	0	0	0
River Pt	7/17/2008	Thunderstorm Wind	54	0	0	0
Ellendale	5/2/2008	Thunderstorm Wind	55	0	0	0
Owatonna	8/11/2007	Thunderstorm Wind	50	0	0	0
Ellendale	7/3/2007	Thunderstorm Wind	60	0	0	0
Steele (Zone)	5/6/2007	High Wind	50	0	0	0
Medford	8/24/2006	Thunderstorm Wind	55	0	0	0
Steele Center	7/13/2006	Thunderstorm Wind	57	0	0	0
Bixby	7/13/2006	Thunderstorm Wind	57	0	0	0
Owatonna	6/24/2006	Thunderstorm Wind	55	0	0	0
Meriden	6/29/2005	Thunderstorm Wind	52	0	0	0
Owatonna	6/8/2005	Thunderstorm Wind	57	0	0	0
Steele (Zone)	12/12/2004	High Wind	40	0	0	0
Ellendale	10/29/2004	Thunderstorm Wind	52	0	0	0
Hope	10/29/2004	Thunderstorm Wind	55	0	0	0
Owatonna	10/29/2004	Thunderstorm Wind	55	0	0	0
Steele (Zone)	4/18/2004	High Wind	52	0	0	0
Owatonna	7/4/2003	Thunderstorm Wind	52	0	0	0
Owatonna	8/3/2002	Thunderstorm Wind	50	0	0	0
Owatonna	7/28/2002	Thunderstorm Wind	52	0	0	0
Owatonna	6/12/2001	Thunderstorm Wind	65	0	0	$10,000
Steele (Zone)	4/7/2001	High Wind	69	0	0	0
Steele (Zone)	4/5/2000	High Wind	64	0	0	0
Blooming Prairie	6/5/1999	Thunderstorm Wind	63	0	0	0
Steele (Zone)	3/17/1999	High Wind	55	0	0	0
Steele (Zone)	11/10/1998	High Wind	47	0	0	0
Owatonna	6/27/1998	Thunderstorm Wind	58	0	0	0
Owatonna Airport	6/27/1998	Thunderstorm Wind	54	0	0	0
Ellendale	6/27/1998	Thunderstorm Wind	61	0	0	0
Owatonna	6/26/1998	Thunderstorm Wind	50	0	0	0
Blooming Prairie	7/17/1997	Thunderstorm Wind	55	0	0	0

Table C - 3. Continued (3 of 3)						
Location or County	**Date**	**Type**	**Magnitude (knots)**	**Deaths**	**Injuries**	**Property Damage**
Owatonna	7/13/1997	Thunderstorm Wind	58	0	0	0
Steele (Zone)	4/6/1997	High Wind	51	0	0	0
Steele (Zone)	10/29/1996	High Wind	64	0	0	0
Owatonna	8/6/1996	Thunderstorm Wind	52	0	0	0
Owatonna	6/5/1996	Thunderstorm Wind	50	0	0	0
Owatonna	5/19/1996	Thunderstorm Wind	70	0	0	$5,000,000
Steele (Zone)	2/10/1996	High Wind	48	0	0	0
Steele (Zone)	5/30/1994	Thunderstorm Wind	0	0	0	$500
Steele (Zone)	4/29/1991	Thunderstorm Wind	0	0	0	0
Steele (Zone)	4/22/1991	Thunderstorm Wind	0	0	0	0
Steele (Zone)	5/23/1989	Thunderstorm Wind	61	0	0	0
Steele (Zone)	6/14/1988	Thunderstorm Wind	57	0	0	0
Steele (Zone)	7/11/1987	Thunderstorm Wind	0	0	0	0
Steele (Zone)	4/26/1986	Thunderstorm Wind	0	0	0	0
Steele (Zone)	4/26/1984	Thunderstorm Wind	0	0	0	0
Steele (Zone)	4/26/1984	Thunderstorm Wind	63	0	0	0
Steele (Zone)	6/30/1983	Thunderstorm Wind	0	0	0	0
Steele (Zone)	6/26/1979	Thunderstorm Wind	70	0	0	0
Steele (Zone)	6/16/1979	Thunderstorm Wind	0	0	0	0
Steele (Zone)	6/4/1977	Thunderstorm Wind	0	0	0	0
Steele (Zone)	6/20/1974	Thunderstorm Wind	0	0	0	0
Steele (Zone)	4/20/1974	Thunderstorm Wind	0	0	0	0
Steele (Zone)	8/29/1970	Thunderstorm Wind	0	0	0	0
Steele (Zone)	7/13/1969	Thunderstorm Wind	65	0	0	0
Steele (Zone)	7/13/1969	Thunderstorm Wind	0	0	0	0
Steele (Zone)	7/13/1969	Thunderstorm Wind	0	0	0	0
Steele (Zone)	5/28/1969	Thunderstorm Wind	0	0	0	0
Steele (Zone)	7/7/1957	Thunderstorm Wind	0	0	0	0
Highest Value Property Damage						**$5,000,000**

Data obtained from:
Storm Events Database - Search Results
National Centers for Environmental Information (noaa.gov)

Table C - 4. All flood events recorded by the NCEI, 1997-December 2022					
Location or County	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**
Owatonna	6/13/2022	Flash Flood	0	0	0
Owatonna Airport	7/5/2019	Flash Flood	0	0	0
Meriden	9/22/2016	Flood	0	0	0
Owatonna Airport	6/18/2014	Flood	0	0	$2,400,000
Pratt	6/16/2014	Flash Flood	0	0	0
Pratt	6/16/2014	Flash Flood	0	0	0
Blooming Prairie	7/15/2011	Flash Flood	0	0	0
Merton	9/23/2010	Flash Flood	0	0	0
Ellendale	9/23/2010	Flood	0	0	$28,400,000
Owatonna	6/26/2010	Flash Flood	0	0	0
Merton	6/17/2010	Flash Flood	0	0	0
Owatonna	10/1/2007	Flash Flood	0	0	$3,000,000
Owatonna	9/30/2007	Flash Flood	0	0	0
Owatonna	8/18/2007	Flash Flood	0	0	$2,500,000
Owatonna	6/9/2006	Flash Flood	0	0	$500,000
Owatonna	9/24/2005	Flash Flood	0	0	0
Countywide	9/14/2004	Flash Flood	0	0	0
Steele (zone)	6/14/2004	Flood	0	0	$2,800,000
Steele (zone)	6/10/2004	Flood	0	0	0
Blooming Prairie	7/21/2002	Flash Flood	0	0	0
Steele (zone)	4/1/2001	Flood	0	0	0
Blooming Prairie	7/8/2000	Flood	0	0	0
Blooming Prairie	8/18/1999	Flood	0	0	0
Medford	8/14/1997	Flash Flood	0	0	0
Highest Value Property Damage					**$28,400,000**

Data obtained from:
Storm Events Database - Search Results
National Centers for Environmental Information (noaa.gov)

Table C - 5. All severe winter weather events recorded by NCEI, 1996-December 2022					
Location or County	Date	Type	Deaths	Injuries	Property Damage
Steele (Zone)	1/14/2022	Winter Storm	0	0	0
Steele (Zone)	12/10/2021	Winter Storm	0	0	0
Steele (Zone)	3/15/2021	Winter Storm	0	0	0
Steele (Zone)	1/14/2021	Winter Storm	0	0	0
Steele (Zone)	12/23/2020	Blizzard	0	0	0
Steele (Zone)	4/12/2020	Winter Storm	0	0	0
Steele (Zone)	2/9/2020	Winter Storm	0	0	0
Steele (Zone)	1/18/2020	Blizzard	0	0	0
Steele (Zone)	1/17/2020	Winter Storm	0	0	0
Steele (Zone)	11/26/2019	Winter Storm	0	0	0
Steele (Zone)	4/10/2019	Winter Storm	0	0	0
Steele (Zone)	2/24/2019	Blizzard	0	0	0
Steele (Zone)	1/27/2019	Winter Storm	0	0	0
Steele (Zone)	1/18/2019	Winter Storm	0	0	0
Steele (Zone)	12/1/2018	Winter Storm	0	0	0
Steele (Zone)	4/14/2018	Winter Storm	0	0	0
Steele (Zone)	4/3/2018	Winter Storm	0	0	0
Steele (Zone)	3/4/2018	Winter Storm	0	0	0
Steele (Zone)	1/22/2018	Blizzard	0	0	0
Steele (Zone)	3/12/2017	Winter Storm	0	0	0
Steele (Zone)	2/23/2017	Winter Storm	0	0	0
Steele (Zone)	1/24/2017	Winter Storm	0	0	0
Steele (Zone)	3/23/2016	Winter Storm	0	0	0
Steele (Zone)	2/2/2016	Winter Storm	0	0	0
Steele (Zone)	12/28/2015	Winter Storm	0	0	0
Steele (Zone)	3/22/2015	Winter Storm	0	0	0
Steele (Zone)	1/8/2015	Blizzard	0	0	0
Steele (Zone)	11/26/2014	Winter Storm	0	0	0
Steele (Zone)	3/4/2014	Heavy Snow	0	0	0
Steele (Zone)	2/26/2014	Blizzard	0	0	0
Steele (Zone)	2/20/2014	Blizzard	0	0	0
Steele (Zone)	1/26/2014	Blizzard	0	0	0
Steele (Zone)	1/16/2014	Blizzard	0	0	0

Table C - 5. Continued (2 of 3)					
Location or County	Date	Type	Deaths	Injuries	Property Damage
Steele (Zone)	4/11/2013	Winter Storm	0	0	0
Steele (Zone)	3/10/2013	Winter Storm	0	0	0
Steele (Zone)	3/4/2013	Winter Storm	0	0	0
Steele (Zone)	2/21/2013	Heavy Snow	0	0	0
Steele (Zone)	1/27/2013	Winter Storm	0	0	0
Steele (Zone)	12/19/2012	Winter Storm	0	0	0
Steele (Zone)	2/20/2011	Winter Storm	0	0	0
Steele (Zone)	12/20/2010	Winter Storm	0	0	0
Steele (Zone)	12/15/2010	Winter Storm	0	0	0
Steele (Zone)	12/10/2010	Blizzard	0	0	0
Steele (Zone)	12/3/2010	Winter Storm	0	0	0
Steele (Zone)	2/7/2010	Winter Storm	0	0	0
Steele (Zone)	12/23/2009	Winter Storm	0	0	0
Steele (Zone)	12/8/2009	Blizzard	0	0	0
Steele (Zone)	1/12/2009	Winter Storm	0	0	0
Steele (Zone)	12/20/2008	Winter Storm	0	0	0
Steele (Zone)	12/9/2008	Winter Storm	0	0	0
Steele (Zone)	1/29/2008	Blizzard	0	0	0
Steele (Zone)	12/1/2007	Winter Storm	0	0	0
Steele (Zone)	3/1/2007	Winter Storm	0	0	0
Steele (Zone)	2/23/2007	Winter Storm	0	0	0
Steele (Zone)	1/14/2007	Heavy Snow	0	0	0
Steele (Zone)	11/10/2006	Heavy Snow	0	0	0
Steele (Zone)	3/12/2006	Winter Storm	0	0	0
Steele (Zone)	2/15/2006	Winter Storm	0	0	0
Steele (Zone)	12/13/2005	Heavy Snow	0	0	0
Steele (Zone)	3/18/2005	Winter Storm	0	0	0
Steele (Zone)	2/19/2005	Winter Storm	0	0	0
Steele (Zone)	1/21/2005	Blizzard	0	0	0
Steele (Zone)	1/1/2005	Winter Storm	0	0	0
Steele (Zone)	3/5/2004	Winter Storm	0	0	0
Steele (Zone)	2/1/2004	Winter Storm	0	0	0
Steele (Zone)	1/24/2004	Winter Storm	0	0	0
Steele (Zone)	12/9/2003	Winter Storm	0	0	0

Table C - 5. Continued (3 of 3)					
Location or County	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**
Steele (Zone)	2/11/2003	Blizzard	0	0	0
Steele (Zone)	3/14/2002	Winter Storm	0	0	0
Steele (Zone)	3/8/2002	Winter Storm	0	0	0
Steele (Zone)	2/1/2002	Winter Storm	0	0	0
Steele (Zone)	1/31/2002	Winter Storm	0	0	0
Steele (Zone)	2/24/2001	Winter Storm	0	0	0
Steele (Zone)	1/29/2001	Winter Storm	0	0	0
Steele (Zone)	12/28/2000	Winter Storm	0	0	0
Steele (Zone)	12/18/2000	Winter Storm	0	0	0
Steele (Zone)	1/19/2000	Heavy Snow	0	0	0
Steele (Zone)	10/1/1999	Winter Weather	0	0	0
Steele (Zone)	3/8/1999	Winter Storm	0	0	0
Steele (Zone)	1/22/1999	Winter Storm	0	0	0
Steele (Zone)	1/17/1999	Winter Storm	0	0	0
Steele (Zone)	1/1/1999	Heavy Snow	0	0	0
Steele (Zone)	1/4/1998	Ice Storm	0	0	0
Steele (Zone)	3/13/1997	Winter Storm	0	0	0
Steele (Zone)	1/15/1997	Blizzard	0	0	0
Steele (Zone)	12/23/1996	Winter Storm	0	0	0
Steele (Zone)	12/14/1996	Heavy Snow	0	0	0
Steele (Zone)	11/22/1996	Heavy Snow	0	0	0
Steele (Zone)	11/20/1996	Heavy Snow	0	0	0
Steele (Zone)	11/14/1996	Ice Storm	0	0	0
Steele (Zone)	3/23/1996	Heavy Snow	0	0	0
Steele (Zone)	1/28/1996	Blizzard	0	0	0
Steele (Zone)	1/25/1996	Heavy Snow	0	0	0
Steele (Zone)	1/17/1996	Heavy Snow	0	0	0
Steele (Zone)	1/10/1996	Heavy Snow	0	0	0
Highest Value Property Damage					**$0**

Data obtained from:
Storm Events Database - Search Results
National Centers for Environmental Information (noaa.gov)

Table C - 6. All severe cold/wind chill events recorded by NCEI, 1996-December 2022					
Location or County	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**
Steele (Zone)	2/14/2021	Extreme Cold/Wind Chill	0	0	0
Steele (Zone)	2/13/2020	Extreme Cold/Wind Chill	0	0	0
Steele (Zone)	1/29/2019	Extreme Cold/Wind Chill	0	0	0
Steele (Zone)	1/1/2018	Extreme Cold/Wind Chill	0	0	0
Steele (Zone)	12/18/2016	Extreme Cold/Wind Chill	0	0	0
Steele (Zone)	1/17/2016	Extreme Cold/Wind Chill	0	0	0
Steele (Zone)	1/27/2014	Extreme Cold/Wind Chill	0	0	0
Steele (Zone)	1/23/2014	Extreme Cold/Wind Chill	0	0	0
Steele (Zone)	1/5/2014	Extreme Cold/Wind Chill	0	0	0
Steele (Zone)	1/14/2009	Cold/Wind Chill	0	0	0
Steele (Zone)	2/19/2008	Cold/Wind Chill	0	0	0
Steele (Zone)	2/10/2008	Cold/Wind Chill	0	0	0
Steele (Zone)	1/15/1997	Cold/Wind Chill	0	0	0
Steele (Zone)	12/24/1996	Cold/Wind Chill	0	0	0
Steele (Zone)	2/1/1996	Cold/Wind Chill	0	0	0
Steele (Zone)	1/31/1996	Cold/Wind Chill	0	0	0
Steele (Zone)	1/18/1996	Cold/Wind Chill	0	0	0
Highest Value Property Damage					**$0**

Data obtained from:
Storm Events Database - Search Results
National Centers for Environmental Information (noaa.gov)

Table C - 7. All extreme heat/heat events recorded by the NCEI, 1996-December 2022					
Location or County	**Date**	**Type**	**Deaths**	**Injuries**	**Property Damage**
Steele (Zone)	6/20/2022	Excessive Heat	0	0	0
Steele (Zone)	7/21/2016	Excessive Heat	0	0	0
Steele (Zone)	8/25/2013	Excessive Heat	0	0	0
Steele (Zone)	7/18/2011	Excessive Heat	0	0	0
Steele (Zone)	7/30/2006	Heat	0	0	0
Steele (Zone)	8/4/2001	Heat	0	0	0
Steele (Zone)	8/1/2001	Heat	0	0	0
Steele (Zone)	7/30/2001	Heat	0	0	0
Steele (Zone)	7/29/1999	Heat	0	0	0
Steele (Zone)	7/23/1999	Heat	0	0	0
Highest Value Property Damage					**$0**

Data obtained from:
Storm Events Database - Search Results
National Centers for Environmental Information (noaa.gov)

Table C - 8. All lightning events recorded by the NCEI, 1996-March 2017				
Location or County	**Date**	**Deaths**	**Injuries**	**Property Damage**
Havana	6/6/2006	0	0	$1,000,000
Highest Value Property Damage				**$1,000,000**

Data obtained from:
Storm Events Database - Search Results
National Centers for Environmental Information (noaa.gov)

Table C – 9. Steele County Census Blocks with the Greatest Estimated Losses in the 100-Year Floodplain		
Census Block Number	**Total Estimated Loss**	**City**
271479604002000	$5,066,000	Owatonna
271479606002005	$3,746,000	Owatonna
271479602002002	$1,845,000	Owatonna
271479602002016	$1,561,000	Owatonna
271479602002018	$1,440,000	Owatonna

https://water.weather.gov/ahps2/hydrograph.php?wfo=mpx&gage=frbm5

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Appendix D
Plan Approval

Resolutions to be added to Appendix D by Steele County following final approval of plan by FEMA.

Appendix E
Steering Committee Meetings

Table of Contents

CAER Meeting Minutes
January 18, 2023

Location: Steele County Admin Building

Call to Order: Meeting called to order at 3:32pm by Tom Karnauskas. Tom asked everyone to introduce themselves. One note to the agenda, this is not an annual meeting.

Attendees: Tom Karnauskas, Jerry Ibberson, Kristen Sailer, Thad Rosenberg, Ed Hoffman, Dennis Hollatz, Bonnie Johnson, Michele Heaver, Jamie Vogt, and Annette Duncan.

Routine Approvals:
1) Financial Report – Kristen reported no expenses or deposits since the last meeting.
2) Secretary's Report - Motion was made by Jerry to approve the minutes from 11/16/2022. Second made by Bonnie. Motion passed.

Old Business:
1) Multi – Hazard Mitigation Plan – Kristen brought everyone's attention to the (2) documents sent out with the agenda. She is looking for feedback from the team. Steele County's plan is due for updates this year, which includes all jurisdictions within the county. Emergency staff have been working together to update the plan. The Risk Assessment piece requires that all hazards in Steele County be identified. This was completed last time, so they are updating with any new information. Kristen reviewed the document and the information that is being requested in the All-Hazards Mitigation Plan Town Vulnerabilities and Strategies Survey. Kristen will follow up with an email after this meeting to ensure everyone has it.
Action Item: All CAER Members are asked to complete this survey. Due within 30 days from date of receipt.
Kristen reviewed the Vulnerability Survey and reported that the top five, in order, are Flood, Cyber Attack, Infectious Disease Outbreak, Hazmat Incident, Tornado. This table will be included with the Hazard Mitigation Plan. This will help the County to prioritize risk. Jerry noted that it didn't believe the examples listed around infectious disease is defined appropriately to clearly relay the threat. He would like Foreign Animal Diseases added. Jamie questioned why Transportation System Disruption, Electric Magnetic Pulse, and Electric Magnetic Pulse should be scored. Thad was curious about the Power Outages in relation to other threats. Kristen noted that if the team feels that this threat should be rated higher, they can reclassify accordingly. Thad will provide additional feedback after he has had a chance to review in more detail. Kristen committed to following up with all interested parties to solicit additional feedback before submitting the final version.
Action Item: Report back to Kristen if you agree or disagree with these findings.
2) Training and Exercise Priorities – Kristen reported that they are planning to hold ICS 300 and 400 trainings in August and November. They do not have specific dates yet. Kristen needs to verify training locations. She is considering Owatonna Public Utilities Morehouse Room.
Kristen is trying to line up tabletop exercises. Thad suggested April. Michele is looking

to have an event around Nuclear Power Plants. She has not selected a date. On February 8, 2023, there is a MN CAER Pipeline Exercise in Albert Lea. Everyone is welcome. Bonnie stated that she would be willing to attend. Michele is going to ask her ED. Thad requested the information as well.
Action Item: If there are any other businesses that are willing to go through the tabletop exercises process, please let Kristen know.

New Business:
1) Shelter Exercise Summary (Dec. 17) – Tom reported that this exercise was completed right before the blizzard. Two purposes; to prove out the shelter kits and provide training to individuals that could act as leaders during a shelter evacuation. Approx. 20 people attended.
2) Blizzard Response (Dec. 22) – Jerry opened a shelter during the blizzard in Ellendale. They had 21 people in the shelter. Kristen commented that the new forms worked well. Some improvements were identified. The church as a good location to serve as a shelter. There were several animals as well, so they had to work through that as well. Bonnie recommended clear plastic product that can be used for "animal spaces". They currently don't have kennels.
3) Governor Conference (Feb. 21-24) – Tom will be attending.
4) HERT Training Waseca (Feb. 4) – This is to train police, fire, and dispatch on how to respond to active school shootings.
5) Shelter Training After Action Review (Feb. 15)

Steele County Emergency Manager Report:
1) Kristen Sailor

Member Reports:
1) CERT – Sheltering exercise completed on December 17. After action review Feb. 15.
2) SKYWARN – Planning annual training March 21st. Tom is getting train the trainer materials to conduct these classes.
3) RACES – Amateur Radio License class scheduled to begin Feb. 14. This is listed in the Community Education brochure.
Bonnie – No update
Ed – adding some paid, on-call firefighters. 4-Seasons working on sirens.
Thad – No update
Dennis – Feb. 23rd, 6:30pm-9pm, Community Education Class – Emergency Preparedness for Beginners 2.5 hours (Pre-CERT Course).
Annette – Volunteers United continues to recruit volunteers so please reach out if volunteers are needed.
Action Item: Annette contact Jerry in Ellendale and Bonnie for Blooming Prairie regarding volunteers that we have in these communities. They are looking for CERT volunteers.
Jerry – there was an article in the Steele County Times around the shelter. Jerry had wanted to proof it but was not allowed. They did a retraction for anything that was incorrect. Very happy with their partnership.
Michele – Continuing to work on Volunteer Recruitment and Training and Disaster

Preparedness.
Jamie – No report.
Kristen – No report.
Adjournment: Tom adjourned the meeting at 4:13pm
Next Meeting: March 15, 2023, at the Steele County Administration Building Room 40

CAER Meeting Minutes
March 15, 2023

Location: Steele County Admin Building and Teams

Call to Order: Meeting called to order at 3:41pm by Tom Karnauskas. Tom asked everyone to introduce themselves. One note to the agenda, this is not an annual meeting.

Attendees: Tom Karnauskas, Melissa Kofstad, Jamie Vogt, Thad Rosenberg, Dennis Hollatz, Rick Hager, Bonnie Johnson, Kristen Sailer, Jerry Ibberson, Ed Hoffman, Michele Heaver, and Annette Duncan. Lon Thiele came for a few minutes; however, had other commitments.

Routine Approvals:

1) Financial Report – Kristen reported no expenses or deposits since the last meeting.
2) Secretary's Report - Motion was made by Jerry to approve the minutes from 1/18/2023. Second made by Jamie. Motion passed.

Old Business:

1) Multi – Hazard Mitigation Plan – Kristen and the team are working on the update. They have divided up the sections and have each person on the team making recommendations on their sections. Once the updates are completed they will bring the final recommendations back to this group for approval. Kristen noted that it will take time to complete this project. Tom noted that the existing plan is located online. The plan is updated every 5 years.
2) Training and Exercise Priorities – Sheltering exercise completed in November of 2021 resulted in the development of sheltering kits. The sheltering kits are located throughout the county. They have one additional kit that needs to be assembled and delivered to Trinity. They completed another exercise in November of 2022 and completed an after- action review on Feb 15th.
3) Severe Weather Feb. 22-23 - Everything has been used in the sheltering kits. It was noted that the only item that needed to be added was a short cord. So far everything has worked out nicely. A shelter was opened at the armory in Owatonna; however, it wasn't needed. It was great practice though. The team feels ready now if we were to have severe weather, that they have the tools and resources necessary to effectively manage.
4) Red Cross was able to provide food and beverages for those that did utilize the armory. Kristen noted that they contacted Red Cross and they took care of ordering the food and this team just needed to pick up food. Tom noted that in the past they have had trouble getting into the armory and this time that wasn't the case. It helped that the Governor had issued an order for the National Guard to assist. Ed commented that he met with Mayo after the weather incident and they would like to be included in future after action reviews.
5) Governor's Conference Postponed – Rescheduled for April 24-25, 2023
6) Training and Exercise Priorities – Kristen reported that they are planning to hold ICS 300 and 400 trainings in August and November. They do not have specific dates yet.

Kristen needs to verify training locations. She is considering Owatonna Public Utilities Morehouse Room.

New Business:

1) Wenger Exercise – Kristen reported that she met with Thad, and he met with his leadership team to discuss dates. They have a new CEO and some additional leadership transitions, so they are postponing until the fall of 2023.
2) Previous Minutes Binder - Tom informed the team that he has a binder with the previous minutes. He stated that all the minutes are now online, so he would like to propose that the printed minutes from 2019 be shredded. The paper copies have electronic versions saved. Ed wanted to confirm that we have a backup in case the drive goes down. Tom is going to double check before shredding. There was a question on whether there is a retention policy. There is not; however, 3 years is typical. No objections provided there is a backup.
3) Table Top Exercises – Jamie reviewed the table top exercises with his Safety Committee and they are very interested. He will work with Kristen offline.
4) Flood Outlook – Kristen reported that the flood outlook was reissued two weeks ago, and it is higher than initially expected. Kristen called the weather service to ask for their opinion on our area. They noted that we have a lot of snow and are on the high end, in the above average range for flooding, should we have large rain events. Kristen wants to know what type of flood planning we want to put into place just in case.

   Kristen suggested a Sandbag policy. We have had one in the past, but it was never ratified. Bonnie noted that we used to provide training for sandbagging. Bonnie noted that we have procedures somewhere. If we are utilizing the sandbag machine,

   Dennis suggested that we should have criteria around who can use it. Michele noted that the Salvation Army has a machine that can be released to us for use.

   Michele has purchased several hundred flood kits that can be distributed across the state. They are used for clean-up. Several hundred are already in the warehouse in the Twin Cities and the rest will be available in the next month. Distribution has not been resolved yet.

   Ed believes we have sandbags; however, is unsure of the quantity. He will identify the quantity and report back to the team. Kristen asked him to report back on their condition as well. Kristen asked Ed to check on his sandbag policy; he is going to check with Public Works. Tom noted that he might have the policy and will send it to Ed today or tomorrow.

   Kristen asked Rick about their needs in Medford. They work with the fire department to meet their immediate needs. There are 3 sites that are priority areas. Potential resources would be needed during the cleanup phase (Hazardous Material). For Ellendale, Jerry has cleanup kits, and everything is good except for the bleach. They have 37 units. The largest issue they have is sewage back up. They need to keep generators running. No sandbagging needed in Ellendale.

Rick asked whether Red Cross is issuing any units. This needs to be checked on. The weather service is going to issue another report in two weeks.

Kristen suggested that a communication should be sent out through the city communication liaison with preparedness measures. Ed will work with Kristen to craft a public message.

Steele County Emergency Manager Report:

1) Kristen Sailor – office moved, tenant of the detention center. They have future plans to move across the street in the Alexander Building next to the Coca Cola Distribution Center in 2024.

Member Reports:

CERT – Sheltering exercise completed on December 17. After action review Feb. 15.

SKYWARN – Annual Spotter training scheduled for March 21st at 7pm. All are welcome to attend.

RACES – Completed Radio License class last Thursday. Five people passed which will provide five potential new members.

Melissa – Public Health has COVID Kits as they won't be available through insurance after April 1st at the pharmacies. Suggested that we check online for current kits as many of the expiration dates have been extended.

Jamie – no report. Thad – no report.

Dennis – Feb. 23rd, 6:30pm-9pm, Community Education Class was cancelled as they only had 2 people registered.

Rick – Skywarn; the Fire Department in Medford is being trained on April 10th.

Bonnie – if employers are interested in receiving information, let her know and she can provide information on sandbagging that can be disseminated to employees.

Jerry – Bought sheet lifters for his binder. The Ellendale Fire Department was trained on Skywarn last month, through an abbreviated session. They were set up for a Sheltering in Place. The church didn't want anyone on site though unless it was activated, so had to develop a backup plan.

Annette – Volunteers United continues to recruit volunteers so please reach out if volunteers are needed.

Michele – Continuing to work on Volunteer Recruitment and Training and Disaster Preparedness, specifically around potential flooding around the state.

Ed – no report.

Adjournment: Tom adjourned the meeting at 4:21pm

Next Meeting: May 17, 2023, at the Steele County Administration Building Room 40 or via Teams

CAER Meeting Minutes
July 19, 2023

Location: Steele County Admin Building Room 40 and Teams

Call to Order: Meeting called to order at 3:30pm by Tom Karnauskas. Kristen that everyone sign in. There is no agenda for today's meeting. The primary purpose is to review the Hazard Mitigation Plan.

Attendees: Tom Karnauskas, Melissa Kofstad, Rick Hager, Bonnie Johnson, Kristen Sailer, Jerry Ibberson,, Ed Hoffman, Michele Heaver, and Annette Duncan.

Routine Approvals:

1) Financial Report – Kristen reported no expenses or deposits since the last meeting.
2) Secretary's Report - Motion was made by Jerry to approve the minutes from 1/18/2023. Second made by Jamie. Motion passed.

Old Business:

1) Multi – Hazard Mitigation Plan – Kristen and the team are working on the update. They have divided up the sections and have each person on the team making recommendations on their sections. Once the updates are completed they will bring the final recommendations back to this group for approval. Kristen noted that it will take time to complete this project. Tom noted that the existing plan is located online. The plan is updated every 5 years.

New Business:

1) Hazard Mitigation Plan – If we want to apply for funding we need to have this plan completed and submitted to FEMA. Steele County has received over $3 million previously in grant funding. The plan focuses on natural disasters; however, technological disasters are also covered in the plan.

   Part of the plan update process is to get feedback from this committee to assist with planning and prioritization. The mitigation plan is a public facing document, available on the Steele County Emergency website.

   Sections 1,2, and 3 will be the focus of today's meeting. We will have additional meetings to address the sections 4 through 6. It takes approx. 45 days for the state to do their initial review. We also need to provide a 30-day public comment period. This feedback is typically limited. The team has met with the townships twice and with the cities once. Initial edits have been made by staff. Now we need input from the CAER Team.

   Tom reviewed Section 1. This is very close to what was previously written, with updates to data, 2022 when available. The previous plan was developed by another group based in the University of MN - Duluth. That language was removed as the plan was completed in house this year. References to items outside of Steele County were removed. The decision

was made to remove tables from the verbiage and leaving in the table section of the plan. This simplifies the document and removes duplication. Kristen is looking for Steele County Specific images (land, buildings, structures, historic sites). Kristen recommends that we add a paragraph about Steele County, providing a summary of Steele County losses. Discussion around how far back to go with suggestions to go back to 1965 which is the oldest record we have. Kristen noted that under section 1.2 we need to add the Building Resilient Infrastructures and Community (BRIC) Grant and the Revolving Loan Program.

Kristen review Section 2. The highlighted names in the section will be updated with current CAER members to ensure that we have adequate representation in the county. Currently validating information under Appendix G and Appendix J and Table 2.

Kristen asked if there are any specific plans at the city level that need to be added. Water Emergency Plans are now required for all the municipalities. In meeting with Planning and Zoning they are discussing a comprehensive storm water management plan. Rick is going to check to see if Medford has a Water Emergency Plan and a Storm Water Management Plan.. Ed is going to verify that Owatonna has a Water Emergency Plan and a Storm Water Management Plan. Jerry will confirm that Ellendale has a Water Emergency Plan and a Storm Water Management Plan. Steele County participates in a Water Shed Plan with the Cannon River Water District. Melissa will check on their plans and provide the names to Kristen.

Tom reviewed Section 3. The specific data points will be updated; however, the verbiage will remain the same. Updated maps will be added to the Appendix. Tom and Kristen will need to verify with Nick what data was used for hydrography information. We are uncertain the location of the "unnamed gravel pit" referenced under 3.3.2 Lakes. Kristen is going to investigate. One of the major changes that will need to be included in the plan is around Climate Change Data in Steele County. All the data in this section needs to be validated. Melissa asked if it would be helpful to include information on how climate change affects diseases in the population. Kristen asked for this to be sent over to her.

We need to update the demographics section 3.5 with updated census data. We also need to validate current predications. Kristen requested that Figure 1, a graph of the breakdown of Steele County Employment, be made larger so it is easier to read. The Annual Average Employment predications and data will also need to be provided.
Annette suggested that Kristen reach out to Workforce Development to see if they have updated data. Melissa suggested SMIF.

Add Olmstead Medical Center to the Health Care Providers. Hospice is closing. Under Emergency, the Owatonna Fire Department is Paid On Call, in place of part time or volunteer. Medford and Blooming Prairie are also Paid On Call. Ellendale remains 100% volunteer. Ed is going to check on the current digital trunked radio communication system. We need to add Xcel Energy to the list of Electrical Utility Providers. Medford Water/Sewer is in the process of

connecting to Owatonna, so this will need to be updated. There are several updates that need to be made under Communication.

Under 3.7.4.3 Railroads, Kristen asked whether we should include how many trains go through the county each day. (Railroad), noted that we average 5 trains a day.

Under 3.7.4.4 Ground Transport Annette suggested to double check the route for SMART as it noted that there is service to Ellendale, Medford, and Blooming Prairie as needed and this may no longer be accurate. Also need to add Land Air as a provider.

Tom noted that data has been updated under Land Use and Ownership. The appendix maps will need to be updated.

Steele County Emergency Manager Report:

1) Kristen Sailor – We will be focusing on the updates between now and our next meeting; however, will send out requests via email if we need to complete a section earlier.

Member Reports:

Tom – A copy of the Emergency Preparedness Plan is now able to be downloaded into a ZIP file to be stored on external hard drives.

Melissa – Finished first AARP. It has been submitted MDH.
Bonnie – No Report

Joe – No Report

Ed – 8 firefighters in training; they need a technology upgrade, so are looking at vendors. It was cut out of last years budget but may be possible this year.
Rick – No Report
Annette – Volunteers United continues to recruit volunteers so please reach out if volunteers are needed. Preparing for the SCFF.
Jerry – National Night Out August 1 planning and training

Adjournment: Tom adjourned the meeting at 4:36pm

Next Meeting: September 20, 2023, at the Steele County Administration Building Room 40 or via Teams

CAER Meeting Minutes

November 15, 2023

Location: Steele County Admin Building Room 40 and Teams

Call to Order: Meeting called to order at 3:35pm by Tom Karnauskas. Kristen asked that everyone sign in. There is no agenda for today's meeting. The primary purpose is to review the Tier 2 Update and Multi Hazard Mitigation Plan.

Attendees: Tom Karnauskas, Melissa Kofstad, Bonnie Johnson, Kristen Sailer, Jerry Ibberson, Dennis Hollatz, Michele Heaver, Thad Rosenberg, Joseph Eichten, Ed Hoffman, and Annette Duncan.

Routine Approvals:

1) Financial Report – Kristen reported no expenses or deposits since the last meeting. We have approx. $1900 in the account, no change. Her hope is that we can host an exercise in the future, which these funds will be used for that purpose.
2) Secretary's Report - Motion was made by Melissa to approve the minutes from 7/19/2023. Second made by Jerry. Motion passed.

Old Business:

1) **Tier 2 Update** – Kristen reported that the state of MN has uploaded all the annual company Tier 2 reports, for 2022. We have 70 locations that reported and 3 of facilities including Central Farm Services – Owatonna (anhydrous ammonia), that are required to submit a Risk Management Plan. The second facility is Crystal Valley Coop (propane gas site) and Pipeline Foods (anhydrous ammonia) both in Hope. We have a fourth facility that we need to follow up with as they haven't reported yet. Based on previous reports, we believe that Central Farm Services (anhydrous ammonia) in Ellendale will also need to provide a Risk Management Plan.

Kristen believes it would be best for her office to plan to get out to these facilities to consult on how to address these hazards. Dennis mentioned that each of the 70 facilities should have offsite consequences. This is a mathematical calculation that determines in hypothetical situations how far the community is impacted. Ed requested that he receive a list of those in his area as he is not seeing the information he is looking for. Kristen said she would send him the spreadsheet; however, after discussion, she was able to direct him to the correct place to locate this information.

SE MN Disaster Health Coalition is putting together a Chemical Response Plan for the region. Ed participated in the training portion of this meeting. They have sent out a request for information. Kristen responded that the subject matter experts in our area are the Fire Chiefs in each community, the State Chemical Assessment Team, and the State Regional Hazmat Team. Ed confirmed this list is good. We were asked what specific resources we need to respond to an incident and what resources do we have. Kristen responded that our first responders/fire fighters have self-contained breathing apparatuses, fire equipment,

foam/water, and fire departments have gas detectors and oxygen depletion devices. Dennis mentioned that the Tier 2 facilities may also have additional resources based on their specific chemicals. It takes approx. 1 hour for units to be on scene. Dennis recommended reconciling the chemicals to determine any unique responses that would be needed. The resources that we need include PPE for first responders, decontamination equipment and showers, blankets and clothing for victims, and pre-hospital care such as oxygen and triage. Ed recommended level D uniforms as current uniforms would not be sufficient for mitigation like shutting off or patching a leak. Kristen shared the top 5 chemicals. Kristen suggested that Dennis review the list to determine the top five that should be listed. Dennis noted that there are risks involving loss of refrigeration that make some chemicals more of an issue.

2) **Multi Hazard Mitigation Plan** – Tom reported that we are very close to completion. Kristen noted that we need the CAER team to review and provide feedback. Tom reported that all the earlier drafts are saved on the Steele County Emergency Management Website. All updates provided have been added to the plan.

   Section 4 Risk Assessment Review:

   Later this week, Tom will make PDF's of all drafts and upload to the website for review. If we have questions or changes, please send to Tom.

   Tom reviewed the changes that were made to this section, which are noted within the document. The 2019 Mitigation Plan replaced the 2014, this is the current version. Tom noted that in the 2017 there was a lot of redundant information. Tom is going to take most of the tables out of the verbiage and leave in the Appendix section.

   Community Resilience Zone – Kristen reported that Steele County is top 50 in the United States, based on data provided by data from FEMA from the National Risk Index. Most of Owatonna is in the map and then the Northern half of Steele County. This has been included in the plan along with a copy of the map and link to the website. Kristen believes that the work that United Way is doing will help improve these areas. This qualification should make additional funding available to improve these areas.

   There were no major changes noted under Hazard.

   Our GIS Coordinator has spent nearly 100 hours updating the maps and information. Kristen has asked the team to review this information to provide updates and feedback. Melissa confirmed with Tom that the documents will be on the Emergency Management Website by the end of this week. **Kristen has asked if we have any pictures of natural disasters in <u>Steele County</u> to send them to her so they can add them (after getting permission).** Dennis noted that the newspaper (OPP) has images as he has used them for presentations. Jerry might also have some pictures from Hope (2016 flood). Dennis has Owatonna Flood, Blizzard, and Tornado pictures (possibly with the source).

   Section 5 Mitigation Strategy:

Kristen has met four times with the townships associations, met with all the cities, also met with OPU and Steele/Waseca and Blooming Prairie Utilities, so has updated this section with the data obtained during these meetings. Most of the mitigation projects were ongoing. A few new actions were added for the townships. Kristen asked that we review this section as well.

Kristen reviewed the process action items list and all the items that have been completed and not completed (ongoing). No mitigation actions were deleted; however, there were small edits. A few of the added items included several township projects, additional stream gauges upstream (warning notifications for campgrounds), sirens in the townships in developed areas, and hydrology studies in the Maple Creek water shed (2016 flood event).

Bonnie wanted to know about the new project coming up on the river that is being built in an area that has a history of being flooded. Ed believes the elevation may make this not an issue, but Kristen suggested that Ed might need to add this to his Emergency Response Plan.

New Business:

1) **Emergency Management Office Move** – tentatively 2664 Alexander Drive, Owatonna, MN 55060 across from the Detention Center. The county purchased it from Cybex. The current tenants plan to move, so Emergency Management, Facilities Management, and Sheriff's Department will utilize this space. We do not have any firm dates.

Steele County Emergency Manager Report:

1) Kristen Sailor – no report.

Member Reports:

Tom – No report.

Melissa – Working to beef up Medical Reserve Core to previous numbers.

Bonnie – No report.

Annette – Continue to grow Volunteers United.

Jerry – No report. Are we going to have a Winter Store Prep meeting. Kristen said she would like to; however, she does not have a meeting scheduled. The plan would be to meet at Trinity Lutheran Church to discuss shelter plans. Bonnie has the mapping for how to place people. Kristen said we won't have the big meeting like last year.

Dennis – No report.

Major Heaver – No report.

Thad – Kristen asked about an exercise, otherwise no report.

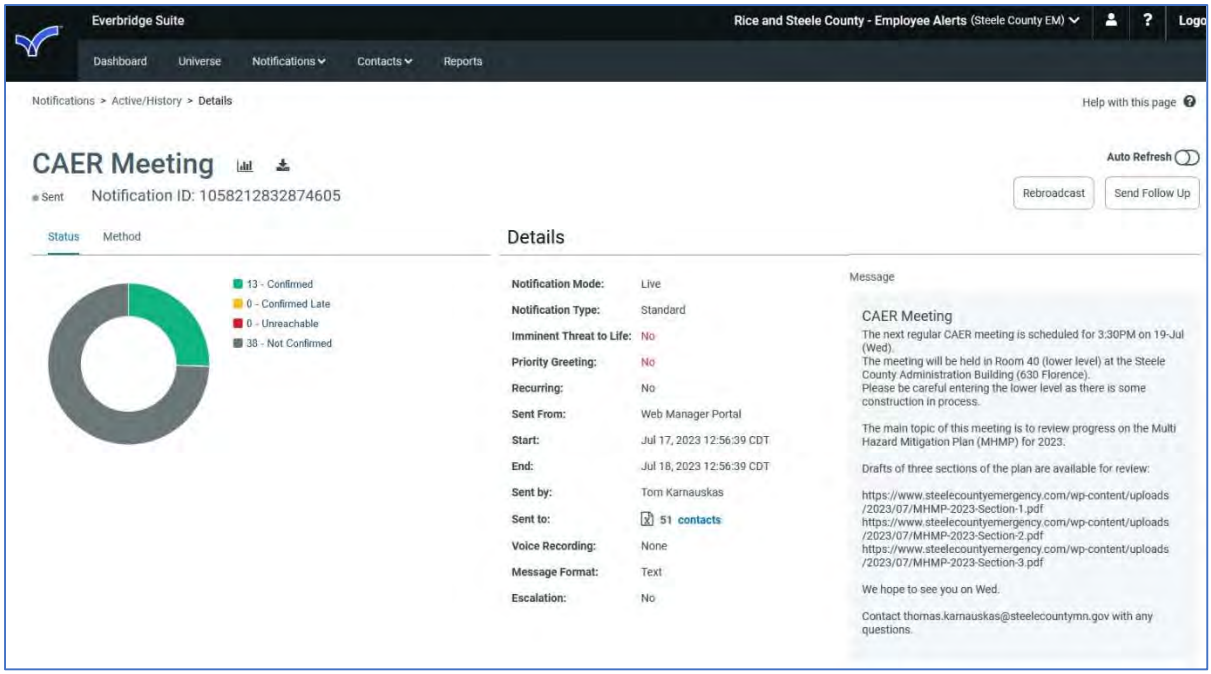
Joe – No report.

Ed – Holiday Train, December 6, following the same plan from 2019. CERT is going to help. Local entertainers in front of the train around 3:40pm with the show starting shortly after before the train is on its way to Waseca.

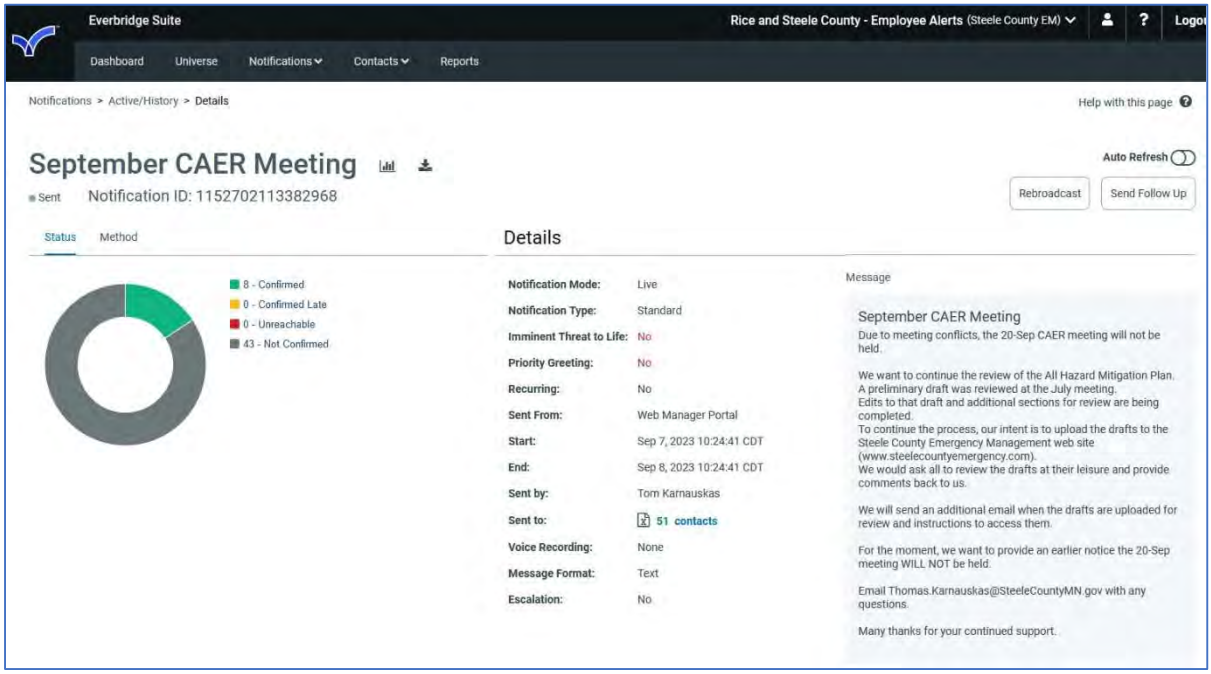
Adjournment: Tom adjourned the meeting at 4:30pm

Next Meeting: January 17, 2024, at the Steele County Administration Building Room 40 or via Teams

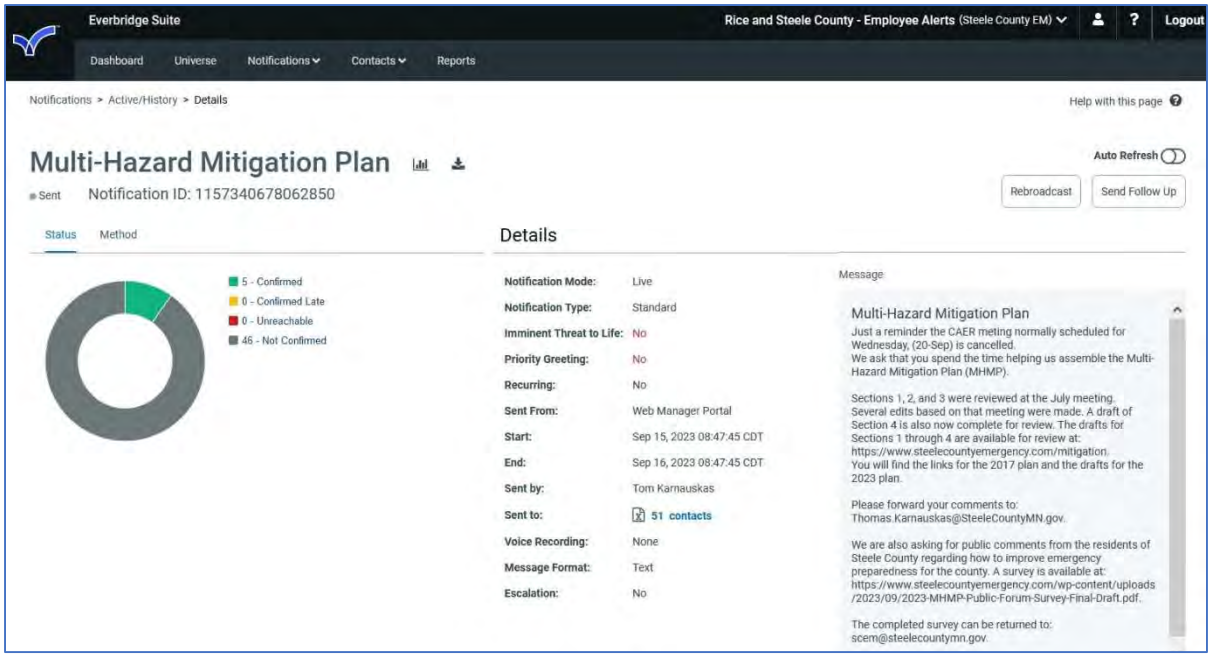
Everbridge Notification – 17-Jul-2023



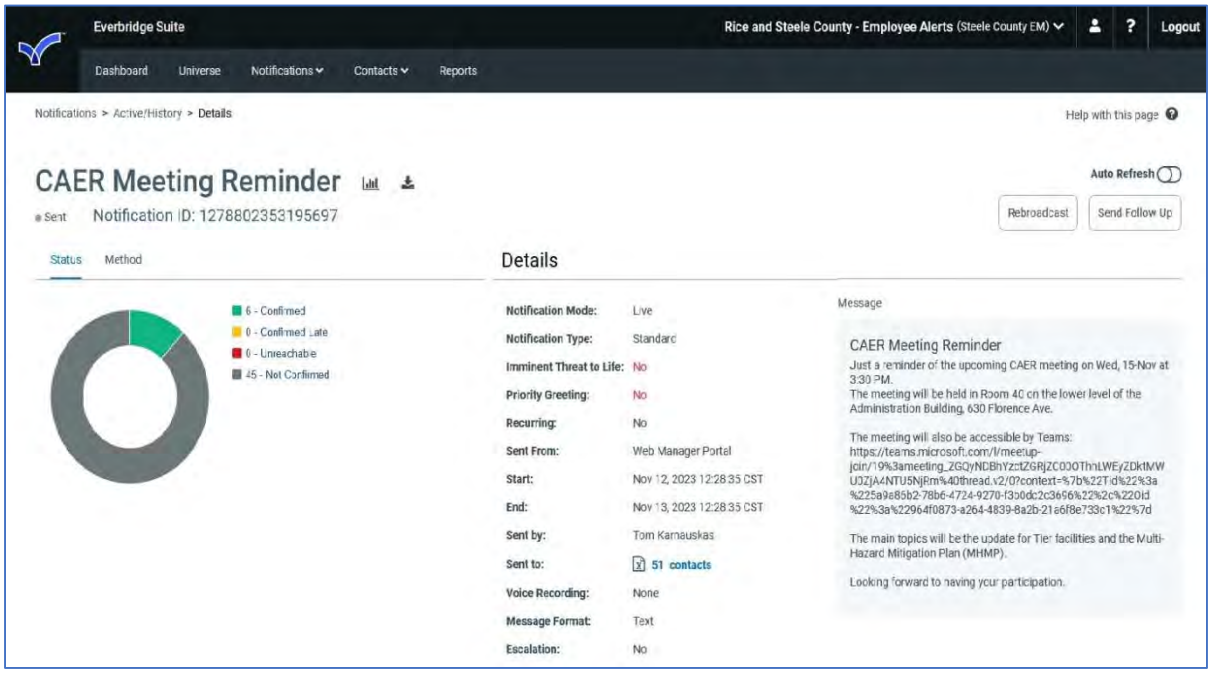
Everbridge Notification – 07-Sep-2023



Everbridge Notification – 15-Sep-2023



Everbridge Notification – 12-Nov-2023



Meeting Sign-In Sheet
CAER Meeting
19-Jul-2023

Steele County CAER Meeting
July 19, 2023

First Name	Last Name	Organization(s)	Signature
Dennis	Adams	Central Farm Service	
Joe	Arnold	Central Farm Service	
Franklin	Birch	Cargill	
Tim	Blok	Charter Communications	
Shannon	Bode	Central Farm Service Ellendale & Owatonna	
Lisa	Boyd	Cybex	
Rebecca	Griebel	Mayo Clinic Ambulance	
John	Champa	Cybex	
Jamie ~~Kyra~~	Fitzgerald-McNelis ~~Crepin~~	Allina Hospital	
Ed	Dankbar	CP Rail	
Annette	Duncan	United Way	
Joe	Eichten	UP ~~GN~~ Rail	
Rick	Ellingson	Mayo Clinic Ambulance	
Steve	Engel	City of Ellendale Clerk/Deputy Clerk	
ELI ~~Sean~~	Szydlo ~~Farley~~	American Red Cross	
Michael	Green	Cargill	
Rhonda	Guthier	Owatonna Chamber of Commerce	
Rick	Hager	Medford Fire Dept/EM	Rick Hag
Sandee	Hardy-Hagen	CERT, RACES, SKYWARN	
Michele	Heaver, Major	Salvation Army	Major Heaver - online
Ed	Hoffman	Owatonna Fire Department	
Dennis	Hollatz	CERT, RACES	

Meeting Sign-In Sheet
Steele County CAER Meeting
15-Nov-2023

Steele County CAER Meeting
Nov 15, 2023

First Name	Last Name	Organization(s)	Signature
Dennis	Adams	Central Farm Service	
Joe	Arnold	Central Farm Service	
Franklin	Birch	Cargill	
Tim	Blok	Charter Communications	
Shannon	Bode	Central Farm Service Ellendale & Owatonna	
Lisa	Boyd	Cybex	
Rebecca	Griebel	Mayo Clinic Ambulance	
John	Champa	Cybex	
Kyra	Crepin	Allina Hospital	
Ed	Dankbar	CP Rail	
Annette	Duncan	United Way	
Joe	Eichten	CN Rail	Online JE
Rick	Ellingson	Mayo Clinic Ambulance	
Steve	Engel	City of Ellendale Clerk/Deputy Clerk	
Sean	Farley	American Red Cross	
Michael	Green	Cargill	
Rhonda	Guthier	Owatonna Chamber of Commerce	
Rick	Hager	Medford Fire Dept/EM	
Sandee	Hardy-Hagen	CERT, RACES, SKYWARN	
Michele	Heaver, Major	Salvation Army	Online MH
Ed	Hoffman	Owatonna Fire Department	Online EH
Dennis	Hollatz	CERT, RACES	

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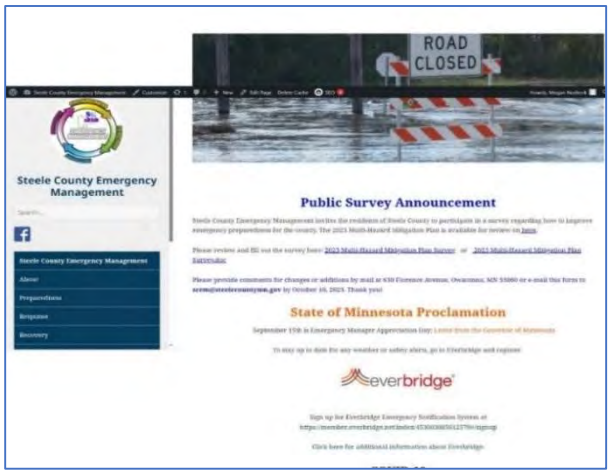
Appendix F
Public Outreach & Engagement Documentation

Table of Contents

Steele County Emergency Management Web Page Notice



Steele County Times Announcement
October 24, 2023

A14 | WEDNESDAY, OCTOBER 4, 2023 NEWS STEELE COUNTY TIMES

County seeks public feedback for all-hazard mitigation plan

The Steele County Emergency and Risk Management Department is currently working on the 2023 Steele County All-Hazard Mitigation Plan and invites residents of Steele County to provide input and feedback.

The plan is a requirement of the Federal Disaster Mitigation Act of 2000 (DMA 2K) and must be update every five years (an additional year has been added due to the COVID-19 pandemic) to maintain eligibility for certain hazard mitigation funding programs.

Development of the plan is under the direction of Emergency Management Director Kristen Sailer in cooperation with a planning team that includes stakeholders from county departments, local municipalities, townships, utilities and other key stakeholders. The planning team is responsible for providing feedback on the planning update including the ranking and identification of strategic, cost effective mitigation activities to reduce future losses for county and local jurisdictions. Some mitigation activities may be eligible for future Federal Emergency Management Agency (FEMA) Hazard Mitigation Assistance (HMA) programs grant funding for projects. Projects can include: localized flooding reduction measures, property aquistion and relocation/conversion to open space, infrastructure retrofits, wildfire mitigation, safe room construction for life-safety protection in weather related events.

The Steele County All-Hazard Mitigation Plan 2023 covers all of Steele County, including Blooming Prairie, Ellendale, Medford, Owatonna, townships, and other stake holders. Steele County is vulnerable to a variety of potential life-threatening events that include, but not limited to: tornadoes, wildfires, flooding, blizzards, ice storms, droughts, and straight-line winds. Natural disasters have a potential for causing major economic losses and personal hardships. The plan will address hazard mitigation strategies, actions, and improvements that will help to limit loss from emergency disasters.

"It is not "if" a disaster will happen; it is "when" will a disaster happen. Hazard mitigation is one the best things we can do to minimize damage and costs to the people and property in our county," said Megan Norbeck, deputy director for Steele County Emergency Management.

Examples of hazard mitigation actions include adding more sirens, automatic flood guages, and community safe rooms for tornadoes to vulnerable areas. Other examples include updating and improving culverts and roads, burying powerlines, conducting public awareness and education campaigns, and providing timely emergency communication alerts.

Public Feedback

The planning process includes gathering and processing input from the community. This step is required as part of the mitigation planning and provides Steele County residents and businesses with the opportunity to provide feedback about how best to prepare Steele County.

-What natural hazards do you feel pose the most risk to your community?

Have you experienced a previous disaster event?

Do you have any concerns and ideas do you have about mitigation actions or projects that you feel could reduce the damage of future events that could affect your personal, business, or community as a whole?

The public is strongly encouraged to submit any comments, concerns, or questions about natural disasters and potential hazard mitigation actions to be included in the plan updating process.

Please submit feedback by Oct. 10 to the Steele County Emergency & Risk Management Director, Kristen Sailer, 507-444-7591 or Kristen.Sailer@SteeleCountyMN.gov. Comments can also be submitted through the Steele County Emergency Management website at https://www.steelecountyemergency.com/mitigation/ and Facebook page: www.facebook.com/SCEmergencyManagement.

The public will have a continued opportunity to participate in the Steele County All-Hazard Mitigation Plan 2023 update in the upcoming months. A draft of the plan will be posted to the County website for public review, public meetings will be held throughout the county, and future news releases will be shared with the media to notify the public of these opportunities of involvement.

Rummage O'Rama

Friday, October 6 - Noon-8pm and Saturday, October 7 -9am-2pm

Izaak Walton - Reding Building - 1546 SW 38th St. (4 mikes south of Hy-Vee on CR 45, 1/2 mile west)

Sponsored by the Friends of Rice Lake State Park

All profits will be used to refurbish the hiking/biking trails at RLSP

This event will feature items for children & the outdoors such as

- Fishing poles, tackle, etc.
- Wildlife Art - Garden Equipment - trowels, planters, etc.
- Sports Equipment - Lawn Equipment
- Wild Bird feeders & baths, hoses, sprinklers, carts, fountains...houses, food
- Lumber/Building Supplies
- Outdoor Clothing - Pet Items
- Outdoor & Shop Tools - Cabin/Kitchen/Cooking Supplies - shovels, rakes, etc.
- Children's Books
- Quilts and Pollinator bags - Toys and Games

AND MANY OTHER ITEMS FROM 9 FAMILIES!

All items will be displayed indoors

For Questions Call: (507) 373-1710

PUBLIC SAFETY

Steele County Emergency Management
News Release
September 15, 2023

FOR IMMEDIATE RELEASE: 09/15/2023
Contact: Kristen Sailer

Steele County Emergency & Risk Management Director

kristen.sailer@steelecountymn.gov

507-444-7501

Public Feedback and Participation Invited for

Steele County 2023 All-Hazard Mitigation Plan Update

Steele County, Minnesota - The Steele County Emergency & Risk Management Department is currently working on the 2023 Steele County All-Hazard Mitigation Plan and invites the residents of Steele County to provide input and feedback. The plan is a requirement of the Federal Disaster Mitigation Act of 2000 (DMA 2K) and must be update every 5 years (an additional year has been added due to the COVID-19 pandemic) to maintain eligibility for certain hazard mitigation funding programs.

Development of the plan is under the direction of Steele County's Emergency & Risk Management Director in cooperation with a planning team that includes stakeholders from the County departments, local municipalities, townships, utitilies and other key stakeholders. The planning team is responsible for providing feedback on the planning updates including the ranking and identification of strategic, cost effective mitigation activities to reduce future losses for county and local jurisdictions. Some mitigation activities may be eligible for future Federal Emergency Management Agency (FEMA) Hazard Mitigation Assistance (HMA) programs grant funding for projects. Projects can include: localized flooding reduction measures, property aquistion and relocation/conversion to open space, infrastructure retrofits, wildfire mitigation, safe room construction for life-safety protection in weather related events.

About The Plan

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"It is not "if" a disaster will happen; it is "when" will a disaster happen. Hazard mitigation is one the best things we can do to minimize damage and costs to the people and property in our County." Megan Norbeck, Steele County Emergency Management Deputy Director

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Public Feedback and Participation is Encouraged

The planning process includes gathering and processing input from the community. This step is required as part of the mitigation planning and provides Steele County residents and businesses with the opportunity to provide feedback about how best to prepare Steele County.

- What natural hazards do you feel pose the most risk to your community?
- Have you experienced a previous disaster event?
- Do you have any concerns and ideas do you have about mitigation actions or projects that you feel could reduce the damage of future events that could affect your personal, business, or community as a whole?

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The public will have a continued opportunity to participate in the Steele County All-Hazard Mitigation Plan 2023 update in the upcoming months. A draft of the plan will be posted to the County website for public review, public meetings will be held throughout the county, and future news releases will be shared with the media to notify the public of these opportunities of involvement.

****

Distributed: MHMP 2023 Survey

Steele County Emergency & Risk Management

Public Comment Survey for the All-Hazard Mitigation Plan

The Steele County All-Hazard Mitigation Plan is being reviewed and updated. A public comment and informational survey is required. We would appreciate if you would share your thoughts and opinions.

1. What hazard(s) do you think has the most significant effect within Steele County? Click all that apply

- ☐ Floods
- ☐ Tornadoes
- ☐ Wildfires
- ☐ Thunderstorms and wind
- ☐ Other (please specify)

2. Have you been impacted by a disaster in Steele County? If yes, how? Please write a short description of the event.

3. Do you feel Steele County is well prepared to mitigate damage from future flooding? If not, what can we do to improve mitigation?

4. Do you support purchasing flood prone properties?

- Yes, it is important to move flood prone properties out of a flood zone.
- Yes, but only if it affected multiple times.
- No, it should not be the County's responsibility to remove flood prone properties.
- No, it is not cost effect to remove properties.
- Other (please specify)

5. If a catastrophic flood (similar to the 2010 flood event) happened today in Steele County, do you feel there are enough resources to prevent major damage? Please explain why you think so.

- No
- Other (please specify)

7. On a scale of 0-5, how comfortable are you with your emergency plans should a disaster occur?

- 1-Extremely confident
- 2-Very confident
- 3-Somewhat confident
- 4-Not so confident
- 5-Not at all confident

8. Do you feel Steele County is well-prepared to respond to a large-scale disaster? Please explain why you agree or don't agree.

9. Do you think climate change is or will have an immediate impact on Steele County resources?

- Very likely
- Likely
- Unlikely
- Very unlikely

10. What level of knowledge do you have about disaster preparedness?

- None at all
- A little
- A moderate amount
- A lot
- A great deal

11. What improvements should Steele County make for disaster preparedness?

12. Would you be interested in having information emailed to you about preparing your family for disaster and/or other learning opportunities? If so, please put your email in the "other" answer.

- Yes
- No
- Other (please specify)

13. Do you feel that Steele County involves the public on emergency preparedness and information?

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Other (please specify)

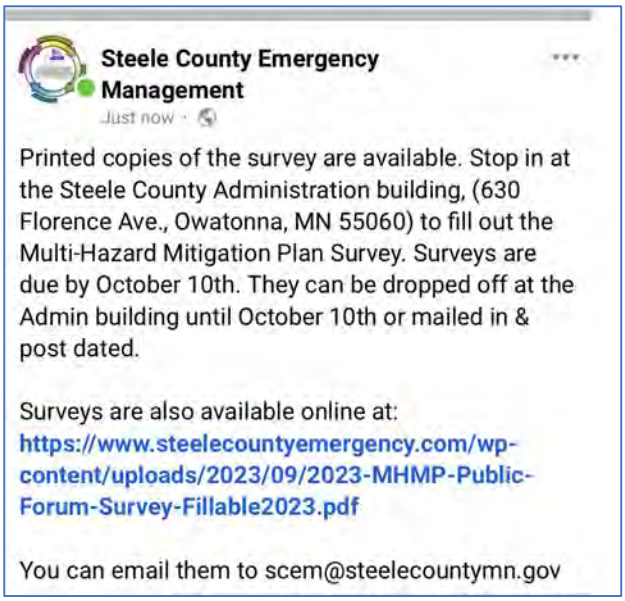
14. The 2023 Steele County All-Hazard Mitigation Plan has been posted to the website at **www.steelecountyemergency.com** to view all the sections Please provide comments for changes or additions by mail at 630 Florence Avenue, Owatonna, MN 55060 or e-mail this form to **scem@steelecountymn.gov** by October 10, 2023.

Please provide your name and email if you would like one of the Emergency Management staff to contact you about your comments.

Name: _____ **E-mail:** _____

Public Access to Printed Copies at Administration Building

Facebook Posts 2023



Results of the 2023 Multi-Hazard Mitigation Survey

Question #1

100% of respondents determined that Thunderstorms the primary hazard that affects Steele County. 80% of the respondents also agreed that floods and tornados top hazards as well.

Question #2

95% of the respondents has been impacted by flooding on some level in Steele County, primarily with roads being washed out and overflow in ditches.

Question #3

50% of the respondents believe Steele County is able to mitigate damage from flooding, while 10% do not think Steele County is prepared. The other 40% chose not to answer.

Question #4

40% of the respondents believe that properties should be removed by the county if they are affected by flooding. 60% of the respondents do not think Steele County should be financially responsible as it is not cost-effective for the county to remove the properties.

Question #5

35% of the respondents feel there is enough resources for a catastrophic flooding event, while 20% were unsure. The other 45% chose not to answer.

Question #6

40% of respondents can hear a tornado siren from their residence. 50% are not able to hear a tornado siren, even if one is in the area. 20% do not have a tornado siren close enough. A suggestion by respondents is to have more rural tornado sirens.

Question #7

95% of the respondents are somewhat confident in their own familiarity with local emergency plans. 5% are very confident.

Question #8

60% of respondents believe Steele County is well-prepared for all types of large scale disasters, while 40% think County needs to update and work on preparation.

Question #9

60% of the respondents think climate change is unlikely to have an immediate impact on Steele County resources, 20% think it is likely, and 20% think it is very likely.

Question #10

75% of respondents have a moderate amount of knowledge about disaster preparedness, while 25% have a little amount of disaster preparedness knowledge.

Question #11

Two suggestions were to have more rural sirens and more help for residents when roads are flooding.

Question #12

Only one respondent asked more information on learning opportunities for disaster preparedness.

Question #13

60% of the respondents would like Steele County to improve on information to the public on preparedness and information. 40% think Steele County gives enough information on preparation.

MHMP 2023 Meetings

Mitigation Meeting Dates	SCEM Staff	Public Partners	Discussion/Action
2021			
July 15, 2021	Kristen Sailer, Director	Jerry Ibberson- Emergency Manager of Ellendale	Review of 2017 mitigation plan and actions 9am
July 27, 2021	Kristen Sailer, Director	Andrew Langholz- City Administrator of Blooming Prairie	Review of 2017 mitigation plan and actions 9am
August 5, 2021	Kristen Sailer, Director	Dale Oolman- Steele County Planning & Zoning Director	Review of 2017 mitigation plan and actions 11am
August 5, 2021	Kristen Sailer, Director	Rick Hager- Emergency Manager City of Medford	Review of 2017 mitigation plan and actions 4pm
June 8, 2021	Kristen Sailer, Director	Somerset Township/Village of Hope review of 2017 Mitigation Plan Actions	Siren decommission and implementing Weather Radio Program 7pm
2022			
February 18, 2022	Kristen Sailer, Director	Ed Hoffman- Emergency Manager City of Owatonna	Review of 2017 mitigation plan and actions 11:30am
September 26, 2022	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director	Township Association Meeting review of Mitigation Kickoff Meeting and Hazard Survey 4pm	Surveyed townships, discussed mitigation plan and actions for review.
September 28, 2022	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director,	Blooming Prairie Township	Meeting review of Mitigation Hazard Survey
October 17, 2022	Kristen Sailer, Director	Clinton Township	Meeting review of Mitigation Hazard Survey
November 3, 2022	Kristen Sailer, Director	Scott Golberg Steele County Administrator	review of mitigation plan
November 21, 2022	Kristen Sailer, Director	Clinton Township	Meeting review of Mitigation Hazard Survey
December 1, 2022	Kristen Sailer, Director	Havana Township	Meeting review of Mitigation Hazard Survey

Mitigation Meeting Dates	SCEM Staff	Public Partners	Discussion/Action
2023			
January 3, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director, Deb Beckstrom- Intern	Weekly SCEM Staff Meeting 1pm	Mitigation Plan Discussion: • Develop Proposed project timeline – assigned follow-up to Megan • Converting old plan from PDF to Word - assigned follow-up to Tom • Develop tracking for tables, charts, and maps and update if available - assigned follow-up to Deb
January 10, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director, Deb Beckstrom- Intern	Weekly SCEM Staff Meeting 1pm	Summarize previous MHMP organization. Breakout information, figures, and tables. Organize breakout into table for tracking development of updated plan.
January 17, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director, Deb Beckstrom- Intern	Weekly SCEM Staff Meeting 1pm	Reviewed MHMP Section Breakout Made Section Assignments across department Added SubFolders to Shared Drive for proper organization of documents
January 18, 2023	2023 Steele County CAER Group Mitigation Steering Committee Kickoff Meeting and Hazard Survey 3:30pm	See Steering Committee Listing	Reviewed Hazards, Hazard Survey, Capabilities, and Actions
January 24, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director, Deb Beckstrom- Intern	Weekly SCEM Staff Meeting 1pm	2023 Weekly SCEM Staff Meeting 1pm

Mitigation Meeting Dates	SCEM Staff	Public Partners	Discussion/Action
January 30, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director, Deb Beckstrom- Intern	Weekly SCEM Staff Meeting 1pm	Mitigation Plan Discussion: • Discussion of changes made by Deb and updates. Definition of commercial vs. industrial. • Adding healthcare facilities by specialty.
February 7, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director	Weekly SCEM Staff Meeting 1pm	Mitigation Plan Discussion: • Continue to work on each section
February 14, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director	Weekly SCEM Staff Meeting 1pm	Mitigation Plan Discussion: • Continue to work on each section
February 28, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director, Deb Beckstrom- Intern	Weekly SCEM Staff Meeting 1pm	Mitigation Plan Discussion: • Discussion of updates, current progress, edits.
March 15, 2023	2023 Steele County CAER Group Mitigation Steering Committee meeting 3:30pm	See Steering Committee Listing	MHMP discussion with CAER group with comments and suggested edits for sections.
March 23, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director, Deb Beckstrom- Intern	Weekly SCEM Staff Meeting 1pm	Mitigation Plan Discussion: • Reviewed mitigation actions specific to townships, added recommended actions based on township surveys. • Presenting the information to the townships for feedback and input on March 26 at 4pm.

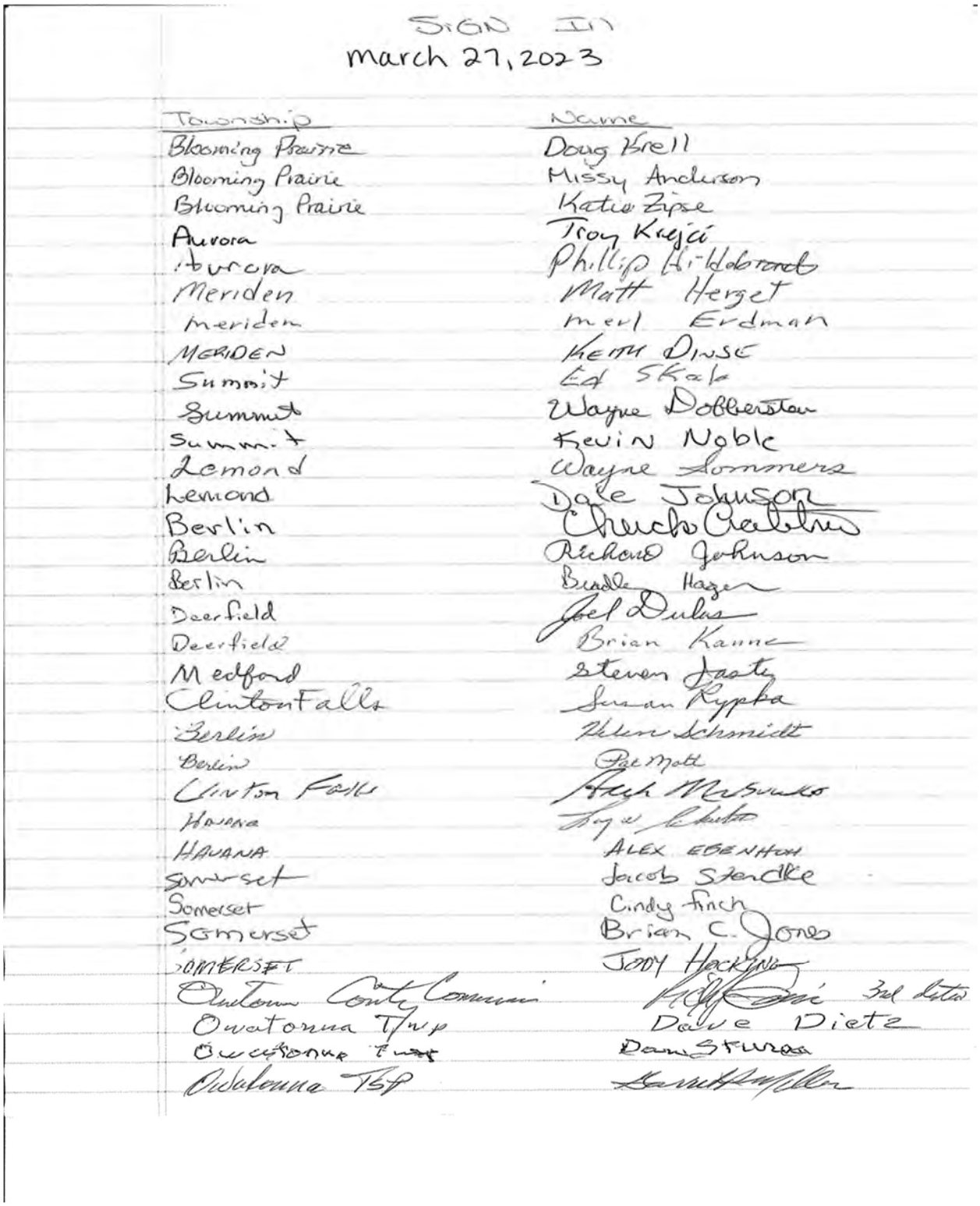
Mitigation Meeting Dates	SCEM Staff	Public Partners	Discussion/Action
March 27, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director	Township Association Meeting review of Mitigation Capabilities and Actions 4pm	Review Mitigation Capabilities and Actions
March 28, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director	Weekly SCEM Staff Meeting 1pm	Mitigation Plan Discussion: • Continue to work on each section
April 18, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director, Deb Beckstrom- Intern	Weekly SCEM Staff Meeting 1pm	Mitigation Plan Discussion: • Discussion of updates, current progress, edits. • Discussed changes to section 5 with updates on Mitigation Action Chart • Added changes and updates from Township Meeting
April 27, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director	Weekly SCEM Staff Meeting 1pm	Mitigation Plan Discussion: • Discussion of updates, current progress, edits. • Discussed changes to section 3 and 4 • Added changes and updates from the last meeting. Updates on status of maps
May 2, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director	Weekly SCEM Staff Meeting 1pm	Mitigation Plan Discussion: • Continue to work on each section • Sections 1-3 review
May 16, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director	Weekly SCEM Staff Meeting 1pm	Mitigation Plan Discussion: • Continue to work on each section • Section 4 review

Mitigation Meeting Dates	SCEM Staff	Public Partners	Discussion/Action
May 23, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director	Weekly SCEM Staff Meeting 1pm	Mitigation Plan Discussion: • Review of sections 1, 2, 3 with editing
May 25, 2023	Megan Norbeck- Deputy Director, Thomas Karnauskas- Deputy Director, Deb Beckstrom- Intern	MHMP meeting	Editing sections and going over extra details for sections 3 & 4
May 30, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director, Deb Beckstrom- Intern	Weekly SCEM Staff Meeting 1pm	Mitigation Plan Discussion: • Discussion of updates, current progress, edits. • Discussed changes to section 4 and editing
May 31, 2023	Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director, Deb Beckstrom- Intern	Weekly SCEM Staff Meeting 1pm	Mitigation Plan Discussion: • Continue to work on each section
June 06, 2023	Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director, Deb Beckstrom- Intern	Weekly SCEM Staff Meeting 1pm	Mitigation Plan Discussion: • Discussion of updates, current progress, edits. • Discussed changes to section 5 and edits
June 16, 2023	Kristen Sailer- Director	Jerry Ibberson & Steve Engel City of Ellendale 10:30am	Review Mitigation Capabilities and Actions
June 22, 2023	Kristen Sailer- Director, Megan Norbeck- Deputy Director	Dale Oolman	Steele County Planning & Zoning director mitigation plan actions & capabilities review 1pm
June 23, 2023	Megan Norbeck- Deputy Director, Thomas Karnauskas- Deputy Director	MHMP Updates	Mitigation Plan Discussion: • Discussion of updates, current progress, edits. • Went over appendix edits, tables & Figure updates including maps

Mitigation Meeting Dates	SCEM Staff	Public Partners	Discussion/Action
July 17, 2023	Kristen Sailer- Director	EM Director meeting with Dave Stenzel Farm Service Officer mitigation plan actions & capabilities review 9am	mitigation survey, plan actions & capabilities review
July 17, 2023	2023 Kristen Sailer	EM Director meeting with Ed Hoffman City of Owatonna mitigation plan actions & capabilities review 2pm	mitigation survey, plan actions & capabilities review
July 18, 2023	2023 Kristen Sailer	EM Director meeting with Rick Hager and Beth Jackson City of Medford mitigation plan actions & capabilities review 4pm	mitigation survey, plan actions & capabilities review
July 20, 2023	2023 Kristen Sailer	EM Director meeting with Melanie Aeschliman City Administrator and Terri Zweiner Deputy City Administrator for the City of Blooming Prairie mitigation plan actions & capabilities review 10am	mitigation survey, plan actions & capabilities review
August 8, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director	Weekly SCEM Staff Meeting 1pm	Mitigation Plan Discussion: • Discussion of updates, current progress, edits. • Worked on Appendix A-H, began compiling survey results and prepared media release. • Create public survey and plan for announcements.
September 11, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director	Township Association Meeting final review of Mitigation Actions	public survey 4pm
September 13, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director	SWCD Meeting final review of Mitigation Actions	public survey 6pm

Mitigation Meeting Dates	SCEM Staff	Public Partners	Discussion/Action
September 11 Thru October 10, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director Megan Norbeck- Deputy Director	Public Comment period	Public Comment period
October 9	2023 Kristen Sailer	Christian Fenstermacher Owatonna Public Utilities	Final review of Mitigation Actions
October 26, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director, Deb Beckstrom- Intern	MHMP Meeting	Mitigation Plan Discussion: • Reviewed Appendices A-J • Edited and updated information on each appendix • Reviewed Tables, Figures, and Map
November 9, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director, Deb Beckstrom- Intern	MHMP Meeting	Mitigation Plan Discussion: • Appendix I- work cited updates • Edited and updated information on each appendix • Finalize Tables, Figures, and Map • Putting all sections together
November 15, 2023	2023 Steele County CAER Group Mitigation Steering Committee meeting 3:30pm	See Steering Committee Listing	MHMP discussion with CAER group with comments and suggested edits for sections.
December 13, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director	MHMP Meeting	Mitigation Plan Discussion • General Review of MHMP progress
December 20, 2023	Kristen Sailer- Director, Thomas Karnauskas- Deputy Director, Megan Norbeck- Deputy Director	MHMP Meeting	• Updates in section 4 • Editing changes • Crosswalk review and updates • General review of MHMP

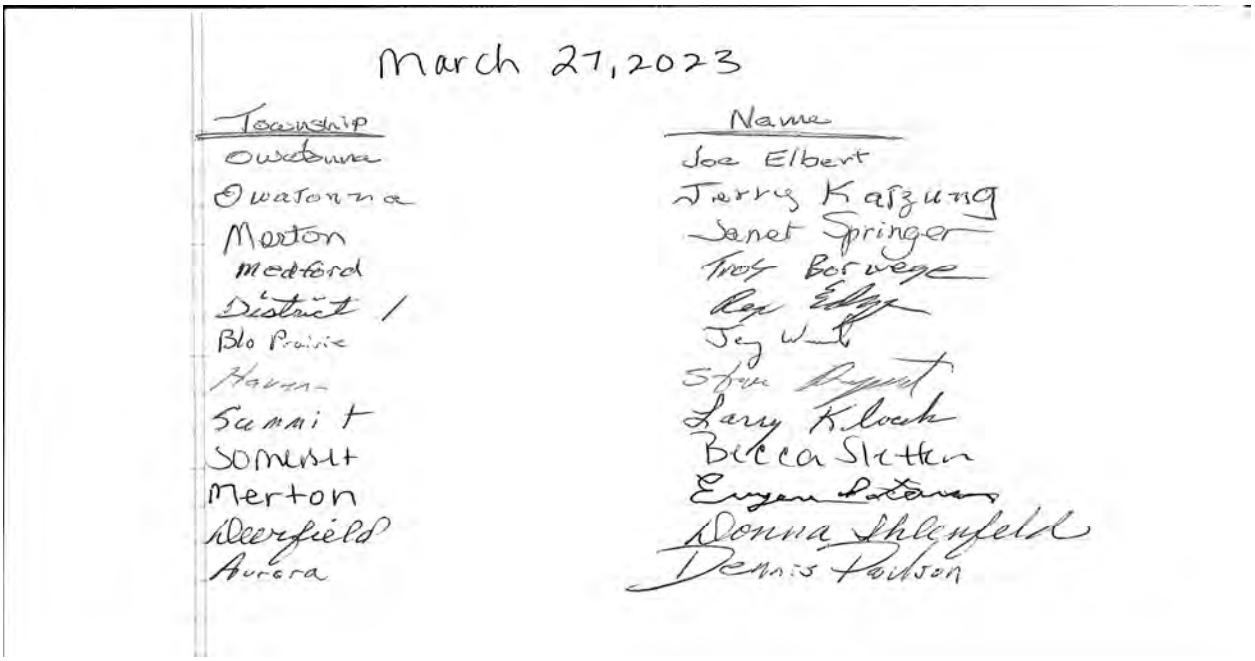
, Meeting Sign-In Sheet
Steele County Townships
27-Mar-2023



SIGN IN
March 27, 2023

Township	Name
Blooming Prairie	Doug Krell
Blooming Prairie	Missy Anderson
Blooming Prairie	Katie Zipse
Aurora	Troy Krejci
Aurora	Phillip Hildebrandt
Meriden	Matt Herget
Meriden	Merl Erdman
MERIDEN	KEITH DINSE
Summit	Ed Skala
Summit	Wayne Dobberstein
Summit	Kevin Noble
Lemond	Wayne Sommers
Lemond	Dale Johnson
Berlin	Chuck Gerdes
Berlin	Richard Johnson
Berlin	Bradley Hazen
Deerfield	Joel Dulas
Deerfield	Brian Kanne
Medford	Steven Jaster
Clinton Falls	Susan Rypka
Berlin	Helen Schmidt
Berlin	Dale Mott
Clinton Falls	Rich Matsuoka
Havana	Troy [illegible]
HAVANA	ALEX EBENHOH
Somerset	Jacob Stendke
Somerset	Cindy Finch
Somerset	Brian C. Jones
SOMERSET	Jody Hackney
Clinton Co Commiss	3rd District
Owatonna Twp	Dave Dietz
Owatonna Twp	Dan Stuwe
Owatonna TSP	[illegible]

Steele County Townships
27-Mar-2023 (Continued)



March 27, 2023

Township	Name
Owatonna	Joe Elbert
Owatonna	Jerry Kaszung
Morton	Janet Springer
Medford	Troy Borwege
District /	Ray Edlin
Blo Prairie	Jay W[illegible]
Havana	Steve Bryant
Summit	Larry K. Loch
Somerset	Becca Slatten
Merton	Eugene Peterson
Deerfield	Donna Ihlenfeldt
Aurora	Dennis Paulson

Meeting Sign-In Sheet
City of Ellendale
16-Jun-2023

June 16 10:30-12:30 pm

Kristen Sailer
Jerry Ibberson
Steve Engel

City Name: **Ellendale MN**

Steele County All Hazards Mitigation Plan City Vulnerabilities and Strategies Survey

Formal action on this survey by the City Council is not required. But we need and value your input. The survey may be completed by Emergency Management, the City Council, Plan Commission, Clerk, Maintenance/ Public Works, or other City representative(s) knowledgeable on such matters in your jurisdiction.

HAZARD VULNERABILITIES

a. We all experience severe weather, but please describe any ***CRITICAL***, ***UNIQUE***, or ***SIGNIFICANT*** vulnerabilities or concerns for your city for each hazard type. Also, identify any vulnerable areas or "hotspots" on the enclosed city map. *An 11x17 city-specific map with 100-year floodplain overlaid upon an orthophoto was included with each survey.*[1]

b. If your community has no unique issues for a hazard, you may state "**NONE**" or leave the corresponding question blank. Even if your City has no comments, we request that you still return the survey.

Flooding (i.e., river/lake flooding, stormwater/flash flooding, dam failure)

Please describe any flooding concerns and generally identify any flood prone areas, structures, or roads on the enclosed city map: South side of 3rd Ave are unbuildable lots due to wetland
None water table higher.

House on pond had flooding - retention pond in Crown ridge development in 90's
has purchased flood insurance. Did maintenance on outflow in 2015-16.
Dredging the pond. The creek is filling in. Identify ditch and talk to Ditch System
Consider Ellendale join participating in NFIP. runoff like 9

redid tile on retention pond for city by 8th & Simplicity Dr. → runs to pasture
recycling center 8th Ave & railroad Area by cemetary
(will be done) Mainetanac

Tornadoes/High Winds/Thunderstorms (including lightning, hail, heavy rain)

Please describe and/or identify on your city map any ***unique*** tornado or thunderstorm vulnerabilities or concerns (e.g., areas or structures at significant risk to such damage, campgrounds, or mobile home parks without storm shelters):	***# of Mobile Homes (2020 Census)***
Nothing in town but we do have the Crystal Springs RV Park 1 mile East of the city.	

- majority of town is overhead - SWCE
- Identify possible safe room in the future - retrofit structure for safe room. community center/school or church
- NOAA weather radio program for residents -

[1] The 100-year floodplain identified in 2022. The analysis in this plan update will be based on the current floodplain boundary.

- placing a 3rd siren next to 3rd Ave W. & 1st St. N. possible
- Quarterly Newsletter to residents for Emergency Prep info.

Meeting Sign-In Sheet
Multiple Dates
22-Jun-2023 thru 20-Jul-2023

Date 6-22-23

1 hr Mitigation Plan Review - Dale Oolman

Dale Oolman

Date 7-17-23

1 hr Mitigation Plan Review - Dave Stenzel

Dave

Date 7-18-23

1 hr Mitigation Plan Review with Medford

Elizabeth Jackson

Kirk Hager

Date 7-20-23

1 hr Mitigation Plan Review - Terri Wiener

Melanie Aeschliman

Terri Wiener

Meeting Sign-In Sheet
Steele County Townships Meeting
11-Sep-2023

September 11, 2023 Township Association Meeting

4 - 6 pm

Name	Township
Jim Brady	Steele Co.
Janet Sphringer	Merton
Greg Krueger	Steele County
Rick Edge	District 1 Director
Wayne Dobberstein	Summit
Kevin Noble	Summit
ED Skala	Summit
Chuck Crabtree	Berlin
Rick Johnson	Berlin
Brad Hagen	Berlin
merl Erdman	meriden
Vern Wheeler	Medford
Steven Jaster	MedFord
Phillip Hildebrandt	Aurora
Dale Johnson	Lemond
[illegible]	Lemond
Vicki Arthur	Lemond
Wayne Sommers	Lemond
Pat Motl	Berlin
Helen Schmidt	Berlin
Nicole Wacek	Deerfield
Joel Dulas	Deerfield
Thad N Boeke	Deerfield
ALEX EBENHOH	HAVANA
DAVID JONCHIM	Havana
Larry Schuber	Havana
Katie Zipse	Blooming
Missy Anderson	Blooming
Doug Krell	Blooming
Robert Halberman	Blooming
Rich [illegible]	Owatonna / Steele Co.
Ray Strenge	"
Jenny Kahnke	Owat Township
Joe Elbert	Owatonna Township
Garret Miller	Owatonna TSP
David D Dieter	Owatonna Twp
John Coleman	Steele Co.
Tom Kamauskas	Steele Co.
Kristin Sailer	Steele Co.
Scott Golberg	Steele Co.
Greg Ilkka	County Engineer
Tom Reineke	Assessor
David Stenzel	Feedlot Officer

Meeting Sign-In Sheet
Soil and Water Conservation District
20-Sep-2023

SWCD Meeting

Mitigation Plan Review

Meeting Date: September 13, 2023

Name	Position (If applicable)	Email
ERIC GULBRANSEN	STEELE SWCD	eric.gulbransen@mn.nacdnet.net
Mark Ihlenfeld	Supv.	
Michael Klecker	SUP	
Mark Dittlevson	Sup	
Dan Hansen	Sup	
Dave Melby	Sup SWCD	

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Appendix G
Mitigation Actions

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
1	All-Hazards	Education & Awareness Programs	Work to ensure that all Steele County residents are aware of and sign-up for the Everbridge emergency notification system.	Ongoing	High	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Emergency Management in coordination with local city and township government	This is a standing effort of the Steele County Emergency Management Program. Sign-up for Everbridge is available on the Steele County Emergency Management website and reminders are also put out via Facebook. Cities also work to promote sign-up by local residents by sharing information on city websites and announcements at public meetings. The Steele County CERT (Community Emergency Response Team) may be used to help encourage residents to sign up for Everbridge and understand the different options when registering for this service.	Steele County Budget, General Funds, Public Safety Budget through the Sheriff's Office, and Staff time.
2	All-Hazards	Mitigation Preparedness & Response Support	Ensure that Steele County and its cities have multiple methods established to relay emergency notifications to all segments of the public.	Ongoing	High	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Emergency Management in coordination with City Emergency Managers	Steele County residents receive emergency warnings through the PSAP with IPAWs, the Everbridge Emergency Warning System, NOAA All-Hazard Radios, and through the outdoor emergency warning siren system using voice and siren. The County also addresses the language barriers in communicating disaster preparedness information and disaster warnings to non-English population groups. This information is provided through ECHO (Emergency Communication Health Outreach). ECHO increases access to life-saving emergency information by facilitating efficient mass media messaging in multiple languages.	Steele County Budget, General Funds, Public Safety Budget through the Sheriff's Office, and Staff time./ City Budgets, General funds, and Staff time
3	All-Hazards	Mitigation Preparedness & Response Support	Promote, grow, and strengthen Steele County's local CERT (Community Emergency Response Team) and CAER (Community Awareness Emergency Response) groups.	Ongoing	High	2023-2028	Steele County	SC Emergency Management in coordination with CERT and CAER groups	The Steele County CERT and CAER groups are an important element of the Steele County Emergency Management Program. We will seek to continue to promote and strengthen these groups with additional outreach to local residents, organizations, and businesses.	Steele County Emergency Management Budget, General Funds, and Staff time.
4	All-Hazards	Mitigation Preparedness & Response Support	Expand, train and organize Ham Radio Operators to enhance communications.	Ongoing	Moderate	2023-2028	Steele County	SC Emergency Management	Steele County has trained instructors that provide annual amateur radio instruction and testing. The group also holds regular meetings and participates in field days.	Steele County Emergency Management Budget, General Funds, and Staff time.
5	All-Hazards	Mitigation Preparedness & Response Support	Continue to foster partnerships with surrounding counties to create regional partnerships that support emergency preparedness, response, and recovery.	Ongoing	High	2023-2028	Steele County	SC Emergency Management	Steele County Emergency Management participates in a Joint Powers Board, which consists of Emergency Management Directors from Homeland Security Emergency Management Region 1. There are monthly meetings to promote regional initiatives.	Steele County Emergency Management Budget, General Funds, and Staff time.

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
6	All-Hazards	Education & Awareness Programs	Work to promote emergency preparedness for local residents.	Ongoing	High	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Emergency Management in coordination with City EM's	This is a standing effort of the Steele County Emergency Management Program. The County provides emergency preparedness presentations to cover information such as developing family emergency plans, develop go-kits, push for Everbridge sign up, etc. City EM's also work to provide this same information at the local level.	Steele County Emergency Management Budget, General Funds, and Staff time.
7	All-Hazards	Mitigation Preparedness & Response Support	Purchase more 800 mhz radios for CERT and other groups to use after a disaster.	New	Moderate	2023-2028	Steele County	SC Emergency Management	Steele County Emergency Management constantly is working to improve its inventory of response equipment.	Steele County Emergency Management Budget, General Funds, and Staff time.
8	Severe Winter & Summer Storms	Mitigation Preparedness and Response Support	Identify critical facilities or infrastructure that do not have backup power in the event of a major power outage resulting from severe winter or summer storms. *(Critical facilities may include: police/fire departments, EOC, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).*	New	High	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Emergency Management, City Admin & Public Works	County buildings (Admin & SCHA) are high priorities for backup generators in the event of a power outage. The County Admin building serves as a hub for County operations (IT, Treasurer, Board of Commissioners, P&Z, Assessors, etc.) and will serve as a command center in the event of a disaster. City jurisdictions have also identified a need for backup power for government buildings or other critical facilities or infrastructure.	Steele County Administration CIP Budget, General Funds, and Staff time.
9	Severe Winter & Summer Storms	Mitigation Preparedness and Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that require backup power.	New	High	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Emergency Management, City Admin & Public Works	Steele County, local city governments, and schools will evaluate feasibility to purchase and install generators for key facilities.	Steele County EM Budget, General Funds, and Staff time./ City Budgets, General funds, and Staff time Possible FEMA HMA HMGP 5% Initiative Funding for Generators

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
10	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with rural electrical coops and municipal utilities to identify and address mitigation measures for above ground power lines that are susceptible to damage from severe storms (i.e., strengthening/burying) in order to reduce potential power outages.	New	High	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	Steele-Waseca Cooperative Electric in cooperation with Steele County and city municipal utilities (Owatonna P.U. and Blooming Prairie P.U.)	The (Steele-Waseca Cooperative Electric) SWCE continues to protect the electrical distribution system by continuously doing line and pole inspections, trimming trees and vegetation that imperil power lines and inspecting underground power lines. SWCE will look for opportunities to protect the power distribution system by reinforcing transmission lines or burying lines underground when feasible. The Steele County Emergency Manager, Utilities and CAER group continue to work with the County Planning Commission and staff to modify county subdivision regulations to require burial of all new power distribution lines before any new subdivision plats will be approved, if feasible.	Electric Coop General Funding, **Possible FEMA HMA HMPG or BRIC funding for Infrastructure Retrofit,** Rural Utility Service (RUS), and CSC funding
11	Severe Winter & Summer Storms	Mitigation Preparedness and Response Support	Work to improve the coverage of Doppler radar for Steele County.	Ongoing	High	2023-2028	Steele County	SC Emergency Management	This is an Ongoing effort of the Steele County Emergency Management Program. Because of the distance from the Doppler radar in Chanhassen, smaller tornadoes are difficult to identify on radar. SKYWARN spotters are not activated and are not used in the dark. Steele County residents are vulnerable to tornados at night that cannot be spotted or identified on radar. Steele County will continue to work to obtain more Doppler radar to cover all areas of Steele County.	Steele County Budget, General Funds, and Staff Time/City Budgets, General funds, and Staff time
12	Severe Winter & Summer Storms	Mitigation Preparedness and Response Support	Promote the use of NOAA weather radios as a key communications resource for residents, businesses, and facilities that house vulnerable populations (i.e., nursing homes, group homes, senior centers, and day care facilities).	Ongoing	High	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna and Township Governments	SC Emergency Management in coordination with City EM's	This is a standing effort of the Steele County Emergency Management Program. Grant funding was used to provide NOAA All Hazard Weather Radios in Schools and Public Gathering Points in Owatonna. Weather Radios have been promoted through SKYWARN and anyone that purchases a NOAA Weather Radio can drop it off at the Owatonna Fire Station and SKYWARN members will program it for free to the Steele County Codes. Promotion of the value of NOAA weather radios is also a part of Steele County's annual participation in the NWS spring and winter Severe Weather Awareness Weeks in April and November.	Steele County EM Budget, General Funds, and Staff time./ City Budgets, General funds, and Staff time Possible FEMA HMA HMGP 5% Initiative Funding for NOAA Weather Radios

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
13	Severe Summer Storms	Mitigation Preparedness & Response Support	Provide/participate in the National Weather Service's SKYWARN "Storm Spotter" training in various parts of the County for first responders and community residents.	Ongoing	High	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	Emergency Management in collaboration with local cities and NWS	This is a standing part of the Steele County Emergency Management Program. Steele County has trained National Weather Service SKYWARN Instructors who provide annual training sessions for community volunteers, law enforcement, and fire departments. We will continue to encourage more volunteers to become active in the severe storm spotters network (SKYWARN, CERT, Ham Radio, etc.).	Steele County Budget, General funds, and staff time and NWS funding to deliver SKYWARN program training
14	Severe Summer Storms	Mitigation Preparedness & Response Support	Continue to strengthen the Steele County SKYWARN program by creating maps and GPS tools that can be used by our network of storm spotters across the county, and work to coordinate safe participation by all storm spotters.	Ongoing	High	2023-2028	Steele County	SC Emergency Management	Steele County used grant funds to purchase 5 wind speed gauges used by SKYWARN. The SKYWARN/RADIO base has GR level 3 radar software with a goal of purchasing level. The County has also provided Instant Alert for 2 years, internet access in the base, and the GIS person works closely with the group for maps/map tools. Computers, furniture and printing needs have been donated by various local businesses. The SKYWARN program has a response plan that assigns spotters to predetermined locations within the county that have been identified as safe spotting locations with good vantage points. What remains to be done is coordinate all spotters within the county. This includes Steele County SKYWARN, Law Enforcement Spotters, and Fire Department spotters.	Steele County EM Budget, General Funds, and Staff time./ City Budgets, General funds, and Staff time Possible FEMA HMA HMGP 5% Initiative Funding for initiative projects
15	Severe Summer Storms	Structure and Infrastructure Projects	Identify areas where vulnerable populations are susceptible to tornadoes or extreme wind events (i.e. schools, campgrounds, or RV/ mobile home parks) and evaluate for construction or retrofit of safe rooms or storm shelters.	Ongoing	High	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna and School Districts	Emergency Management, HC Public Health, in coordination with townships and local cities Considerations for Steele County fairgrounds, Havana, Medford, Summit, Somerset, and Owatonna Township	Tornadoes are one of the top ranked natural hazard that pose risk to Steele County. Steele County Emergency Management and City Emergency Managers will work to identify where safe room construction or retrofit is needed and may be feasible and work to explore advancing a safe room project.	Steele County EM Budget, General Funds, and Staff time./ City Budgets, General funds, and Staff time Possible FEMA HMA HMGP Or BRIC Funding for projects

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
16	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	Ongoing	High	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna and School Districts	SC Emergency Management, HC Public Health, in coordination with townships and local cities	Any community safe room projects that the County is involved in will be part of the Steele County Emergency Management program. SC Emergency Management will work with any school or jurisdiction seeking to develop an application to FEMA for a safe room project.	Steele County EM Budget, General Funds, and Staff time./ City Budgets, General funds, and Staff time Possible FEMA HMA HMGP Or BRIC Funding for safe room construction projects
17	Severe Summer Storms	Mitigation Preparedness & Response Support	Upgrade the warning siren paging system to newer technologies, and identify areas for voice sirens.	Ongoing	High	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Emergency Management in coordination with townships and local cities	New outdoor emergency warning sirens were installed in Ellendale, Blooming Prairie and Owatonna. In Owatonna the siren system was completely replaced with new sirens and voice sirens were installed at Lake Kohlmeyer, Downtown, the water park and at the Steele County Fairgrounds. A new voice siren was also recently installed at the Brooktree Golf course. New outdoor emergency warning siren for consideration of adding a siren in Meriden Township Upgrade siren in Berlin township around Beaver Lake park, and Owatonna Township	Steele County EM Budget, General Funds, and Staff time./ City Budgets, General funds, and Staff time Possible FEMA HMA HMGP 5% initiative for projects
18	Severe Summer Storms	Education & Awareness Programs	Provide public awareness & education of what the warning sirens mean and what safety measures to take when they are activated.	Ongoing	High	2023-2028	Steele County	SC Emergency Management	This is accomplished through a media campaign for Severe Weather Awareness Week with the National Weather Service. Steele County also participates in the Statewide Tornado Drill in April each year.	Steele County EM Budget, General Funds, and Staff time./ City Budgets, General funds, and Staff time
19	Severe Summer Storms	Education & Awareness Programs	Provide awareness and education to homeowners and businesses on measures to decrease the vulnerability of homes and public buildings from damage from lightning strikes.	Ongoing	Moderate	2023-2028	Steele County	SC Emergency Management and Municipal Public Utility providers	This is accomplished through information from the public utilities.	Steele County EM Budget, General Funds, and Staff time./ City Budgets, General funds, and Staff time Possible FEMA HMA HMGP Or BRIC Funding for projects

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
20	Extreme Temps (Heat / Cold)	Education & Awareness Programs	Educate the public on the dangers of extreme heat or extreme cold and how to take personal safety measures during periods of extreme temperatures.	Ongoing	High	2023-2028	Steele County	SC Emergency Management, SC Public Health and School District Staff	This is done as part of the NWS annual spring and winter severe weather awareness weeks. It is also done during actual periods of extreme temperatures. Information on staying safe during periods of extreme heat or cold is relayed to the public through channels such as radio, TV, and Facebook.	Steele County EM Budget, General Funds, and Staff time./ City Budgets, General funds, and Staff time
21	Extreme Temps (Hot / Cold)	Mitigation Preparedness & Response Support	Develop plans to respond to extreme temperatures situations in Steele County.	Ongoing	Moderate	2023-2028	Steele County	SC Emergency Management and SC Public Health	In the event of a severe heat or cold temperature event that posed risk to public safety, Steele County Emergency Management would work with Public Health to release information to the public about personal safety measures.	Steele County EM and Public Health Budget, General Funds, and Staff time.
22	Flooding	Local Planning & Regulations	Upgrade the Steele County and local city culvert plans and prioritize most vulnerable areas. Include buffer strips in most vulnerable areas.	Ongoing	High	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Highway Dept., SC Public Works	This is a standing effort of the Steele County Highway Department and local city Public Works programs.	Steele County Highway/PW Budget, General Funds, and Staff time
23	Flooding	Structure and Infrastructure Projects	Identify areas of concern at areas around bridges and culverts to mitigate erosion and soil stabilization issues.	Ongoing	High	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Highway Dept., SC Public Works, City & Township governments and public works	This is a standing effort of the Steele County Highway Department/Public Works and of each city's public works department.	Steele County Highway/PW City and Township Budget, General Funds, and Staff time
24	Flooding	Local Planning & Regulations	Identify, map, and prioritize roads in the County and cities & townships that are impacted by flood events, and implement required mitigation measures to reduce future flood damages.	Ongoing	High	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna, All Townships	SC Highway Dept., SC Public Works, SC GIS, and local city and township public works	This is a standing effort of the Steele County Highway Department/Public Works.	Steele County Highway/PW Budget, General Funds, and Staff time **Possible FEMA HMA HMGP or BRIC funding for Localized Flood Reduction Projects**

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
25	Flooding	Local Planning & Regulations	Develop stormwater management plans and improve stormwater management systems at the county and city level.	Ongoing	New	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna, All Townships	SC Envr. Services, SC SWCD and local city public works depts., MN DNR, MPCA, and Watershed Plans. Township Governments	Steele County maintains a County Water Plan and a Watershed Plan which both address stormwater management planning and projects. The County is working to identify upland areas to hold water to help reduce the impact of stormwater flow. Consider Hydrology study for Maple Creek watershed	Steele County/SWCD budgets, general funds and staff time. Clean Water Fund, Possible MPCA/PFA grant funding
26	Flooding	Local Planning & Regulations	Develop ditch system agreements for water flow and maintenance	Ongoing	New	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna, All Townships	SC Envr. Services, SC SWCD and local city public works depts., MN DNR, MPCA, and Watershed Plans. Township Governments	Steele County maintains the ditch systems.	Steele County/SWCD budgets, general funds and staff time. Clean Water Fund, Possible MPCA/PFA grant funding
27	Flooding	Local Planning & Regulations	Ensure that wellhead protection plans are in place to address flooding that may lead to contaminated drinking water.	New	High	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Public Works, SC SWCD, MN Dept of Health and local city and township public works depts.	Cities work directly with the Minnesota Department of Health on the development or update of wellhead protection plans to ensure they meet State requirements.	Steele County Public Health Budget, General funds, and staff time. MDH Source Water Protection grant funding for wellhead improvement projects
28	Flooding	Local Planning & Regulations	Work with the City of Owatonna to address raising control panels for traffic lights above flood level.	Ongoing	High	2023-2028	Steele County City of Owatonna	SC Public Works, City Public Works	Currently there is only one control panel that must be raised above flood level. All other traffic lights have been addressed.	Steele County Highway/City PW Budgets, General Funds and Staff time.

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
29	Flooding	Local Planning & Regulations	Identify properties that experience damage from repetitive flooding, and work with property owners to buy out structures and turn into open-space.	New	High	2023-2028	Steele County Blooming Prairie, Ellendale, Medford, Owatonna	SC Emergency Management, SC Envr. Services, and City Admin.	This is an ongoing effort of Steele County in conjunction with the cities of Blooming Prairie, Ellendale, Medford, and Owatonna.	Steele County Planning and Zoning Budget/City Planning Funding, General Funds, and staff time **Possible State Mitigation Fund, FEMA HMGP, FMA, BRIC grant funding for Property Acquisition**
30	Flooding	Education & Awareness Programs	Work to provide education to homeowners in all cities on green infrastructure methods to assist in local stormwater management.	New	High	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC SWCD, SC P&Z, and local city Public Works	The Steele County SWCD provides information and technical assistance as needed to communities to learn about and implement green infrastructure projects to help reduce localized flood damages and reduce erosion.	Steele County SWCD budget, General Funds, and Staff Time. **Possible FEMA HMA, HMGP, BRIC Funding for Green Infrastructure Projects**
31	All-Hazards	Mitigation Preparedness & Response	Use of NOAA radios and purchase program.	New	High	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna, All Townships	SC Emergency Management in coordination with townships and local cities.	Priority for Owatonna Township, Meriden, Havana, and Somerset due to campgrounds and low-lying river areas.	Steele County/City/Township General Funding, and Staff Time **Possible FEMA HMGP 5% Initiative grant funding**
32	Flooding	Mitigation Preparedness & Response	Add Automated river gauges	New	High	2023-2028	Steele County, Specific Townships for Riverview Campground, Owatonna Township and Somerset Township	SC Emergency Management in coordination with townships and local cities.	Priority for Owatonna Township and Somerset due to campgrounds and low-lying river areas.	Steele County/City/Township General Funding, and Staff Time **Possible grant funding from USGS and USACE**

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
33	Solar Farms	Structure & Infrastructure Projects	Identify future issues and possible solutions	New	Moderate	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna, All Township Governments	SC Emergency Management, SC Public Works, SC GIS, and local city and township public works. Township governments	Panels could fill landfills, windfarms could affect aerial wildlife.	Steele County Landfill Budget, General Funding, and Staff Time.
34	All Hazards	Mitigation Preparedness & Response	Promote the use of generators and having a back up energy (such as solar panels) and/or heat source during loss of power during rolling blackouts.	New	High	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna, All Township Governments	SC Emergency Management, Utility Companies, and local city and township governments	Loss of power during all hazard events including rolling blackouts will need alternative energy sources, including installation of generators and solar panels or other green infrastructure.	Steele County/City/Township General Funding, and Staff Time
35	All Hazards	Mitigation Preparedness & Response	Promote the culvert inventory project with Steele County GIS	New	Moderate	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna, All Townships	SC Emergency Management, SC Public Works, SC GIS, and local city and township public works. Township governments	Inventory all culverts location, size and year built to help with projects	Steele County Highway/GIS Department/City PW Budgets, General Funds and Staff time.,
36	Flooding	Mitigation Preparedness & Response	Identify critical infrastructure located in the floodplain to develop protection flood response plan	New	Moderate	2023-2028	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna, All Townships	SC Emergency Management, SC Public Works, SC GIS, and local city and township public works. Township governments	Inventory all critical infrastructure in the floodplain and develop flood response plan for protecting the asset	Steele County Highway/GIS Department/City PW Budgets, General Funds and Staff time.,

Appendix H
Past Mitigation Action Review
Status Report (2017-2024)

Table of Contents

COMPLETED

The following mitigation actions from the past MHMP have been completed and will be removed from the plan update.

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
7	Severe Winter & Summer Storms	Mitigation Preparedness and Response Support	Ensure that plans are in place for emergency sheltering and that designated shelter facilities are identified.	Ongoing	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Emergency Management in coordination with City EM's	Steele County has a shelter plan and has trained CERT members how to open the shelter at the National Guard Armory in Owatonna. The Armory is a State-designated shelter facility, and helps to ensure our preparedness to meet the needs of local residents and travelers. Completed by all cities and Steele County	County/City Funding
11	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Work to ensure that all cities have battery backup on traffic lights and warning sirens in the event of power outages from severe winter/ summer storms.	New	Moderate	2017-2024	Steele County, Owatonna	SC Emergency Management, City Admin & Public Works	All the traffic lights in the City of Owatonna have battery backup on traffic lights. Completed by all cities and Steele County	County/City Budgets
15	Severe Winter & Summer Storms	Natural Systems Protection	Work with municipal and rural coop utility companies to inventory, trim, or cut down trees that are growing by electric lines to reduce risk of power outages during winter or summer storms.	Ongoing	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Highway Department, City EM's, Steele-Waseca Cooperative Electric, and municipal utilities (Owatonna P.U. and Blooming Prairie P.U.)	This is an ongoing effort of Steele County Public Works in cooperation with utilities. Keeping power lines clear of trees will help to reduce the risk of power outages from downed lines during storms. Completed by all cities and power utilities on an annual basis	City Municipal Utility and Rural Utility Coop Funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
16	Severe Winter Storms	Mitigation Preparedness and Response Support	Continue to coordinate emergency transportation plans & procedures with the Minnesota Department of Transportation to prepare for emergency shut-down of I-35 during severe winter storms and to provide for the safe sheltering of stranded motorists.	Ongoing	High	2017-2024	Steele County	SC Emergency Management, MN DOT	Steele County has been designated as an Interstate 35 closing point for Winter Weather by the Minnesota Department of Transportation. Emergency Plans have been developed to facilitation the closing of the freeway and opening of a shelter at the National Guard Armory. The Steele County Emergency Manager works with the County Highway Department and Minnesota Department of Transportation to limit travel on major county highways during hazardous driving conditions by blocking entrances to the major highways using freeway gates. Completed by MNDOT, State Patrol and Steele County in 2021 and 2022	County/ MN DOT
30	Flooding	Local Planning & Regulations	Ensure that wellhead protection plans are in place to address flooding that may lead to contaminated drinking water.	New	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Public Works, SC SWCD, MN Dept of Health and local city and township public works depts.	Cities work directly with the Minnesota Department of Health on the development or update of wellhead protection plans to ensure they meet State requirements. Completed by all cities	MDH Source Water Protection grant funding for wellhead improvement projects
31	Flooding	Local Planning & Regulations	Work with the City of Owatonna to address raising control panels for traffic lights above flood level.	Ongoing	High	2017-2024	Steele County City of Owatonna	SC Public Works, City Public Works	Currently there is only control panel that must be raised above flood level. All other traffic lights have been addressed. Completed by the City of Owatonna	County/City Budgets
20	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	Ongoing	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna and School Districts	SC Emergency Management, HC Public Health, in coordination with townships and local cities	Any community safe room projects that the County is involved in will be part of the Steele County Emergency Management program. SC Emergency Management will work with any school or jurisdiction seeking to develop an application to FEMA for a safe room project. Remove this item due to being a duplicate item listed in #19	County/City budgets Possible FEMA HMA funding for Safe Room Construction

NOT COMPLETED
(ONGOING/KEEP FOR PLAN UPDATE)

The following mitigation actions from the past MHMP have not been completed, have been deemed as still relevant and will be carried over into the plan update. Actions will be revised as necessary.

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
1	All-Hazards	Education & Awareness Programs	Work to ensure that all Steele County residents are aware of and sign-up for the Everbridge emergency notification system.	Ongoing	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Emergency Management in coordination with local city and township government	This is a standing effort of the Steele County Emergency Management Program. Sign-up for Everbridge is available on the Steele County Emergency Management website and reminders are also put out via Facebook. Cities also work to promote sign-up by local residents by sharing information on city websites and announcements at public meetings. The Steele County CERT (Community Emergency Response Team) may be used to help encourage residents to sign up for Everbridge and understand the different options when registering for this service.	County Budget using General funds for Public Safety
2	All-Hazards	Mitigation Preparedness & Response Support	Ensure that Steele County and its cities have multiple methods established to relay emergency notifications to all segments of the public.	Ongoing	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Emergency Management in coordination with City Emergency Managers	Steele County residents receive emergency warnings through the PSAP with IPAWs, the Everbridge Emergency Warning System, NOAA All-Hazard Radios, and through the outdoor emergency warning siren system using voice and siren. The County also addresses the language barriers in communicating disaster preparedness information and disaster warnings to non-English population groups. This information is provided through ECHO (Emergency Communication Health Outreach). ECHO increases access to life-saving emergency information by facilitating efficient mass media messaging in multiple languages.	County/City Budgets using General funds for Public Safety
#	**Hazard**	**Mitigation Strategy**	**Mitigation Action**	**Status**	**Priority Ranking**	**Time- frame**	**Jurisdictions**	**Responsibility**	**County Comments on Planning Mechanisms for Implementation**	**Possible Funding**

3	All-Hazards	Mitigation Preparedness & Response Support	Promote, grow, and strengthen Steele County's local CERT (Community Emergency Response Team) and CAER (Community Awareness Emergency Response) groups.	Ongoing	High	2017-2024	Steele County	SC Emergency Management in coordination with CERT and CAER groups	The Steele County CERT and CAER groups are an important element of the Steele County Emergency Management Program. We will seek to continue to promote and strengthen these groups with additional outreach to local residents, organizations, and businesses.	County Budget using General funds for Emergency Management and donations
4	All-Hazards	Mitigation Preparedness & Response Support	Expand, train and organize Ham Radio Operators to enhance communications.	Ongoing	Moderate	2017-2024	Steele County	SC Emergency Management	Steele County has trained instructors that provide annual amateur radio instruction and testing. The group also holds regular meetings and participates in field days.	County Budget using General funds for Emergency Management
5	All-Hazards	Mitigation Preparedness & Response Support	Continue to foster partnerships with surrounding counties to create regional partnerships that support emergency preparedness, response, and recovery.	Ongoing	High	2017-2024	Steele County	SC Emergency Management	Steele County Emergency Management participates in a Joint Powers Board, which consists of Emergency Management Directors from Homeland Security Emergency Management Region 1. There are monthly meetings to promote regional initiatives.	County Budget using General funds for Emergency Management
6	All-Hazards	Education & Awareness Programs	Work to promote emergency preparedness for local residents.	Ongoing	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Emergency Management in coordination with City EM's	This is a standing effort of the Steele County Emergency Management Program. The County provides emergency preparedness presentations to cover information such as developing family emergency plans, develop go-kits, push for Everbridge sign up, etc. City EM's also work to provide this same information at the local level.	County/City Budget using General funds for Emergency Management
8	All-Hazards	Mitigation Preparedness & Response Support	Purchase more 800 mhz radios for CERT and other groups to use after a disaster.	New	Moderate	2017-2024	Steele County	SC Emergency Management	Steele County Emergency Management constantly is working to improve its inventory of response equipment.	County Budget using General funds for Emergency Management

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
9	Severe Winter & Summer Storms	Mitigation Preparedness and Response Support	Identify critical facilities or infrastructure that do not have backup power in the event of a major power outage resulting from severe winter or summer storms. *(Critical facilities may include: police/fire departments, EOC, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).*	New	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Emergency Management, City Admin & Public Works	County buildings (Admin & SCHA) are high priorities for backup generators in the event of a power outage. The County Admin building serves as a hub for County operations (IT, Treasurer, Board of Commissioners, P&Z, Assessors, etc.) and will serve as a command center in the event of a disaster. City jurisdictions have also identified a need for backup power for government buildings or other critical facilities or infrastructure.	County/City budgets **General funding under capital improvement plan**
10	Severe Winter & Summer Storms	Mitigation Preparedness and Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that require backup power.	New	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Emergency Management, City Admin & Public Works	Steele County, local city governments, and schools will evaluate feasibility to purchase and install generators for key facilities.	County/City Budgets **Possible FEMA HMA 5% Initiative Funding for Generators**
12	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with rural electrical coops and municipal utilities to identify and address mitigation measures for above ground power lines that are susceptible to damage from severe storms (i.e., strengthening/burying) in order to reduce potential power outages.	New	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	Steele-Waseca Cooperative Electric in cooperation with Steele County and city municipal utilities (Owatonna P.U. and Blooming Prairie P.U.)	The (Steele-Waseca Cooperative Electric) SWCE continues to protect the electrical distribution system by continuously doing line and pole inspections, trimming trees and vegetation that imperil power lines and inspecting underground power lines. SWCE will look for opportunities to protect the power distribution system by reinforcing transmission lines or burying lines underground when feasible. The Steele County Emergency Manager, Utilities and CAER group continue to work with the County Planning Commission and staff to modify county subdivision regulations to require burial of all new power distribution lines before any new subdivision plats will be approved, if feasible.	Electric Coop Funding, **Possible FEMA HMA funding for Infrastructure Retrofit,** Rural Utility Service (RUS), and CSC funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
13	Severe Winter & Summer Storms	Mitigation Preparedness and Response Support	Work to improve the coverage of Doppler radar for Steele County.	Ongoing	High	2017-2024	Steele County	SC Emergency Management	This is an Ongoing effort of the Steele County Emergency Management Program. Because of the distance from the Doppler radar in Chanhassen, smaller tornadoes are difficult to identify on radar. SKYWARN spotters are not activated and are not used in the dark. Steele County residents are vulnerable to tornados at night that cannot be spotted or identified on radar. Steele County will continue to work to obtain more Doppler radar to cover all areas of Steele County.	County/City budgets **General funding under capital improvement plan or working with AMEM for State Legislators for State General Funding**
14	Severe Winter & Summer Storms	Mitigation Preparedness and Response Support	Promote the use of NOAA weather radios as a key communications resource for residents, businesses, and facilities that house vulnerable populations (i.e., nursing homes, group homes, senior centers, and day care facilities).	Ongoing	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Emergency Management in coordination with City EM's	This is a standing effort of the Steele County Emergency Management Program. Grant funding was used to provide NOAA All Hazard Weather Radios in Schools and Public Gathering Points in Owatonna. Weather Radios have been promoted through SKYWARN and anyone that purchases a NOAA Weather Radio can drop it off at the Owatonna Fire Station and SKYWARN members will program it for free to the Steele County Codes. Promotion of the value of NOAA weather radios is also a part of Steele County's annual participation in the NWS spring and winter Severe Weather Awareness Weeks in April and November.	County/City Budgets General Funding under Emergency Management
17	Severe Summer Storms	Mitigation Preparedness & Response Support	Provide/participate in the National Weather Service's SKYWARN "Storm Spotter" training in various parts of the County for first responders and community residents.	Ongoing	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	Emergency Management in collaboration with local cities and NWS	This is a standing part of the Steele County Emergency Management Program. Steele County has trained National Weather Service SKYWARN Instructors who provide annual training sessions for community volunteers, law enforcement, and fire departments. We will continue to encourage more volunteers to become active in the severe storm spotters network (SKYWARN, CERT, Ham Radio, etc.).	County Budget General Funding under Emergency Management and donations deliver program

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
18	Severe Summer Storms	Mitigation Preparedness & Response Support	Continue to strengthen the Steele County SKYWARN program by creating maps and GPS tools that can be used by our network of storm spotters across the county, and work to coordinate safe participation by all storm spotters.	Ongoing	High	2017-2024	Steele County	SC Emergency Management	Steele County used grant funds to purchase 5 wind speed gauges used by SKYWARN. The SKYWARN/RADIO base has GR level 3 radar software with a goal of purchasing level. The County has also provided Instant Alert for 2 years, internet access in the base, and the GIS person works closely with the group for maps/map tools. Computers, furniture and printing needs have been donated by various local businesses. The SKYWARN program has a response plan that assigns spotters to predetermined locations within the county that have been identified as safe spotting locations with good vantage points. What remains to be done is coordinate all spotters within the county. This includes Steele County SKYWARN, Law Enforcement Spotters, and Fire Department spotters.	County Budget General Funding under Emergency Management and donations deliver program
19	Severe Summer Storms	Structure and Infrastructure Projects	Identify areas where vulnerable populations are susceptible to tornadoes or extreme wind events (i.e. schools, campgrounds, or RV/ mobile home parks) and evaluate for construction or retrofit of safe rooms or storm shelters.	Ongoing	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna and School Districts	Emergency Management, HC Public Health, in coordination with townships and local cities	Tornadoes are one of the top ranked natural hazard that pose risk to Steele County. Steele County Emergency Management and City Emergency Managers will work to identify where safe room construction or retrofit is needed and may be feasible and work to explore advancing a safe room project.	**County/City Budgets General Funding and Possible FEMA HMA, BRIC funding for Safe Rooms**
21	Severe Summer Storms	Mitigation Preparedness & Response Support	Upgrade the warning siren paging system to newer technologies, and identify areas for voice sirens.	Ongoing	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Emergency Management in coordination with townships and local cities	New outdoor emergency warning sirens were installed in Ellendale, Blooming Prairie and Owatonna. In Owatonna the siren system was completely replaced with new sirens and voice sirens were installed at Lake Kohlmeyer, Downtown, the water park and at the Steele County Fairgrounds. A new voice siren was also recently installed at the Brooktree Golf course.	County/City Budget General Funds or Donations

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
22	Severe Summer Storms	Education & Awareness Programs	Provide public awareness & education of what the warning sirens mean and what safety measures to take when they are activated.	Ongoing	High	2017-2024	Steele County	SC Emergency Management	This is accomplished through a media campaign for Severe Weather Awareness Week with the National Weather Service. Steele County also participates in the Statewide Tornado Drill in April each year.	County/City Budget General Funds or Donations
23	Severe Summer Storms	Education & Awareness Programs	Provide awareness and education to homeowners and businesses on measures to decrease the vulnerability of homes and public buildings from damage from lightning strikes.	Ongoing	Moderate	2017-2024	Steele County	SC Emergency Management and Municipal Public Utility providers	This is accomplished through information from the public utilities.	County/City Budget General Funds, Donations or Utility Funding
24	Extreme Temps (Heat / Cold)	Education & Awareness Programs	Educate the public on the dangers of extreme heat or extreme cold and how to take personal safety measures during periods of extreme temperatures.	Ongoing	High	2017-2024	Steele County	SC Emergency Management, SC Public Health and School District Staff	This is done as part of the NWS annual spring and winter severe weather awareness weeks. It is also done during actual periods of extreme temperatures. Information on staying safe during periods of extreme heat or cold is relayed to the public through channels such as radio, TV, and Facebook.	County/City Budget General Funds or Donations
25	Extreme Temps (Hot / Cold)	Mitigation Preparedness & Response Support	Develop plans to respond to extreme temperatures situations in Steele County.	Ongoing	Moderate	2017-2024	Steele County	SC Emergency Management and SC Public Health	In the event of a severe heat or cold temperature event that posed risk to public safety, Steele County Emergency Management would work with Public Health to release information to the public about personal safety measures.	County/City Budget General Funds or Donations
26	Flooding	Local Planning & Regulations	Upgrade the Steele County and local city culvert plans and prioritize most vulnerable areas. Include buffer strips in most vulnerable areas.	Ongoing	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Highway Dept., SC Public Works	This is a standing effort of the Steele County Highway Department and local city Public Works programs.	County/City Budget General Funds

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
27	Flooding	Structure and Infrastructure Projects	Identify areas of concern at areas around bridges and culverts to mitigate erosion and soil stabilization issues.	Ongoing	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Highway Dept., SC Public Works, City & Township public works	This is a standing effort of the Steele County Highway Department/Public Works and of each city's public works department.	County/City/ Township Budgets General Funds
28	Flooding	Local Planning & Regulations	Identify, map, and prioritize roads in the County and cities & townships that are impacted by flood events, and implement required mitigation measures to reduce future flood damages.	Ongoing	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna, All Townships	SC Highway Dept., SC Public Works, SC GIS, and local city and township public works	This is a standing effort of the Steele County Highway Department/Public Works.	County/City Budgets, State Aid Funding, **Possible FEMA HMA, FMA, BRIC funding for Localized Flood Reduction Projects**
29	Flooding	Local Planning & Regulations	Develop stormwater management plans and improve stormwater management systems at the county and city level.	Ongoing	New	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna, All Townships	SC Envr. Services, SC SWCD and local city public works depts., MN DNR, MPCA, and Watershed Plans	Steele County maintains a County Water Plan and a Watershed Plan which both address stormwater management planning and projects. The County is working to identify upland areas to hold water to help reduce the impact of stormwater flow.	County/SWCD budgets,General Funds, Clean Water Fund, Possible MPCA/PFA grant funding
32	Flooding/ Erosion	Natural Systems Protection	Work to reduce erosion to streambanks and bridges due to flooding throughout the County.	Ongoing	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC Highway Dept., SC Public Works in coordination with local city EM's, Public Works depts., SC Env Services, SC SWCD, and Watershed plans	Steele County and many communities experience high erosion due to flooding, including impacts to bridge areas and streambanks being severely cut away. Steele County and each city is working to identify and implement measures to reduce erosion. We will work in coordination with the Watershed plans.	County/City Budgets, General Funds, **Possible FEMA HMA, BRIC grant funding for Localized Flood Reduction Projects**, and Clean Water Act Fund

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
33	Flooding	Local Planning & Regulations	Identify properties that experience damage from repetitive flooding, and work with property owners to buy out structures and turn into open-space.	New	High	2017-2024	Steele County Ellendale, Medford, Owatonna	SC Emergency Management, SC Envr. Services, and City Admin.	This is an ongoing effort of Steele County in conjunction with the cities of Ellendale, Medford, and Owatonna. The City of Blooming Prairie is not within the floodplain.	County/City Funding, **Possible FEMA HMA, FMA, BRIC grant funding for Property Acquisition**
34	Flooding	Education & Awareness Programs	Work to provide education to homeowners in all cities on green infrastructure methods to assist in local stormwater management.	New	High	2017-2024	Steele County, Blooming Prairie, Ellendale, Medford, Owatonna	SC SWCD, SC P&Z, and local city Public Works	The Steele County SWCD provides information and technical assistance as needed to communities to learn about and implement green infrastructure projects to help reduce localized flood damages and reduce erosion.	SWCD budget, general funding, donations or **Possible FEMA HMA, BRIC Funding for Green Infrastructure Projects**

NOT COMPLETED
(DELETE)

The following mitigation actions from the past MHMP have been deemed as not relevant and will be removed from the plan update.

No mitigation actions were deleted from the 2017 plan.

Appendix I
Works Cited

Adaptation Clearinghouse
Minnesota Interagency Climate Adaptation Team. November 2013. *Adaptation Clearinghouse*. [Accessed July 15, 2023]. https://www.adaptationclearinghouse.org/resources/adapting-to-climate-change-in-minnesota-2013-report-of-the-interagency-climate-adaptation-team.html

Anderson, G., & Bell, M. (2011)
Heat Waves in the United States: Mortality Risk during Heat Waves and Effect Modification by Heat Wave Characteristics in 43 U.S. Communities. *Environmental Health Perspectives*, 210-218.

Blitzortung
https://www.blitzortung.org

Brooks H, Carbin G, & Marsh P. 2014.
Increased Variability Of Tornado Occurrence In The United States. Science Vol 346 (6207): 349-352 DOI: 10.1126/science.125746

Chandler V.W., 2014. Earthquakes. *University Of Minnesota College of Science and Engineering*.
https://cse.umn.edu/mgs/earthquakes

Del Genio, A., Yao, M., & Jonas, J. (2007)
Will moist convection be stronger in a warmer climate? Geophys. Res. Lett. Federal Advisory Committee Draft National Climate Assessment (NCA)

Federal Emergency Management Agency (FEMA)
National Risk Index (NRI)
https://hazards.fema.gov/nri/strong-wind
https://hazards.fema.gov/nri/community-resilience
https://hazards.fema.gov/nri/social-vulnerability
https://hazards.fema.gov/nri/expected-annual-loss
https://hazards.fema.gov/nri/understanding-scores-ratings
https://hazards.fema.gov/nri/literature-review
FARCGIS. 2022. Community Disaster Resilience Zones Viewer
https://experience.arcgis.com/experience/e3bb8cb79d124a0ca38a05e48afb6fd6/page/Community-Disaster-Resilience-Zone-Viewer/
Severe Repetitive Loss Properties. *NFIP Flood Insurance Manual*
https://www.fema.gov/sites/default/files/2020-05/fim_appendix-i-severe-repetitive-loss-properties_apr2020.pdf
Hazus. 2022. Flood Hazard
https://www.fema.gov/flood-maps/products-tools/hazus
Natural Hazard Mitigation Saves Interim Report (2017)
https://www.fema.gov/sites/default/files/2020-07/fema_ms2_interim_report_2017.pdf
NFIP's Pricing Approach. *Flood Insurance*
https://www.fema.gov/flood-insurance/risk-rating
NFIP Minnesota Rate Analysis Comparison. *FEMA Risk Rating 2.0*
https://www.fema.gov/sites/default/files/documents/fema_mn-new-methodology-vs-old-methodology_narrative.pdf

Georgakakos, A., P. Fleming, M. Dettinger, C. Peters-Lidard, Terese (T.C.) Richmond, K. Reckhow, K. White, and D. Yates, 2014: Ch. 3: Water Resources. Climate Change Impacts in the United States: The Third National Climate Assessment, J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 69-112.
https://nca2014.globalchange.gov/report/sectors/water

Hales, D., Hohenstein, W., Bidwell, M. D., Landry, C., McGranahan, D., Molnar, J., . . . Jadin, J. (2014). Climate Change Impacts in the United States: The Third National Climate Assessment. Washington, D.C.: U.S. Global Change Research Program.Harold Brooks, Gregory Carbin, and Patrick Marsh (2014)

Intellicast
https://www.wunderground.com/intellicast
International Residential Code
https://www.iccsafe.org/products-and-services/i-codes/2018-i-codes/irc/

Khatana S, Werner R, Groeneveld P. 2022. Association of Extreme Heat With All-Cause Mortality In The Contiguous US, 2008-2017. *JAMA Netw Open.* 2022;5(5):e2212957. https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2792389
Kunkel, K. E., Stevens, L. E., Stevens, S. E., Sun, L., Janssen, E., Wuebbles, D. J., Hilberg, S. D., Timlin, M. S., Stoecker, L. A., Westcott, N. E., & Dobson, G. J. (2013). *Regional Climate Trends And Scenarios For The U.S. National Climate Assessment Part 3: Climate Of The Midwest U.S.* NOAA.

Lightning Maps
https://www.lightningmaps.org

Minnesota Board of Water Soil Resources (2019). WCA Program Guidance and Information.
https://bwsr.state.mn.us/wca-program-guidance-and-information
Minnesota Department of Agriculture
https://gisdata.mn.gov/dataset/water-aquifer-vulnerability
Minnesota Department of Health
Planning for climate and health impacts: Emergency management considerations.
https://www.health.state.mn.us/communities/environment/climate/data.html
Minnesota Department of Health
Advancing Health & Disaster Resiliency in Minnesota, CO-PRODUCING CLIMATE & HEALTH INFORMATION FOR THE EMERGENCY MANAGEMENT SECTOR. Updated January 26, 2022.
https://www.health.state.mn.us/communities/environment/climate/docs/advhlthdisastr.pdf
Minnesota Department of Labor and Industry
https://www.dli.mn.gov/business/codes-and-laws/overview-minnesota-state-building-code
Minnesota Department of Natural Resources
Climate Change Fact Sheet
https://files.dnr.state.mn.us/natural_resources/climate/change/climatechange-factsheet.pdf
Infested Waters
https://www.dnr.state.mn.us/invasives/ais/infested.html
Dam Safety Program
https://www.dnr.state.mn.us/waters/surfacewater_section/damsafety/index.html
Straight River At Owatonna, W Bridge St.
https://www.dnr.state.mn.us/waters/csg/site.html?id=39042001
Minnesota Environmental Quality Board. Minnesota and Climate Change: Our Tomorrow Starts Today.
https://www.eqb.state.mn.us/minnesota-and-climate-change-our-tomorrow-starts-today
Minnesota Historical Society
https://www.mnhs.org/mnhspress
Minnesota Pollution Control Agency: Adapting to Climate Change in Minnesota
https://www.pca.state.mn.us/sites/default/files/p-gen4-07c.pdf
Minnesota Rules Chapter 1309: *Revisor of Statutes.*
https://www.revisor.mn.gov/rules/pdf/1309/2020-03-31%2011:43:26+00:00
Minnesota State Hazard Mitigation Plan (2019)
https://dps.mn.gov/divisions/hsem/hazard-mitigation/Pages/state-hazard-mitigation-plan.aspx
Minnesota Weather Almanac (2015)

Mueller, B., & Seneviratne, S. (2012). Hot days induced by precipitation deficits at the global scale. *Proceedings from the National Academy of Sciences*, 12,398-12,403.

Multi-Hazard Mitigation Council

https://www.ncei.noaa.gov/access/billions

National Centers for Environmental Information (NCEI)
https://www.ncei.noaa.gov/access/billions/,

National Climate Assessment Development Advisory Committee
https://www.globalchange.gov/our-work/fifth-national-climate-assessment

National Oceanic and Atmospheric Administration (NOAAA)

Advanced Hydrologic Prediction Service (AHPS)
https://toolkit.climate.gov/tool/advanced-hydrologic-prediction-service
National Weather Service (NWS)
https://www.weather.gov/mpx/HistoricStormDecember2021
Storm Prediction Center (SPC)
https://www.spc.noaa.gov/faq/tornado/ef-scale.html
Straight River Hydrograph (Faribault)
https://water.weather.gov/ahps2/hydrograph.php?wfo=mpx&gage=frbm5
National Severe Storms Laboratory (NSSL)
https://www.nssl.noaa.gov/

Perera, E. M., Sanford, T., White-Newsome, J. L., Kalkstein, L. S., Vanos, J. K., & Weir, K. (2012). Heat in the Heartland. *Climate Change and Your Health*.

Pryor, S., Scavia, D., Downer, C., Gaden, M., Iverson, L., Nordstrom, R., . . . Robertson, G. (2014).

Climate Change Impacts in the United States: The Third National Climate Assessment, Ch. 18: Midwest. Washington, D.C.: U.S. Global Change Research Program.

Seeley, M. 2015. *Minnesota weather almanac: Second edition, completely updated for the new normals*. Minnesota Historical Society Press

State of Minnesota Multi Hazards Identification Risk Assessment.

U.S. Department of Agriculture
https://www.nass.usda.gov/Publications/AgCensus/2017/index.php U.S. Department of Energy

U.S. Army, 2023. National Inventory of Dams
https://nid.sec.usace.army.mil/#/dams/search/sy=@countyState:Steele,%20Minnesota&viewType

=map&resultsType=dams&advanced=false&hideList=false&eventSystem=false

U.S. Department of Energy

https://www.oe.netl.doe.gov/OE417_annual_summary.aspx

U.S. Geological Survey GAP
https://www.usgs.gov/programs/gap-analysis-project
U.S. Global Change Research Program (NCA), 2022

https://www.globalchange.gov/our-work/national-climate-assessment

University of Minnesota College of Science and Engineering (2014)

Weatherbase
https://www.weatherbase.com

Wetland Conservation Act
https://bwsr.state.mn.us/wca-program-guidance-and-information

Appendix J
Steele County Plans & Programs in Place

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Planning & Regulatory			
Plans/Programs	**Yes/No**	**Plans/Programs**	**Yes/No**
Comprehensive/Master Plan	Yes	Zoning ordinance	Yes
Capital Improvements Plan	Yes	Subdivision ordinance	Yes
Economic Development Plan	Yes	Floodplain ordinance	Yes
Emergency Operations Plan	Yes	Burning permits/restrictions	Yes
Continuity of Operations Plan	Yes	Flood insurance rate maps	Yes
Transportation Plan	Yes	NOAA Weather Radios	Yes
Stormwater Management Plan	Yes	THIRA	Yes
Ditch System Jurisdiction	Yes	Storm shelters (list all locations)	Yes
Community Rating System	No	Warning sirens (list all locations)	Yes
Community Wildfire Protection Plan	No	SKYWARN Storm Spotter Program	Yes
FireWise Program	No	Mass Notification System	Yes
Watershed Management Plan	Yes	Severe Weather Awareness Week	Yes
Wellhead Protection Plan	Yes	Winter Weather Awareness Week	Yes
Dry hydrants/well access maps	Yes		
Acquisition of land for open space and public recreation uses	Yes	Natural hazard specific ordinance (stormwater, steep slope, wildfire)	No
Water Conservation/Emergency Preparedness Plan	Yes	School closing policy/communications plan in event of inclement weather/temperatures	Yes

Administrative & Technical			
Administration	**Yes/No**	**Technical**	**Yes/No**
Planning Commission	Yes	Warning systems/services (Reverse 911, outdoor warning signals)	Yes
Mitigation Planning Steering Committee	Yes	Hazard data and information	Yes
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	Yes	HAZUS analysis	No
Mutual aid agreements	Yes		

Staff	Yes/No
Chief Building Official	Yes
Floodplain Administrator	Yes
Emergency Manager	Yes
Community Planner	Yes
Civil Engineer	Yes
GIS Coordinator	Yes

Education and Outreach	
Program/Organization	**Yes/No**
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes
Natural disaster or safety related school programs	Yes
StormReady Certification	Yes
WeatherReady Nation Ambassador	Yes
Firewise Communities Certification	No
Public-private partnership initiatives addressing disaster-related issues	Yes

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Appendix K
Local Mitigation Capabilities Assessment Report

Table of Contents

STEELE COUNTY

2023 Local Mitigation Capabilities Assessment Report

As part of the 2023 Steele County Multi-Hazard Mitigation Plan update, city and township jurisdictions as well as County departments were invited to respond to a "Local township, city, and public survey" questionnaire to provide information about the current capabilities they have in place to support hazard mitigation, as well as any identified gaps or deficiencies. Information from the surveys along with individual meetings to assist in developing new mitigation actions for the 2023 plan update. Following are the responses from those departments or jurisdictions that participated.

Steele County, MN

Meeting with Kristen Sailer, Emergency Management Director, and Dale Oolman, Planning & Zoning Director on June 22, 2023

Q1. What <u>plans, authorities, or policies</u> are in place to help accomplish mitigation in your community?

- The County has an ordinance book.
- The County has a strategic plan and comprehensive plan.
- Steele County used the Armory for sheltering in 2019, 2021 and 2022. Steele County update the shelter plans and response kits, forms and training in 2021, 2022, and exercised set up in February, 2023.

Q2. What staff (organizational capacity) are in place to help accomplish mitigation in your community?

- The County has a Planning & Zoning Director and acts as the Floodplain Administrator
- The County appointed a Full-time Emergency Management Director and developed a new Emergency Management Department
- The County has a Township Fire Association
- The County has a Full-time GIS Director

Q3. What <u>programs</u> are in place to help accomplish mitigation in your community?

- The County participates in the NFIP.
- The County participates in the Steele County Emergency Alert System and provides emergency notification on the County's website and facebook sites.
- The County participates in Severe Weather, Winter Weather Hazard weeks.
- The County was certified as StormReady County and WRN Ambassador in 2021.

Q4. What <u>funding or other resources</u> are available to help accomplish mitigation in your community?

- The County developed and continually reviews capital improvements budget for county infrastructure improvements.

Q5. What program gaps or deficiencies do you feel exist that are a barrier to accomplishing mitigation in your community?

- The County should update their ordinance book
- The County does not have generators for their main Administration building where the main network equipment and IT server room resides.
- The County should conduct a siren study for identifying updated siren technologies

CITY OF BLOOMING PRAIRIE, MN

Meeting with Kristen Sailer, Emergency Management Director, Melanie Aeschliman, City Administrator, and Terri Zweiner, Deputy City Administrator on July 20, 2023

Q1. What plans, authorities, or policies are in place to help accomplish mitigation in your community?

- The City of Blooming Prairie just completed their water emergency plan.
- The City Administrator represents Emergency Management, continually connected with the City Council on all the City's Commissions and Boards.
- The City Center during the 2019 snow event in Steele County used the facility for sheltering. Steele County updated the shelter response kits, forms and training in 2022.

Q2. What staff (organizational capacity) are in place to help accomplish mitigation in your community?

- The City has a Planning & Zoning Commission, Fire Commission, Police Commission and Ambulance Commission.
- The City of Blooming Prairie Emergency Manager is the full-time City Administrator that represents the City in any mitigation.

Q3. What programs are in place to help accomplish mitigation in your community?

- The City participates in the Steele County Emergency Alert System and provides emergency notification on the City's website.
- The Blooming Prairie Fire Dept. does fire drills annually during Fire Prevention week.

Q4. What funding or other resources are available to help accomplish mitigation in your community?

- The City continually reviews capital improvements budget for city infrastructure improvements.

Q5. What program gaps or deficiencies do you feel exist that are a barrier to accomplishing mitigation in your community?

- The City needs funding to eliminate sewer cross connections and street flooding along 2nd Street South.
- The City does not currently have a tornado safe facility that can be used by travelers.

CITY OF ELLENDALE, MN

Meeting with Kristen Sailer, Emergency Management Director, *Jerold Ibberson, City Emergency Manager, and Steve Engel, City Clerk/Treasurer on June 16, 2023.*

Q1. What plans, authorities, or policies are in place to help accomplish mitigation in your community?

- We participate in and are covered by the Steele County Mitigation plan.
- We adopted the Steele County EOP in 2021.
- The City has an ordinance book, codification manual.
- The City of Ellendale has a five year strategic plan.

Q2. What staff (organizational capacity) are in place to help accomplish mitigation in your community?

- We have a volunteer Emergency Manager and a volunteer Fire Chief.
- We have a city engineer Bolton and Menk contracted to the City.
- the mayor, city clerk, and councilman took ICS training

Q3. What programs are in place to help accomplish mitigation in your community?

- We have encouraged people to sign up for the county emergency alert system.
- Our school practices Tornado drills.
- We activated our shelters annually due to blizzards and I-35 road closures

Q4. What funding or other resources are available to help accomplish mitigation in your community?

- none, general tax funds.

Q5. What program gaps or deficiencies do you feel exist that are a barrier to accomplishing mitigation in your community?

- We could use funding to help establish a city tornado shelter, upgrade tornado sirens, and expand emergency power to city buildings.

CITY OF MEDFORD, MN

Meeting with Kristen Sailer, Emergency Management Director, *Rick Hager, City Emergency Manager, and Elizabeth Jackson, City Adminsitrator on July 18, 2023.*

Q1. What <u>plans, authorities, or policies</u> are in place to help accomplish mitigation in your community?

- We have a Comprehensive Plan (2020) that is designed to plan for the future physical growth of the city and appropriate land uses.
- We have a floodplain ordinance
- The City adopted the County Emergency Operations Plan in 2021.

Q2. What <u>staff</u> (organizational capacity) are in place to help accomplish mitigation in your community?

- Our Fire Chief is the City's designated Emergency Manager.
- We have a City Engineer and a Public Works Supervisor can address public works and infrastructure related mitigation projects (storm water outfalls, pumping systems, park infrastructure relocation, streambank stabilization, etc.)
- Our City Administrator is the floodplain administrator

Q3. What <u>programs</u> are in place to help accomplish mitigation in your community?

- The City does have a Floodplain ordinance and floodplain administrator.

Q4. What <u>funding or other resources</u> are available to help accomplish mitigation in your community?

- The City's general fund and FEMA awarded funds have paid for past flood response and recovery efforts in Medford. Mitigation efforts in the past have been limited.

Q5. What <u>program gaps or deficiencies</u> do you feel exist that are a barrier to accomplishing mitigation in your community?

- The City needs additional funding for mitigation planning.
- The City needs additional funding to implement mitigation of storm water outfalls, pumping systems, park infrastructure relocation, streambank stabilization, etc.

CITY OF OWATONNA, MN

Meeting with Kristen Sailer, Emergency Management Director, and *Ed Hoffman, Fire Chief and City Emergency Manager on July 17, 2023*

Q1. What plans, authorities, or policies are in place to help accomplish mitigation in your community?

- We have Development Plan (2020) that is designed to plan for the future physical growth of the city and appropriate land uses.
- We have a City Planning Commission that has established a Floodplain Ordinance. The City participates in the National Flood Insurance Program (NFIP).
- We have a Stormwater plan to stormwater and drainage improvements to reduce repetitive flooding.
- The city is working on a comprehensive plan to be completed in 2024.
- The city is monitoring and attempting to purchase private properties in the floodplain as opportunities come up.
- The city is reviewing city property within the flood plan to minimize risks.
- The city is working on a crisis communications plan.
- Our fire department does plan reviews of new constructions to ensure codes are followed concerning fire codes (which include ensuring emergency vehicle access)
- The city is working on its continuity of operations plans

Q2. What staff (organizational capacity) are in place to help accomplish mitigation in your community?

- Our Fire Chief is the City's designated Emergency Manager.
- The City has its own GIS Specialist
- We have a City Engineer/Public Works Director that addresses road maintenance issues for flooding (culverts, repetitive flooding)
- We have a Community Development Director that administers a flood buyout program for the City.
- The City has its own Communications Manager.
- The City has a Water Quality / Stormwater Specialist responsible for Owatonna's Stormwater Management Program

Q3. What programs are in place to help accomplish mitigation in your community?

- The City has an Emergency Alert System that residents can sign up for on our website. The City participates in the annual Severe Winter/Spring Weather Awareness Week
- Our schools practice tornado drills on an annual basis.
- We have a flood buyout program.
- We continue to maintain and improve our warning/siren systems.

Q4. What funding or other resources are available to help accomplish mitigation in your community?

- The City has worked with state and federal partners to address mitigation efforts following past flood disaster events.
- The City has utilized State funding to purchase and remove structures within the floodplain.

Q5. What program gaps or deficiencies do you feel exist that are a barrier to accomplishing mitigation in your community?

- The City needs additional funding to buy out properties and improve roads that experience repetitive flooding. Home values continue to rise and the price of homes are too high for buyout opportunities.

Appendix L
Local Mitigation Plan Review Tool

Special Note

The author of the MHMP included in Review Tool in Appendix L. References in the Review Tool are suggested locations in the plan that satisfy the requirements for each element. These suggestions are solely intended to assist the review by the approving agencies.

Element A Requirements	Location in Plan (section and/or page number)	Met / Not Met
A1. Does the plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement 44 CFR § 201.6(c)(1))		
A1-a. Does the plan document how the plan was prepared, including the schedule or time frame and activities that made up the plan's development, as well as who was involved?	Section 2 Public Planning Process	Choose an item.
A1-b. Does the plan list the jurisdiction(s) participating in the plan that seek approval, and describe how they participated in the planning process?	Section 1.1.1 Scope	Choose an item.

Cover Page

The Local Mitigation Plan Review Tool (PRT) demonstrates how the local mitigation plan meets the regulation in 44 CFR § 201.6 and offers states and FEMA Mitigation Planners an opportunity to provide feedback to the local governments, including special districts.

1. The Multi-Jurisdictional Summary Sheet is a worksheet that is used to document how each jurisdiction met the requirements of the plan elements (Planning Process; Risk Assessment; Mitigation Strategy; Plan Maintenance; Plan Update; and Plan Adoption).
2. The Plan Review Checklist summarizes FEMA's evaluation of whether the plan has addressed all requirements.

For greater clarification of the elements in the Plan Review Checklist, please see Section 4 of this guide. Definitions of the terms and phrases used in the PRT can be found in Appendix E of this guide.

Plan Information	
Jurisdiction(s)	Steele County
Title of Plan	Steele County Multi-Hazard Mitigation Plan
New Plan or Update	Update from 2017 MHMP
Single- or Multi-Jurisdiction	Multi-jurisdiction
Date of Plan	10/2/2023
Local Point of Contact	
Title	Director
Agency	Steele County Emergency Management
Address	630 Florence Ave; Owatonna, MN 55060
Phone Number	507-444-7501
Email	Kristen.Sailer@SteeleCountyMn.gov

Additional Point of Contact	
Title	Tom Karnauskas
Agency	Steele County Emergency Management
Address	630 Florence Ave; Owatonna, MN 55060
Phone Number	507-461-4521
Email	Thomas.Karnauskas@SteeleCountyMN.gov

Review Information	
State Review	
State Reviewer(s) and Title	Click or tap here to enter text.
State Review Date	Click or tap to enter a date.
FEMA Review	
FEMA Reviewer(s) and Title	Click or tap here to enter text.
Date Received in FEMA Region	Click or tap to enter a date.
Plan Not Approved	Click or tap to enter a date.
Plan Approvable Pending Adoption	Click or tap to enter a date.
Plan Approved	Click or tap to enter a date.

Multi-Jurisdictional Summary Sheet

#	Jurisdiction Name	Requirements Met (Y/N)						
		A. Planning Process	B. Risk Assessment	C. Mitigation Strategy	D. Plan Maintenance	E. Plan Update	F. Plan Adoption	G. State Requirements
1	Steele County	N	N	N	Y	N		N/A
2	City of Blooming Prairie	N	N	N	Y	N		N/A
3	City of Ellendale	N	N	N	Y	N		N/A
4	City of Medford	N	N	N	Y	N		N/A
5	City of Owatonna	N	N	N	Y	N		N/A
6	Auroral Township	N	N	N	Y	N		N/A
7	Berlin Township	N	N	N	Y	N		N/A
8	Blooming Prairie Township	N	N	N	Y	N		N/A
9	Clinton Falls Township	N	N	N	Y	N		N/A
10	Deerfield Township	N	N	N	Y	N		N/A
11	Havana Township	N	N	N	Y	N		N/A
12	Lemond Township	N	N	N	Y	N		N/A
13	Medford Township	N	N	N	Y	N		N/A
14	Meriden Township	N	N	N	Y	N		N/A
15	Merton Township	N	N	N	Y	N		N/A
16	Owatonna Township	N	N	N	Y	N		N/A
17	Somerset Township	N	N	N	Y	N		N/A
18	Summit Township/Village of Hope	N	N	N	Y	N		N/A

Plan Review Checklist

The Plan Review Checklist is completed by FEMA. States and local governments are encouraged, but not required, to use the PRT as a checklist to ensure all requirements have been met prior to submitting the plan for review and approval. The purpose of the checklist is to identify the location of relevant or applicable content in the plan by element/sub-element and to determine if each requirement has been "met" or "not met." FEMA completes the "required revisions" summary at the bottom of each element to clearly explain the revisions that are required for plan approval. Required revisions must be explained for each plan sub-element that is "not met." Sub-elements in each summary should be referenced using the appropriate numbers (A1, B3, etc.), where applicable. Requirements for each element and sub-element are described in detail in Section 4: Local Plan Requirements of this guide.

Plan updates must include information from the current planning process.

If some elements of the plan do not require an update, due to minimal or no changes between updates, the plan must document the reasons for that.

Multi-jurisdictional elements must cover information unique to all participating jurisdictions.

Element A: Planning Process

Element A Requirements	Location in Plan (section and/or page number)	Met / Not Met
A1. Does the plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement 44 CFR § 201.6(c)(1))		
A1-a. Does the plan document how the plan was prepared, including the schedule or time frame and activities that made up the plan's development, as well as who was involved? -Steele County staff added steering committee member titles per FEMA Review	Section 2, pp. 2.2 Appendix E Appendix F Appendix M: Table M-1 Table M-3 Public Planning Process	Not Met
A1-b. Does the plan list the jurisdiction(s) participating in the plan that seek approval, and describe how they participated in the planning process?	Section 1.1: p.1.3 Section 2.3: p. 2.2 Appendix F Appendix M: Table M-1, Table M-3	Met

Element A Requirements	Location in Plan (section and/or page number)	Met / Not Met
A2. Does the plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development as well as businesses, academia, and other private and non-profit interests to be involved in the planning process? (Requirement 44 CFR § 201.6(b)(2))		
A2-a. Does the plan identify all stakeholders involved or given an opportunity to be involved in the planning process, and how each stakeholder was presented with this opportunity?	Section 2: 2 Appendix F Appendix M Table M-1, Table M-3	Met
A3. Does the plan document how the public was involved in the planning process during the drafting stage and prior to plan approval? (Requirement 44 CFR § 201.6(b)(1))		
A3-a. Does the plan document how the public was given the opportunity to be involved in the planning process and how their feedback was included in the plan?	Appendix E: pp. E.2 Appendix F Appendix M: Table M-3	Met
A4. Does the plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement 44 CFR § 201.6(b)(3))		
A4-a. Does the plan document what existing plans, studies, reports and technical information were reviewed for the development of the plan, as well as how they were incorporated into the document?	Section 2.2: p.2.2 Appendix M: Table M-2 Appendix A: pp.A.22-A.27	Met
ELEMENT A REQUIRED REVISIONS		
Required Revision: A1-a. The plan provides documentation on members of the Steering Committee in table M-1. Many of the members are missing titles. Please add their titles to the table. Steele County staff added steering committee member titles.		

Element B: Risk Assessment

Element B Requirements	Location in Plan (section and/or page number)	Met / Not Met
B1. Does the plan include a description of the type, location, and extent of all natural hazards that can affect the jurisdiction? Does the plan also include information on previous occurrences of hazard events and on the probability of future hazard events? (Requirement 44 CFR § 201.6(c)(2)(i))		
B1-a. Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?	Tornadoes: pp. 4.10 – 4.11 Windstorms: p. 4.13 Lightning: p. 4.15 Hail: p. 4.17 Flash/Riverine Flood: p. 4.19 Severe Winter Storms: p. 4.22 Extreme Cold: p. 4.25 Extreme Heat: p. 4.26 Drought: p. 4.27 Wildfire: p. 4.28 Landslides and Soil Erosion: pp. 4.29 – 4.30 Dam Failure: p. 4.31 Earthquakes: p. 4.32 Appendix C Appendix M: Table M-10	Met

Element B Requirements	Location in Plan (section and/or page number)	Met / Not Met
B1-b. Does the plan include information on the location of each identified hazard?	Tornadoes: Map A-10 Windstorms: Map A-9 Lightning: Table C-8 Hail: p. 4.18, Table C-2 Flash/Riverine Flood: p. 4.19 – 4.20, Table C-4, Maps A-21 – A-26 Severe Winter Storms: p. 4.23, Table C-5 Extreme Cold: p. 4.25 Extreme Heat: pp. 4.26 – 4.27 Drought: pp. 4.27 – 4.28 Wildfire: p. 4.29, Map A-20 Landslides and Soil Erosion: p. 4.30, Map A-28 Dam Failure: p. 4.31, Map A-11, Table B-7 Earthquakes: p. 4.32, Map A-29 Appendix C	Met

Element B Requirements	Location in Plan (section and/or page number)	Met / Not Met
B1-c. Does the plan describe the extent for each identified hazard? Steele County staff added extent for each of the hazards	Tornadoes: p. 4.11 Windstorms: p. 4.13 Lightning: pp. 4.15 – 4.16 Hail: p. 4.17 Flash/Riverine Flood: p. 4.19 Severe Winter Storms: pp. 4.22 – 4.23 Extreme Cold: p. 4.25 Extreme Heat: p. 4.26 Drought: p. 4.27 Wildfire: p. 4.28 Landslides and Soil Erosion: pp. 4.29 – 4.30 Dam Failure: p. 4.31 Earthquakes: p. 4.32 Appendix A Appendix C	Not Met

Element B Requirements	Location in Plan (section and/or page number)	Met / Not Met
B1-d. Does the plan include the history of previous hazard events for each identified hazard?	Section 4.1: p. 4.9 Tornadoes: p. 4.11 Windstorms: p. 4.14 Lightning: p. 4.16, Table C-8 Hail: p. 4.18, Table C-2 Flash/Riverine Flood: pp. 4.19 – 4.20, Table C-4 Severe Winter Storms: p. 4.23, Table C-5 Extreme Cold: p. 4.25 Extreme Heat: p. 4.26, Table C-7 Drought: pp. 4.27 – 4.28 Wildfire: p. 4.29, Map A-20 Landslides and Soil Erosion: p. 4.30 Dam Failure: p. 4.31 Earthquakes: p. 4.32 Appendix C Appendix M: Table M-14, Table M-15, Table M-20	Met

Element B Requirements	Location in Plan (section and/or page number)	Met / Not Met
B1-e. Does the plan include the probability of future events for each identified hazard? Does the plan describe the effects of future conditions, including climate change (e.g., long-term weather patterns, average temperature and sea levels), on the type, location and range of anticipated intensities of identified hazards?	Section 4.3: p. 4.10 Tornadoes: p. 4.11 – 4.12 Windstorms: p. 4.14 Lightning: p. 4.16 Hail: p. 4.18 Flash/Riverine Flood: p. 4.21 Severe Winter Storms: p. 4.23 Extreme Cold: p. 4.25 Extreme Heat: pp. 4.26 – 4.27 Drought: p. 4.28 Wildfire: p. 4.29 Landslides and Soil Erosion: p. 4.30 Dam Failure: p. 4.31 Earthquakes: p. 4.32	Met
B1-f. For participating jurisdictions in a multi-jurisdictional plan, does the plan describe any hazards that are unique to and/or vary from those affecting the overall planning area?	Section 4.1: pp. 4.7 – 4.8 Tornadoes: p. 4.12 Windstorms: p. 4.14 Lightning: p. 4.16 Hail: p. 4.18 Flash/Riverine Flood: pp. 4.20 – 4.21, Table C-9, Map A-22 – A-26 Severe Winter Storms: p. 4.24 Extreme Cold: p. 4.25 Extreme Heat: p. 4.27 Drought: p. 4.28 Wildfire: p. 4.29 Landslides and Soil Erosion: p. 4.30, Map A-28 Dam Failure: p. 4.31 Earthquakes: p. 4.32 Appendix A Appendix C	Not Met

Element B Requirements	Location in Plan (section and/or page number)	Met / Not Met
B2. Does the plan include a summary of the jurisdiction's vulnerability and the impacts on the community from the identified hazards? Does this summary also address NFIP-insured structures that have been repetitively damaged by floods? (Requirement 44 CFR § 201.6(c)(2)(ii))		
B2-a. Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards?	Section 4.1: pp. 4.5 – 4.9 Section 4.2: p. 4.10 Appendix A Appendix C Appendix M: Table M-17, Table M-18	Not Met
B2-b. For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction?	Section 4.1: pp. 4.7 – 4.8 Tornadoes: p. 4.12 Windstorms: p.4.14 Lightning: pp. 4.15 – 4.16 Hail: p. 4.18 Flash/Riverine Flood: pp. 4.20 – 4.21, Table C-9, Map A-22 – A-26 Severe Winter Storms: p. 4.24 Extreme Cold: p. 4.25 Extreme Heat: p. 4.27 Drought: p. 4.28 Wildfire: p. 4.29 Landslides and Soil Erosion: p. 4.30, Map A-28 Dam Failure: p. 4.31 Earthquakes: p. 4.32 Appendix C: Table C-9	Met
B2-c. Does the plan address NFIP-insured structures within each jurisdiction that have been repetitively damaged by floods?	Section 5.1: pp. 5.2 Section 5.1.1 National Flood Insurance Program (NFIP)	Met

Element B Requirements	Location in Plan (section and/or page number)	Met / Not Met
ELEMENT B REQUIRED REVISIONS		
Required Revision: B1-c. The plan mainly uses descriptions of possible impacts and ranges of intensities to show the extent of hazards. However, both the Earthquake and Drought profiles are missing an explanation of their extents. The Earthquake profile mentions magnitude as a concept and mentions the magnitude of historical earthquakes, but the scale itself is not described. The Drought profile mentions the types of drought but does not include information on the range of intensity droughts can have. You can reference the Risk Assessment Starter Kit in the Local Mitigation Planning Handbook for information and examples on these hazard extents and include them in the plan. Steele County staff added extent to each of the hazards. B2-a. This requirement is focused on describing how assets such as people, structures, systems, resources and community activities are impacted by each hazard. To form the vulnerability description, plan participant(s) may identify which specific assets are most important and most susceptible to damage or loss from hazards. (For example, this may be expressed as replacement cost). The hazard profiles for Floods, Severe Winter Storms, Extreme Heat/Cold, Wildfire, Landslide/Erosion, and Dam Failure all identify the most vulnerable populations and/or structure values to describe vulnerability to the hazards. Steele County staff added vulnerability data to each of the hazards.		

Element C: Mitigation Strategy

Element C Requirements	Location in Plan (section and/or page number)	Met / Not Met
C1. Does the plan document each participant's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement 44 CFR § 201.6(c)(3))		
C1-a. Does the plan describe how the existing capabilities of each participant are available to support the mitigation strategy? Does this include a discussion of the existing building codes and land use and development ordinances or regulations?	Section 5.1: pp. 5.2 – 5.3 Appendix J Appendix K	Met

Element C Requirements	Location in Plan (section and/or page number)	Met / Not Met
C1-b. . Does the plan describe each participant's ability to expand and improve the identified capabilities to achieve mitigation?	Appendix K Local Mitigation Capabilities Assessment Report	Met
C2. Does the plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement 44 CFR § 201.6(c)(3)(ii))		
C2-a. Does the plan contain a narrative description or a table/list of their participation activities? Steele County staff added information for NFIP and FIRMs	Section 1.1 pp. 1.4 Section 5.1: pp. 5.2 – 5.3 Appendix A. Map A-33, 34 pp. A-34, A-35 Appendix M: Table M-21	Not Met
C3. Does the plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement 44 CFR § 201.6(c)(3)(i))		
C3-a. Does the plan include goals to reduce the risk from the hazards identified in the plan? Steele County added clarification language to section.	Section 5.2: p. 5.3 Appendix M: Table M-22	Not Met
C4. Does the plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement 44 CFR § 201.6(c)(3)(ii))		
C4-a. Does the plan include an analysis of a comprehensive range of actions/projects that each jurisdiction considered to reduce the impacts of hazards identified in the risk assessment?	Section 5.3: pp. 5.3 – 5.4 Appendix H Appendix M: Table M-23	Met
C4-b. Does the plan include one or more action(s) per jurisdiction for each of the hazards as identified within the plan's risk assessment?	Appendix G	Met
C5. Does the plan contain an action plan that describes how the actions identified will be prioritized (including a cost-benefit review), implemented, and administered by each jurisdiction? (Requirement 44 CFR § 201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))		
C5-a. Does the plan describe the criteria used for prioritizing actions?	Section 5.3: pp. 5.3 – 5.4 Appendix M: Table M-24	Met

Element C Requirements	Location in Plan (section and/or page number)	Met / Not Met
C5-b. Does the plan provide the position, office, department or agency responsible for implementing/administrating the identified mitigation actions, as well as potential funding sources and expected time frame? Steele County staff added information to funding sources	Appendix G	Not Met
ELEMENT C REQUIRED REVISIONS		
Required Revision: C2-a. The plan mentions the participating communities that also participate in the NFIP. It says that participation requires the regulation of development through the adoption of floodplain management regulations. However, there is no mention of who is responsible for enforcing these regulations. It also does not discuss NFIP participation outside of Blooming Prairie, Ellendale, Medford, Owatonna and Steele County. In addition, it does not identify the FIRMs for these jurisdictions. It does not give the dates they were adopted. Lastly, there is no information on how the substantial improvement/substantial damage provisions are implemented after an event. If they are not currently being implemented, please state this. Steele County staff added information about NFIP and FIRMs C3-a. Section 5.2 says that the goals are the ones from the 2019 state plan. These also say that they are currently in development. Since that plan has since been updated, the plan must include updated goals. These can be goals tailored to fit the county. Steele County staff obtained information from the 2023 State plan and added information. C5-b. Policy states that the plan must identify potential funding sources. It must have details beyond general descriptions. Many of the mitigation actions have possible funding sources of "County/City/Township Budgets." Please identify the direct source of these funds, such as the general fund, staff time or public works budget. FEMA HMA grants must also include the specific program, such as BRIC, HMGP or FMA. Steele County staff added funding information.		

Element D: Plan Maintenance

Element D Requirements	Location in Plan (section and/or page number)	Met / Not Met
D1. Is there discussion of how each community will continue public participation in the plan maintenance process? (Requirement 44 CFR § 201.6(c)(4)(iii))		
D1-a. Does the plan describe how communities will continue to seek future public participation after the plan has been approved?	Section 6.3: pp. 6.3 – 6.4	Met

Element D Requirements	Location in Plan (section and/or page number)	Met / Not Met
D2. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a five-year cycle)? (Requirement 44 CFR § 201.6(c)(4)(i))		
D2-a. Does the plan describe the process that will be followed to track the progress/status of the mitigation actions identified within the Mitigation Strategy, along with when this process will occur and who will be responsible for the process?	Section 6.1: p. 6.2	Met
D2-b. Does the plan describe the process that will be followed to evaluate the plan for effectiveness? This process must identify the criteria that will be used to evaluate the information in the plan, along with when this process will occur and who will be responsible.	Section 6.1: p. 6.2	Met
D2-c. Does the plan describe the process that will be followed to update the plan, along with when this process will occur and who will be responsible for the process?	Section 6.1: p. 6.2	Met
D3. Does the plan describe a process by which each community will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement 44 CFR § 201.6(c)(4)(ii))		
D3-a. Does the plan describe the process the community will follow to integrate the ideas, information and strategy of the mitigation plan into other planning mechanisms?	Section 6.2: pp. 6.2 – 6.3 Appendix G	Met
D3-b. Does the plan identify the planning mechanisms for each plan participant into which the ideas, information and strategy from the mitigation plan may be integrated?	Section 6.2: pp. 6.2 – 6.3 Appendix G	Met
D3-c. For multi-jurisdictional plans, does the plan describe each participant's individual process for integrating information from the mitigation strategy into their identified planning mechanisms?	Appendix G	Met
ELEMENT D REQUIRED REVISIONS		
Required Revision: Click or tap here to enter text.		

Element E: Plan Update

Element E Requirements	Location in Plan (section and/or page number)	Met / Not Met
E1. Was the plan revised to reflect changes in development? (Requirement 44 CFR § 201.6(d)(3))		
E1-a. Does the plan describe the changes in development that have occurred in hazard-prone areas that have increased or decreased each community's vulnerability since the previous plan was approved? Steele county staff added analysis on how development has changed and what vulnerabilities in section 3.8.	Section 3.8: p. 3.11 Section 4.4: pp. 4.12, in all hazards Appendix A - Maps	Not Met
E2. Was the plan revised to reflect changes in priorities and progress in local mitigation efforts? (Requirement 44 CFR § 201.6(d)(3))		
E2-a. Does the plan describe how it was revised due to changes in community priorities?	Section 2.3: p. 2.2 Section 5.3: pp. 5.3 – 5.4	Met
E2-b. Does the plan include a status update for all mitigation actions identified in the previous mitigation plan?	Appendix H	Met
E2-c. Does the plan describe how jurisdictions integrated the mitigation plan, when appropriate, into other planning mechanisms?	Appendix K	Met
ELEMENT E REQUIRED REVISIONS		
Required Revision: E1-a. The plan shows maps and population changes over time. It does not discuss how these changes have impacted vulnerability. There is no analysis using the maps to show how development has changed in areas that are hazard-prone, such as building permits or deeper analysis on floodplain maps. If these changes have not resulted in changes to vulnerability, the plan must say this. Steele county staff added analysis on how development has changed and what vulnerabilities.		

Element F: Plan Adoption

Element F Requirements	Location in Plan (section and/or page number)	Met / Not Met
F1. For single-jurisdictional plans, has the governing body of the jurisdiction formally adopted the plan to be eligible for certain FEMA assistance? (Requirement 44 CFR § 201.6(c)(5))		
F1-a. Does the participant include documentation of adoption?	Appendix D (future) After FEMA Approval	Choose an item.
F2. For multi-jurisdictional plans, has the governing body of each jurisdiction officially adopted the plan to be eligible for certain FEMA assistance? (Requirement 44 CFR § 201.6(c)(5))		
F2-a. Did each participant adopt the plan and provide documentation of that adoption?	Appendix D (future) After FEMA Approval	Choose an item.
ELEMENT F REQUIRED REVISIONS		
Required Revision: This section will be completed after FEMA approval.		

Element G: High Hazard Potential Dams (Optional)

HHPD Requirements	Location in Plan (section and/or page number)	Met / Not Met
HHPD1. Did the plan describe the incorporation of existing plans, studies, reports and technical information for HHPDs?		
HHPD1-a. Does the plan describe how the local government worked with local dam owners and/or the state dam safety agency?	N/A	Choose an item.
HHPD1-b. Does the plan incorporate information shared by the state and/or local dam owners?	N/A	Choose an item.
HHPD2. Did the plan address HHPDs in the risk assessment?		
HHPD2-a. Does the plan describe the risks and vulnerabilities to and from HHPDs?	N/A	Choose an item.

HHPD Requirements	Location in Plan (section and/or page number)	Met / Not Met
HHPD2-b. Does the plan document the limitations and describe how to address deficiencies?	N/A	Choose an item.
HHPD3. Did the plan include mitigation goals to reduce long-term vulnerabilities from HHPDs?		
HHPD3-a. Does the plan address how to reduce vulnerabilities to and from HHPDs as part of its own goals or with other long-term strategies?	N/A	Choose an item.
HHPD3-b. Does the plan link proposed actions to reducing long-term vulnerabilities that are consistent with its goals?	N/A	Choose an item.
HHPD4-a. Did the plan include actions that address HHPDs and prioritize mitigation actions to reduce vulnerabilities from HHPDs?		
HHPD4-a. Does the plan describe specific actions to address HHPDs?	N/A	Choose an item.
HHPD4-b. Does the plan describe the criteria used to prioritize actions related to HHPDs?	N/A	Choose an item.
HHPD4-c. Does the plan identify the position, office, department or agency responsible for implementing and administering the action to mitigate hazards to or from HHPDs?	N/A	Choose an item.
HHPD Required Revisions		
Required Revision: No HHPD's in this jurisdiction to report on.		

Element H: Additional State Requirements (Optional)

Element H Requirements	Location in Plan (section and/or page number)	Met / Not Met
This space is for the State to include additional requirements		
Click or tap here to enter text.	Click or tap here to enter text.	Choose an item.

Plan Assessment

These comments can be used to help guide your annual/regularly scheduled updates and the next plan update.

Element A. Planning Process

Strengths

- [insert comments]

Opportunities for Improvement

- [insert comments]

Element B. Risk Assessment

Strengths

- [insert comments]

Opportunities for Improvement

- [insert comments]

Element C. Mitigation Strategy

Strengths

- [insert comments]

Opportunities for Improvement

- [insert comments]

Element D. Plan Maintenance

Strengths

- [insert comments]

Opportunities for Improvement

- [insert comments]

Element E. Plan Update

Strengths

- [insert comments]

Opportunities for Improvement

- [insert comments]

Element G. HHPD Requirements (Optional)

Strengths

- [insert comments]

Opportunities for Improvement

- [insert comments]

Element H. Additional State Requirements (Optional)

Strengths

- [insert comments]

Opportunities for Improvement

- [insert comments]

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Appendix M
Miscellaneous Tables

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Table M-1. Multi-Hazard Mitigation Steering Committee		
Organization	**Name**	**Participant Title**
Steele County	Kristen Sailer	Emergency Management Director
Steele County	Tom Karnauskas	Emergency Management Dep Dir
Steele County	Megan Norbeck	Emergency Management Dep Dir
Steele County	Deb Beckstrom	Emergency Management
Steele County	Jim Abbe	Commissioner
Steele County	James Brady	Commissioner
Steele County	Rick Gnemi	Commissioner
Steele County	Greg Krueger	Commissioner
Steele County	John Glynn	Commissioner
Steele County	Scott Golberg	Administrator
Steele County	Nick Flatgard	GIS Coordinator
Steele County	Greg Ilkka	County Engineer
Steele County	Melissa Kofstad	PHEP Coordinator
Steele County	Dave Purscell	IT Director
City of Blooming Prairie	Melanie Aeschliman	Administrator
City of Blooming Prairie	Terri Zweiner	Deputy Clerk
City of Ellendale	Matthew Bartsch	Mayor
City of Ellendale	Steve Engel	Deputy Clerk/Treasurer
City of Ellendale	Jerry Ibberson	Emergency Management Director
City of Medford	Danny Thomas	Mayor
City of Medford	Elizabeth Jackson	City Administrator/Clerk
City of Medford	Rick Hager	Fire Chief/EM Director
City of Owatonna	Tom Kuntz	Mayor
City of Owatonna	Kris Busse	Administrator
City of Owatonna	Doug Voss	City Council
City of Owatonna	Ed Hoffman	Fire Chief/EM Director
City of Owatonna	Troy Klecker	Community Development Director
City of Owatonna	Jenna Tuma	Parks & Recreation Senior Director
Aurora Township	Troy Krejci	Chairman
Berlin Township	Richard Johnson	Chairman
Blooming Prairie Township	Jerry Wencl	Chairman
Clinton Falls Township	Darren Hagen	Chairman
Deerfield Township	Karl Buscho	Chairman
Havana Township	David Joachim	Chairman
Lemond Township	Jim Springer	Chairman
Medford Township	Steve Jaster	Chairman
Meriden Township	Keith Dinse	Chairman
Merton Township	Lowell Scholljegerdes	Chairman
Owatonna Township	Jerry Katzung	Chairman
Somerset Township	Brian Jones	Chairman
Summit Township	Kevin Noble	Chairman

Table M-1. Multi-Hazard Mitigation Steering Committee (continued - 2 of 3)		
Organization	**Name**	**Participant Title**
Allina Hospital	Kyra Crepin	Emergency Management Coordinator
Allina Hospital	Jonathon King	Safety & Security Manager
American Red Cross	Sean Farley-Cowdin	Disaster Preparedness Specialist
American Red Cross	Eli Szyldo	Disaster Preparedness Specialist
Blooming Prairie Public Utility	Jerry Mausbach	Director
Bosch	Chuck Miklich	VP Operations
Bosch	Andrea Peterson	EHS Manager
Cargill	Franklin Birch	EHS Specialist
Cargill	Michael Green	Owner/Operator
Cargill	Loan Trinh	EHS Specialist
Central Farm Service	Dennis Adams	Owner/Operator
Central Farm Service	Joe Arnold	Owner/Operator
Central Farm Service	Shannon Bode	EHS Specialist
Central Farm Service	Jim Jung	Owner/Operator
Civil Air Patrol	Alec Newbowers	Airman
CPKC Railroad	Ed Dankbar	HazMat Specialist
Federated Insurance	Trudy Haugen	Safety Manager
Federated Insurance	Jamie Vogt	Facilities Manager
Life Fitness	Lisa Boyd	Environmental, Safety Coordinator
Life Fitness	John Champa	Owner/Operator
Mayo Ambulance	Rick Ellingson	Paramedic
Mayo Health Systems	Rebecca Griebel	Director
Mayo Health Systems	Shawn Smith	Supervisor
Minnesota Prairie County Alliance	Tara Reich	Executive Director
Minnesota Prairie County Alliance	Kris Jackson	Executive Assistant
Owatonna Chamber of Commerce	Rhonda Guthier	Director of Operations
Owatonna Public Utilities	Ronnie Johnson	Director of Engineering
Rice/Steele 911 Center	Brian Becker	Director
Rice/Steele 911 Center	Cheryl Pritzlaff	Interim Director
Salvation Army	Major Michelle Heaver	Major
Spectrum	Tim Block	Facility Manager
Steele-Waseca Cooperative Electric	Lori Read	Compliance Coordinator
Steele-Waseca Cooperative Electric	Jon Stelter	Controller
Steele County CERT	Dennis Hollatz	CERT Leader
Steele County CERT	Bonnie Johnson	CERT Manager
Steele County CERT	Iris Johnson	CERT Leader
Steele County CERT	Barb Ruhter	CERT Leader
Steele County CERT	Tim VanEngelenhoven	CERT Leader

Table M-1. Multi-Hazard Mitigation Steering Committee (continued - 3 of 3)		
Organization	**Name**	**Participant Title**
Union Pacific Railroad	Joe Eichten	HazMat Specialist
United Way of Steele County	Annette Duncan	President
Viracon	Doug Zirngible	Director of Engineering Maintenance
Wenger Corporation	Jim Kingsley	Owner/Operator
Wenger Corporation	Thad Rosenberg	EHS Manager

Table M-2. Planning Documents used for MHMP Planning Process				
Author(s)	**Year**	**Title**	**Description**	**Where Used**
Minnesota Division of Homeland Security and Emergency Management	2023	Minnesota All-Hazard Mitigation Plan Update	Statewide hazard mitigation plan.	Section 4
Steele County	2017	Steele County Local Water Management Plan 2017 - 2021	The purpose of this plan is to provide a framework and schedule for implementing activities that address priority water management concerns.	Section 4
Steele County	2007	Steele County Comprehensive Land Use Plan	This plan provides an objective study of Steele County's physical features, land use, population, natural resources, development trends, and other factors to guide future decision-making.	Section 3

Table M-3. Steele County Hazard Mitigation Update Meetings and Public Outreach		
Meeting Type	**Date**	**Location**
Kickoff Meeting	9/26/2022	Steele Co. Community Center, Owatonna, MN
Steering Committee	1/18/2023	Steele County Administrative Building, Owatonna, MN
Township Association	3/27/2023	Steele Co. Community Center, Owatonna, MN
Public Outreach	9/11/2023	News release inviting public feedback
Township Association	9/11/2023	Steele Co. Community Center, Owatonna, MN
Steering Committee	11/15/2023	Steele County Administrative Building, Owatonna, MN
Steering Committee	1/17/2024	Steele County Administrative Building, Owatonna, MN

Table M-4. Steele County Population by Community, 2020		
Community	**2020 Population**	**% of County**
Aurora Township	528	1.41%
Berlin Township	506	1.35%
Blooming Prairie City	1,974	5.28%
Blooming Prairie Township	397	1.06%
Clinton Falls Township	386	1.03%
Deerfield Township	542	1.45%
Ellendale City	676	1.81%
Havana Township	556	1.49%
Lemond Township	503	1.34%
Medford City	1,315	3.52%
Medford Township	843	2.25%
Meriden Township	620	1.66%
Merton Township	361	0.97%
Owatonna City	26,420	70.63%
Owatonna Township	613	1.64%
Somerset Township	733	1.96%
Summit Township	433	1.16%
Total	**37,406**	

Source: U.S. Census Bureau, 2020 Decennial Census

Table M-5. Steele County Population Change (1940-2020)									
Year	**1940**	**1950**	**1960**	**1970**	**1980**	**1990**	**2000**	**2010**	**2020**
Population	19,749	21,155	25,059	26,931	30,328	30,729	33,680	36,576	37,406
% Change		7.1%	18.5%	7.5%	12.6%	1.3%	9.6%	8.6%	2.3%

Source: U.S. Census Bureau, 2023

Table M6. Steele County Population Projections (2015-2045)								
Year	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2015 - 2045**
Population	38,672	40,375	41,926	43,411	44,852	46,154	47,458	
% Change		4.4%	3.8%	3.5%	3.3%	2.9%	2.8%	23%

Source: Minnesota State Demographic Center, Minnesota Planning, 2015

Table M-7 Annual Average Employment by Major Industry Sector, Steele County		
Industry	**Estimated 2020**	**Projected 2030**
Natural Resources and Mining	3,477	3,477
Utilities	1,160	150
Construction	9,396	9,891
Manufacturing	36,536	36,636
Wholesale Trade	7,047	7,342
Retail Trade	25,379	24,160
Transportation and Warehousing	7,801	8,311
Information	2,943	2,941
Financial Activities	6,025	6,133
Professional /Business Services	7,642	7,966
Admin Support & Waste Management	8,158	8,815
Educational Services	18,447	20,396
Health Care & Social Assistance	64,850	70,687
Leisure and Hospitality	19,129	23,366
Other Services	8,287	9,159
Public Administration	13,990	14,748
Totals	**240,267**	**254,178**

Source: Minnesota Dept. of Employment and Economic Development.
Note: data discrepancies between segment values and totals exist due to data suppression for confidentiality.

Table M-8. FEMA MHIRA Natural Hazards		
Flooding	Hail	Drought
Dam/Levee Failure	Lightning	Extreme Heat
Wildfire*	Winter Storms	Extreme Cold
Windstorms	Erosion	Earthquakes
Tornadoes	Land Subsidence (Sinkholes & Karst)	

Table M-9. FEMA MHIRA Other Hazards		
Terrorism	Nuclear Generating Plant Incidents	Ground and Surface Water Supply Contamination*
Infectious Disease Outbreak	Hazardous Materials Incidents	
Fires (Structures and Vehicles)	Transportation Incidents	

Table M-10. Hazards identified in the 2023 Steele County Multi-Hazard Mitigation Plan			
High Priority Hazards			
Agricultural Disaster	Communication Interruption	911 System Interruption	Telecommunication Failure
Emergency Radios	Explosion WMD	External Sabotage	Extreme Temperatures
HazMat Release	Health Hazard/Disease	Heat/Natural Gas Interruption	Incendiary Device
Industrial Accident	Power Failure/Interruption	Strong Storms/High Winds	Snow and Ice Storms
Terrorism	Tornado	Violence in Schools/ Workplace	Water Supply Failure/Contamination
Medium Priority Hazards			
Biological WMD	Bomb Threat	Chemical WMD	Economic Disaster
Explosion	Fire (Wildfire)	Fire (Structure Fire)	Food Supply Crisis
Flooding	Information System Failure	Internal Sabotage	Mischief/Vandalism
Medical Care (Facilities or Supplies)	Sewer Infrastructure Failure	Theft of Assets	Transportation Rail Crisis
Transportation Highway Crisis	Transportation Pipeline Crisis		
Low Priority Hazards			
Civil Disturbance	Drought	Earthquake	Incompetence Catastrophic
Nuclear Accident Regional	Radiological WMD	Strike	Theft of Information
Transportation Air Crisis			

Table M-11. Summary of Calculated Priority Risk Index (CPRI) Categories and Risk Levels				
CPRI Category	DEGREE OF RISK			Assigned Weighting Factor
	Level ID	Description	Index Value	
Probability	Unlikely	Extremely rare with no documented history of occurrences or events. Annual probability of less than 0.001	1	45%
	Possible	Rare occurrences with at least one documented or anecdotal historic event. Annual probability that is between 0.01 and 0.001.	2	
	Likely	Occasional occurrences with at least two or more documented historic events. Annual probability that is between 0.1 and 0.01.	3	
Magnitude / Severity	Negligible	Negligible property damages (less than 5% of critical and non-critical facilities and infrastructure). Injuries or illnesses are treatable with first aid and there are no deaths. Negligible quality of life lost. Shutdown of critical facilities for less than 24 hours.	1	30%
	Limited	Slight property damages (greater than 5% and less than 25% of critical and non-critical facilities and infrastructure). Injuries or illnesses do not result in permanent disability and there are no deaths. Moderate quality of life lost. Shut down of critical facilities for more than 1 day and less than 1 week.	2	
	Critical	Moderate property damages (greater than 25% and less than 50% of critical and non-critical facilities and infrastructure). Injuries or illnesses result in permanent disability and at least one death. Shut down of critical facilities for more than 1 week and less than 1 month.	3	
Warning Time	Less than 12 hours	Less than 12 hours	1	15%
	12 to 24 hours	12 to 24 hours	2	
	More than 24 hours	Over 24 hours	3	
Duration	Brief	Up to 6 hours	1	10%
	Intermediate	Up to 1 day	2	
	Extended/Prolonged	Up to 1 week or more	3	

Table M-12. Hazard Ranking for 2023 MHMP Update	
Natural Hazards	**MHMP Hazard Ranking**
Severe Summer Storms (Thunderstorms, Lightning, Hailstorms, Windstorms, Tornadoes)	High
Severe Winter Storms (blizzards, heavy snow)	High
Flash Flood & Riverine Flood	High
Erosion / Land Subsidence (Sinkholes & Karst)	High
Extreme Heat & Extreme Cold	Moderate
Wildfire	Low
Drought	Low
Dam Failure	Low

Table 13. National Centers for Environmental Information Historical Hazards	
Tornado	Hail
Thunderstorm Wind	Flood/Flash Flood
Winter Weather/ Winter Storm/Blizzard	Cold/Wind Chill
Excessive Heat/Heat	Lightning

Table M-14. FEMA-Declared Major Disasters in Steele County (1953- February 2023)						
Incident	**Declaration Date and Disaster Number**	**Incident Period**	**Total PA Obligated by FEMA for Disaster in Minnesota**	**Total PA Obligated by FEMA for Disaster in Steele County**	**Individual Assistance in Minnesota**	**Individual Assistance in Steele County**
Severe Storms and Flooding	11/02/2016 DR-4290	9/21/2016-9/24/21016	$1,308,184 (as of 2/8/17)	$328,714.29	$2,460,692.05	None
Severe Storms, Straight-line Winds, Flooding, Landslides, and Mudslides	7/21/2014 DR-4182	6/11/2014-7/11/2014	$55,180,608	$532,893	None	None
Severe Storms and Flooding	10/13/2010 DR-1941	9/22/2010-10/14/2010	$33,453,783	$10,181,611	None	None
Severe Storms, Tornadoes, and Flooding	7/17/2010 DR-1921	6/17/2010-6/26/2010	$17,728,370	$126,294	None	None
Severe Storms and Flooding	8/23/2007 DR-1717	8/18/2007-8/31/2007	$39,751,469	$439,883	$19,808,889	$346,670
Severe Storms and Flooding	10/7/2004 DR-1569	9/14/2004-9/27/2004	$5,016,667	$379,311	$4,210,930	$490,348
Severe Winter Storms, Blizzards	1/16/1997 DR-1158	1/3/1997-2/3/1997	Yes, amount unknown	Yes, amount unknown	None	None
Flooding	6/1/1996 DR-1116	3/14/1996-6/17/1996	Yes, amount unknown	Yes, amount unknown	None	None
Flooding, Severe Storm, Tornadoes	6/11/1993 DR-993	5/6/1993-8/25/1993	Yes, amount unknown	Yes, amount unknown	Yes, amount unknown	Yes, amount unknown
Ice Storm	12/26/1991 DR-929	10/31/1991-11/29/1991	Yes, amount unknown	Yes, amount unknown	None	None
Flooding	4/11/1965 DR-188	4/11/1965	Yes, amount unknown	Yes, amount unknown	Yes, amount unknown	Yes, amount unknown

Table M-15. FEMA-Declared Emergencies in Steele County (1974-July 2017)				
Incident	**Declaration Date and Disaster Number**	**Incident Period**	**Individual Assistance in Minnesota**	**Public Assistance (all affected areas)**
Minnesota Hurricane Katrina Evacuation	9/13/2005 EM-3242	8/29/2005-10/01/2005	Unknown	$2,470,003.23
Drought	6/17/1976 EM-3013	6/17/1976	Unknown	Unknown

Data provided by MN HSEM in September 2016. Values are estimates collected at the time of the disaster.

Table M-16. Historical Hazard Mitigation Funding (HMGP and PDM) in Steele County			
Year	**Project Description**	**Sub-Grantee**	**Federal Share**
2012	Warning systems/Generators (PDM)	City of Owatonna	$441,495
2007	Local Multi-Hazard Mitigation Plan update (HMGP)	Steele County	$22,104
2007	Property acquisition/demolition (HMGP)	City of Owatonna	$255,826
2007	Property acquisition/demolition (HMGP)	City of Owatonna	$498,044
2007	Residential stormwater drainage rehabilitation (HMGP)	City of Owatonna	$1,084,955
2006	Property acquisition/demolition (HMGP)	City of Owatonna	$129,148
1998	Convert .4 miles of overhead electrical feeder line to underground (HMGP)	Blooming Prairie Public Utilities	$100,000
1996	Installation of living snow fence along 35W (HMGP)	MN DOT	$13,840
1991	Utility protective measures (HMGP)	Steele Waseca Co-Op Electric	$645,674
Total HMGP/PDM Funding – Steele County			**$3,191,086**

Data downloaded from https://www.fema.gov/media-library/assets/documents/28323 and https://www.fema.gov/medialibrary/assets/documents/103341 on 2/20/2017.

Table M-17. Steele County Critical Infrastructure and Facilities			
ACAMS Category	**Number of Facilities**	**ACAMS Category**	**Number of Facilities**
Agriculture and Food	8	Government Facilities	23
Banking and Finance	19	Healthcare and Public Health	12
Chemical and Hazardous Materials	1	Information Technology	0
Commercial Facilities	2	Manufacturing	0
Communications	5	National Monuments and Icons	0
Dams	10	Nuclear	0
Defense Industrial Base	0	Postal and Shipping	7

Table M-18. Steele County Total Building Exposure		
General Occupancy	**Parcels Containing Structures**	**Total Building Exposure**
Agriculture	1,082	$574,000
Commercial	619	$934,000
Education	33	$0
Government	127	$1,517,000
Industrial	186	$396,000
Religious/Non-Profit	89	$6,000
Residential	11,710	$10,504,000
Total:	**13,846**	**$13,931,000**

Table M-19. Historic Tornado Events in Steele County, 1950-December 2022					
Location or County	**Date**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**
Blooming Prairie	12/15/2021	EF0	0	0	0
Medford	5/19/2021	EF0	0	0	0
Meriden	5/19/2021	FC x 3	0	0	0
Lemond	8/13/2019	EF0	0	0	$100,000
Lemond	8/13/2019	FC	0	0	0
Owatonna	6/17/2019	EF0	0	0	0
Meriden	9/20/2018	EF1	0	0	0
Meriden	9/20/2018	EF1	0	0	0
Ellendale	3/6/2017	EF0	0	0	0
Ellendale	6/17/2010	EF2	0	0	0
Ellendale	6/17/2010	EF1	0	0	0
Blooming Prairie	6/17/2010	EF3	0	0	0
Blooming Prairie	6/17/2010	EF2	0	1	0
Owatonna	6/17/2009	FC	0	0	0
Blooming Prairie	6/17/2010	EF0	0	0	0
Ellendale	6/11/2004	FC	0	0	0
Medford	7/18/2002	F1	0	0	0
Hope	5/1/2001	F0	0	0	0
Merton	8/9/1999	F0	0	0	0
Owatonna	7/20/1997	FC	0	0	0
Blooming Prairie	7/20/1997	F0	0	0	0
Morristown	9/6/1995	F0	0	0	0
Clinton Falls	9/6/1995	F0	0	0	0
Steele County	5/24/1989	F0	0	0	0
Steele County	7/16/1984	F1	0	0	$25,000
Steele County	6/7/1984	F1	0	0	$2,500,000
Steele County	5/17/1982	F3	0	0	$250,000
Steele County	5/17/1982	F3	0	0	$250,000
Steele County	7/23/1973	F0	0	0	$2,500
Steele County	5/15/1968	F1	0	0	$25,000
Steele County	4/30/1967	F1	0	0	$25,000,000
Steele County	4/30/1967	F4	2	0	$25,000,000
Steele County	5/22/1962	F1	0	0	$250,000

Source: National Centers for Environmental Information

Table M-20 State Declared Events in Steele County				
Date	**Organization**	**Preliminary Damage Asssement**	**Actual Damages**	**Pay Date**
15-Dec-2021	Blooming Prairie Public Utilities	$6,000	$42,313	6/16/2022
15-Dec-2021	Blooming Prairie, City of	$10,000	$10,800	2/3/2022
15-Dec-2021	Blooming Prairie, City of		$3,700	2/3/2022
15-Dec-2021	Medford, City of	$5,000		
15-Dec-2021	Owatonna Public Utilities	$17,300	$21,403	4/1/2022
15-Dec-2021	Owatonna, City of (Fire & Parks Dept)	$28,100	$15,174	2/3/2022
15-Dec-2021	Southern MN Municipal Power	$105,000	$88,480	6/7/2022
15-Dec-2021	Steele County (Hwy, Sheriff & EM)	$22,550	$7,916	2/15/2022
15-Dec-2021	Steele County (Hwy, Sheriff & EM)		$28,360	2/15/2022
15-Dec-2021	Steele County (Hwy, Sheriff & EM)		$4,043	2/15/2022
15-Dec-2021	Steele Waseca Cooperative	$96,000	$106,522	2/4/2022
	Total	**$289,950**	**$328,714**	

Table M-21 NFIP Participation and FIRMs in Steele County					
Jurisdiction Name	**Community Number**	**NFIP Y/N**	**FEMA Mapped High Risk Areas**	**Located on FIRM PANEL(s)**	**Date Adopted**
Blooming Prairie, City of	270052	N	None	0300, **0400	NA
	Zoning Administrator: The Steele County Zoning Administrator administers and implements all NFIP requirements found in the Steele County Floodplain Management Ordinance Adopted October 11, 2011. https://cms2.revize.com/revize/steelecountynew/Floodplain%20Ordinance.pdf				
Ellendale, City of	270501	N	None	0250, 0350	NA
	Zoning Administrator: The Steele County Zoning Administrator administers and implements all NFIP requirements found in the Steele County Floodplain Management Ordinance Adopted October 11, 2011. https://cms2.revize.com/revize/steelecountynew/Floodplain%20Ordinance.pdf				
Medford, City of	270462	Y	Yes	0042,0044, 0061	Dec 2, 2011
	Zoning Administrator: The Steele County Zoning Administrator administers and implements all NFIP requirements found in the Steele County Floodplain Management Ordinance Adopted October 11, 2011. https://cms2.revize.com/revize/steelecountynew/Floodplain%20Ordinance.pdf				
Owatonna, City of	270463	Y	Yes	0043, 0044, 0063, 0132, 0135, 0142, 0151, 0152, 0153, 0154, 0156, 0158, 0161, 0165	Dec 2, 2011
	Zoning Administrator: The Steele County Zoning Administrator administers and implements all NFIP requirements found in the Steele County Floodplain Management Ordinance Adopted October 11, 2011. https://cms2.revize.com/revize/steelecountynew/Floodplain%20Ordinance.pdf				

Table M-21 (continued - 2 of 2)
NFIP Participation and FIRMs in Steele County

Jurisdiction Name	Community Number	NFIP Y/N	FEMA Mapped High Risk Areas	Located on FIRM PANEL(s)	Date Adopted
Steele County (Unincorporated areas)	270635	Y	Yes	0025,** 0030, **0035, 0040, **0041, 0042, 0043, 0044, 0053, 0055, 0066, 0061, 0062, 0063, 0064,0070, 0100, 0125, 0130, 0132, 0135, **0140, 0142, 0145, 0151, 0152, 0154, 0156, 0157, 0158, 0159, 0161, 0165, 0170, 0200, 0250, 0275, 0300, **0325, 0350, 0375, **0400	Dec 2, 2011
	Zoning Administrator: The Steele County Zoning Administrator administers and implements all NFIP requirements found in the Steele County Floodplain Management Ordinance Adopted October 11, 2011. https://cms2.revize.com/revize/steelecountynew/Floodplain%20Ordinance.pdf				

*No special flood hazard areas identified
**Panel not printed

Data current as of August 8, 2024 (website https://www.fema.gov/cis/MN.html)

Table M-22. Goals that will be used in the 2023 Steele County All Hazard Mitigation Plan
Flooding Goal: Reduce deaths, injuries, property loss and economic disruption due to all types of flooding (riverine, flash flooding, dam/levee failure)
Wildfire Goal: Reduce deaths, injuries, property loss, natural resource and economic disruption due to wildfire (forest, prairie, grass, and peat bogs).
Windstorms Goal: Reduce deaths, injuries, property loss, and economic disruption due to windstorms.
Severe Winter Storms Goal: Reduce deaths, injuries, property loss, and economic disruption due to severe 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, property loss, and economic disruption due to extreme cold.
Landslide/Erosion Goal: Reduce deaths, injuries, property loss, and economic disruption due to landslides and erosion.

Table M-23. Mitigation Strategies and Action Types		
Mitigation Strategy	**Description**	**Example Mitigation Actions**
Local Plans and Regulations	These actions include government authorities, policies, or codes, that influence the way land and buildings are developed and built.	• Comprehensive plans • Land use ordinances • Planning and Zoning • Building Codes and Enforcement • Floodplain ordinance • NFIP Community Rating System Capital improvement programs • Open space preservation • Shoreline codes • Stormwater management regulations and master plans
Structure and Infrastructure Projects	These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards. Many of these types of actions are projects eligible for funding through the FEMA Hazard Mitigation Assistance program.	• Acquisitions and elevations of structures in flood prone areas • Utility undergrounding • Structural retrofits • Floodwalls and retaining walls Detention and retention structures Culverts • Safe rooms
Natural Systems Protection	These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.	• Sediment and erosion control • Stream corridor restoration • Forest management • Conservation easements Wetland restoration and • preservation
Education and Awareness Programs	These are actions to inform and educate 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.	• Radio or television spots Websites with maps and information • Real estate disclosure • Presentations to school groups or neighborhood organizations Mailings to residents in hazardprone areas. • StormReady • Firewise Communities

Table M-23. Mitigation Strategies and Action Types (continued)		
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.	x Emergency operations plan x Flood fight plans and preparedness x Dam emergency action plans x Warning x Backup power x Emergency Capabilities

Table M-24. Criteria for Mitigation Action Ranking	
Ranking	**Criteria**
High Priority (1)	• 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, or are permanent risk reduction solutions.
Moderate Priority (2)	• Mitigation methods are established. • The County has limited experience with 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 time.
Low Priority (3)	• 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.

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