



2024 – 2030



KINGSBURY COUNTY

Pre-Disaster
Mitigation Plan

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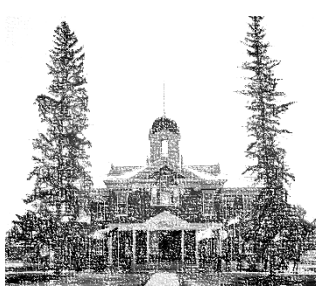
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CHAPTER 1 | INTRODUCTION

INTRODUCTION

Kingsbury County (County) is vulnerable to natural hazards that have the possibility of causing serious threat to the health, welfare, and security of our citizens. The cost of response and recovery, in terms of potential loss of life or loss of property, from potential disasters can be lessened when attention is turned to mitigating their impacts and effects before, they occur or re-occur.

The Kingsbury County Board of Commissioners, in conjunction with the South Dakota Office of Emergency Management (SD OEM) and the Federal Emergency Management Agency (FEMA), has agreed to update this plan to assist all participating entities in the county in their mission to mitigate losses from natural hazards throughout Kingsbury County, South Dakota, and the communities located therein.

This plan is an update of the Pre-Disaster Mitigation Plan (PDM) that was developed by the County in 2007, updated in 2014, and once again in 2019. The document will serve as a strategic planning tool for use by the county and its communities in its efforts to mitigate future disaster events. The plan identifies and analyzes natural disasters that may occur in the County in order to understand the county's vulnerabilities and propose mitigation strategies that minimize future damage caused by those hazards. This knowledge will help identify solutions that can significantly reduce threat to life and property. The plan is based on the premise that hazard mitigation works. With increased attention to mitigating natural hazards, communities can greatly reduce threats to existing citizens and avoid creating new problems in the future. In addition, many mitigation actions can be implemented at minimal cost.

To date, a total of 4,079 Major Presidential Disaster Declarations (all natural hazards) have been proclaimed in the United States, of those declarations, 87 occurred fully or partially within the state of South Dakota. Kingsbury County is no stranger to natural and man-made disasters. All or portions of Kingsbury County have been included in 19 Presidential Disaster Declarations, four of which occurred in the last 10 years. In order to prevent and reduce the cost that is incurred by businesses, citizens, and property owners from these disasters, the Kingsbury County Pre-Disaster Mitigation Plan was developed. This plan identifies hazards that occur throughout Kingsbury County and mitigation projects that will aid in preventing and reducing the effects of those disasters on the property and lives within. Special consideration has been given to critical infrastructure throughout the county.

This is not an emergency response or emergency management plan. Certainly, the plan can be used to identify weaknesses and refocus emergency response planning. Enhanced emergency response planning is an important mitigation strategy. However, the focus of this plan is to support better decision making directed toward avoidance of future risks and the implementation of activities or projects that will eliminate or reduce the risk for those that may already have exposure to a natural hazard threat.

AUTHORITY FOR PRE-DISASTER MITIGATION PLAN

Each year, disasters take the lives of hundreds of people and injure thousands more in the United States. Across the nation, billions of taxpayer-funded dollars are spent annually to help communities, organizations, businesses, and individuals recover from natural disasters. However, these funds can never fully cover the true cost of the disasters.

In October of 2000, the Disaster Mitigation Act (DMA2K) was signed to amend the 1988 Robert T. Stafford Disaster Relief and Emergency Assistance Act. This amendment created the framework for state, local, tribal, and other territorial governments to engage in hazard mitigation planning to receive certain types of non-emergency disaster assistance. Section 322 (a-d) requires that local governments, as a condition of receiving federal disaster mitigation funds, have a multi-hazard mitigation plan in place that:

1. Identifies hazards and their associated risks and vulnerabilities;
2. Develops and prioritizes mitigation projects; and
3. Encourages cooperation and communication between all levels of government and the public.

The objective of this plan is to meet the hazard mitigation planning needs for the County and participating entities. Consistent with the Federal Emergency Management Agency's guidelines, this plan will review all possible activities related to disasters to reach efficient solutions, link hazard management policies to specific activities, educate and facilitate communication with the public, build public and political support for mitigation activities, and develop implementation and planning requirements for future hazard mitigation projects.

PURPOSE

The County PDM is a planning tool to be used by the County, as well as other local, state, and federal units of government, in their efforts to fulfill federal, state, and local hazard mitigation planning responsibilities; to promote pre- and post-disaster mitigation measures, short/long range strategies that minimize suffering, loss of life, and damage to property resulting from hazardous or potentially hazardous conditions to which citizens and institutions within the county are exposed; and to eliminate or minimize conditions which would have an undesirable impact on our citizens, economy, environment, or the well-being of the County. This plan will aid city, township, and county agencies and officials in enhancing public awareness of the threat hazards have on property and life, and what can be done to help prevent or reduce the vulnerability and risk of each County jurisdiction.

USE OF PLAN

The plan will be used to help the county, communities, and their elected and appointed officials:

- Plan, design and implement programs and projects that will help reduce their community's vulnerability to natural hazards.
- Facilitate inter-jurisdictional coordination and collaboration related to natural hazard mitigation planning and implementation.
- Develop or provide guidance for local emergency response planning.
- Be compliant with the Disaster Mitigation Act of 2000.

SCOPE OF PLAN

- Provide opportunities for public input and encourage participation and involvement regarding the mitigation plan.
- Identify hazards and vulnerabilities within the county and local jurisdictions.
- Combine risk assessments with public and emergency management ideas.
- Develop goals based on the identified hazards and risks.
- Review existing mitigation measures for gaps and establish projects to sufficiently fulfill the goals.
- Prioritize and evaluate each strategy/objective.
- Review other plans for cohesion and incorporation with the PDM.
- Establish guidelines for updating and monitoring the plan.
- Present the plan to the Kingsbury County Commissioners and the participating communities within the county for adoption.

WHAT IS HAZARD MITIGATION?

Hazard mitigation is defined as any cost-effective action(s) that has the effect of reducing, limiting, or preventing vulnerability of people, property, and the environment to potentially damaging, harmful, or costly hazards. Hazard mitigation measures, which can be used to eliminate or minimize the risk to life and property, fall into three categories. First are those that keep the hazard away from people, property, and structures. Second are those that keep people, property, and structures away from the hazard. Third are those that do not address the hazard at all but rather reduce the impact of the hazard on the victims such as insurance. This mitigation plan has strategies that fall into all three categories.

Hazard mitigation measures must be practical, cost effective, environmental, and politically acceptable. Actions taken to limit the vulnerability of society to hazards must not in themselves be more costly than the value of anticipated damages.

The primary focus of hazard mitigation actions must be at the point at which capital investment decisions are made and based on vulnerability. Capital investments, whether for homes, roads, public utilities, pipelines, power plants, or public works, determine to a large extent the nature and degree of hazard vulnerability of a community. Once a capital facility is in place, very few opportunities will present themselves over the useful life of the facility to correct any errors in location or construction with respect to hazard vulnerability. It is for these reasons that zoning and other ordinances, which manage development in high vulnerability areas, and building codes, which ensure that new buildings are built to withstand the damaging forces of hazards, are often the most useful mitigation approaches a jurisdiction can implement.

Previously, mitigation measures have been the most neglected programs within emergency management. Since the priority to implement mitigation activities is generally low in comparison to the perceived threat, some important mitigation measures take time to implement. Mitigation success can be achieved, however, if accurate information is portrayed through complete hazard identification and impact studies, followed by effective mitigation management. Hazard mitigation is the key to eliminating long-term risk to people and property in South Dakota from hazards and their effects. Preparedness for all hazards includes response and recovery plans, training, development, management of resources, and mitigation of each jurisdictional hazard.

This plan evaluates the impacts, risks, and vulnerabilities of natural hazards within the jurisdictional area of the entire county. The plan supports, provides assistance, identifies, and describes mitigation projects for each of the local jurisdictions who participated in the plan update. The suggested actions and plan implementation for local governments could reduce the impact of future natural hazard occurrences. Lessening the impact of natural hazards can prevent such occurrences from becoming disastrous but will only be accomplished through coordinated partnership with emergency managers, political entities, public works officials, community planners, and other dedicated individuals working to implement this program.

KINGSBURY COUNTY PROFILE

Population

Kingsbury County is located in the east central portion of South Dakota. It borders Clark and Hamlin Counties to the north, Brookings County to the east, Lake, Sanborn and Minor Counties to the south, and Beadle County to the west. The county has a geographic area of 832 square miles and its Census 2020 population was 5,187, which averages 6.2 persons per square mile, which remains the same since 2010. According to 2023 American Community Survey data, 23.2% of the population is older than age 65. Education levels of persons twenty-five and older include 90.5% high school graduates and 23.0% with college degrees. The number of high school and college graduates has remained steady since 2010, which is a positive trend for the County.

The county seat is De Smet, which is situated at the intersection of US Highway 14 and US Highway 25. Table 1.1 shows the population and number of housing units located in each of the county's municipalities. It should be noted that a small portion of the City of Arlington is located within Brookings County, but that portion only contains two housing units (8 individuals) and no municipally provided infrastructure. Table 1.2 lists the thirteen County Townships by population. The County was starting to experience a slight population decline from 2000 to 2020. However, due to the County's proximity to larger employment centers such as Huron, Watertown, Brookings, and Madison, as well as an increased cultural desire to raise families in safer and less crowded environment, Kingsbury County has become a suitable place to live. Additionally, the County is being looked at as the potential location for several large projects, such as a biofuel plant and a dairy barn. These projects would create numerous jobs within the County.

Table 1.1: Kingsbury County Municipalities

Name	2020 Population	2010 Population	Location	Elevation	Housing Units
Arlington	915	907	44 21'52" N 97 07'59" W	1,844 feet	467
Badger	129	107	44 29'07" N 97 12'17" W	1,732 feet	62
Bancroft	13	19	44 29'17" N 97 45'00" W	1,572 feet	9
De Smet	1,056	1,089	44 23'15" N 97 33'01" W	1,726 feet	533
Erwin	40	45	44 29'15" N 97 26'42" W	1,873 feet	28

Name	2020 Population	2010 Population	Location	Elevation	Housing Units
Hetland	20	46	44 22'41" N 97 14'06" W	1,732 feet	21
Iroquois	292	200	44 21'59" N 97 50'54" W	1,398 feet	129
Lake Preston	589	559	44 21'49" N 97 22'38" W	1,722 feet	322
Oldham	121	133	44 13'39" N 97 18'28" W	1,722 feet	92
Unincorporated Areas	2,012	2,003			952
Kingsbury County	5,187	5,148	44 22'00" N 97 29'01" W	1,709 feet	2,615

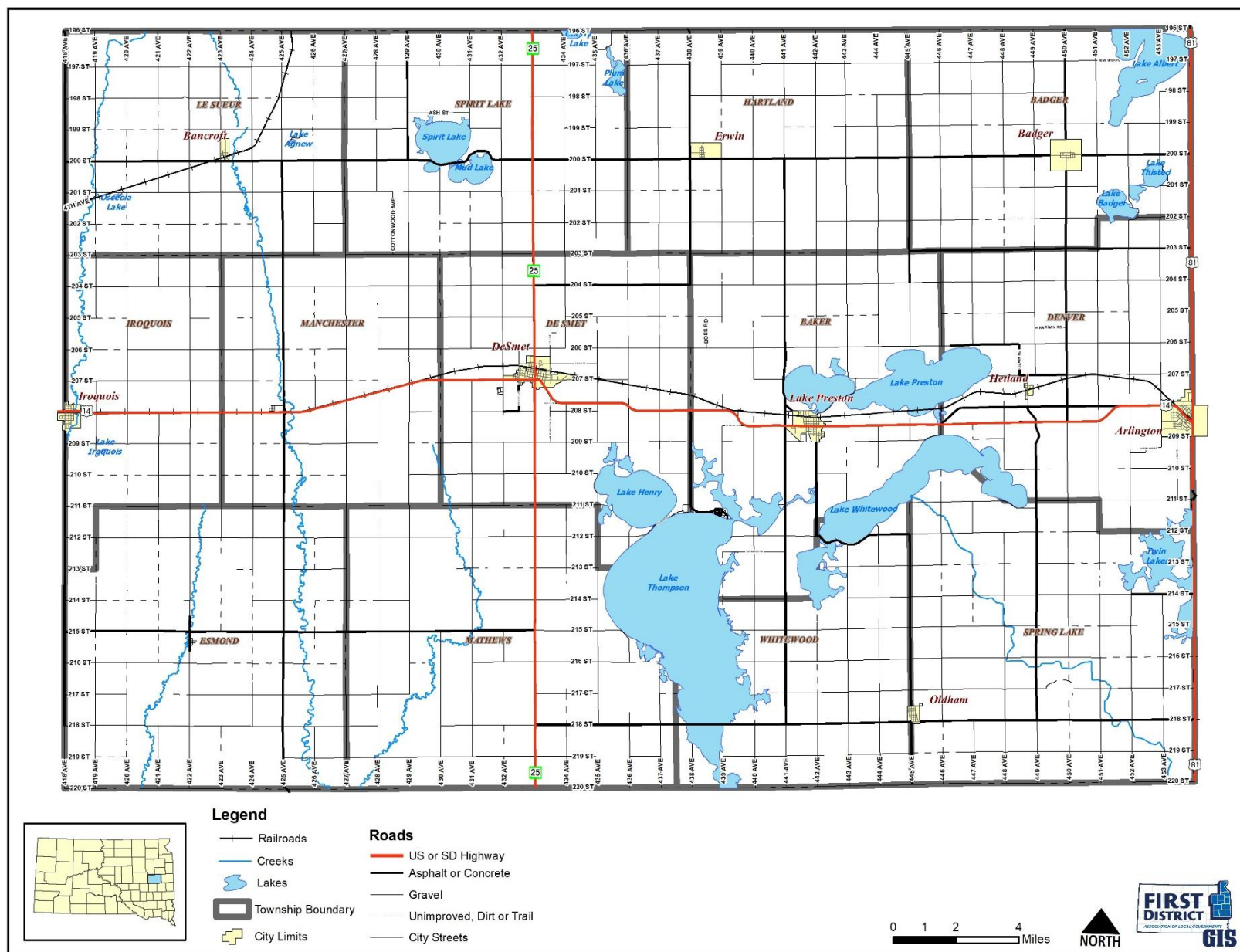
Source : 2020 & 2010 Census, www.Lat-Long.com, www.usbeacon.com

Table 1.2: Kingsbury County Townships

Township	Population
Badger	197
Baker	217
Denver	211
De Smet	288
Esmond	45
Hartland	158
Iroquois	68
Le Suer	146
Manchester	73
Mathews	125
Spirit Lake	168
Spring Lake	288
Whitewood	99

SOURCE : 2020 Census

Figure 1.1 Political Map



Social and Economic Description

The County's economy is dependent upon its agricultural and manufacturing sectors. While the number of farm and ranching units has decreased over the years, the size of each unit has increased dramatically. The number of acres farmed or ranched has remained stable throughout the years. Most non-agricultural employment is centered in the tourism, education, health care, and social service industries. A few major employers in the county include 21st Century Manufacturing is located in Lake Preston; CMI Architectural Products Inc, Lyle Signs, DeSo Architectural Inc, American Engineered Products, Sheyenne Dakota, and Shin America Inc. are all located in De Smet.

Fishing, hunting, camping, lake use recreation, and the Laura Ingalls Wilder Homestead in De Smet create a base for tourism opportunities.

The City of De Smet is the largest community in Kingsbury County, followed closely in population by the City of Arlington, and serves as the county seat and governmental, employment, and retail hub for the county. Arlington and Lake Preston also provide necessary retail needs for the residents of those communities and surrounding smaller towns. Most of the remaining rural communities in the County serve as bedroom communities and provide a "small town" atmosphere. Because these communities often have limited retail and service sectors that only provide basic needs, a large majority of the residents within these communities commute to the neighboring county seats of Brookings, Madison, Huron, and Watertown for work. Arlington, De Smet, Iroquois, and Lake Preston have K-12 facilities located in the county.

Overall unemployment rates in South Dakota have remained under 3.5% over the last 5 years with the exception of an 8.9% spike that resulted from the start of the Coronavirus pandemic in April of 2020. Since that date, unemployment rates across the state quickly declined back to around 3.5% by fall of 2020. The state unemployment rates continued to steadily decrease until plateauing and remaining at 2% ($\pm 0.1\%$) since. According to the US Bureau of Labor Statistics, Kingsbury County followed a similar pattern with unemployment hovering around 2.0% then spiking to 5.3% in April of 2020 but fell back to about 2.2% by fall of that year. The Kingsbury County unemployment rate experienced a consistent decrease, with a few minor spikes, but maintained an average under 2.0% from 2021 to present day. According to the 2023 American Community Survey, 10.0% of the population of Kingsbury County is at or falls below the poverty line.

Kingsbury County issues approximately 60 building permits annually, including commercial and housing development. The communities of Arlington, De Smet, and Lake Preston issue several building permits a year for new residences and businesses. However, very little development has occurred in the last five years that would alter the PDM plan from its planned update.

Physical Description and Climate

Geographically, the western portion of Kingsbury County is relatively flat and the land east of Highway 25 is more rolling. There are several lakes in the county with the largest being Lake Thompson. During the floods of 1984, 85 and 86, Lake Thompson overtook Lake Poinsett in Hamlin County, as being the largest natural lake in South Dakota. Whitewood and Henry are adjacent to Lake Thompson and the West Vermillion Creek runs south from Lake Thompson. Eventually this creek enters the Vermillion River in south east South Dakota. Lake Preston, Spirit

Lake and Lake Albert being of lesser size are north of Highway 14. There are several smaller lakes and sloughs throughout the county.

Kingsbury County is located within the region generally classified as mild and dry continental or Steppe with four well-defined seasons. The weather can be quite changeable with large day to day temperature variations, particularly from the fall to the spring. Days with severe winter cold and summer heat are typical.

Normally, the temperature is moderate until the beginning of July, after which short, hot periods are experienced until the end of August. The freeze-free period is the number of days between the average last occurrence of freezing temperatures in the spring and the average first occurrence of 32 degrees F or lower in the fall. The length of the freeze-free period approximates the length of the growing season which ranges from 130 days or more between May 21st and September 21st. Topography and local weather conditions can produce subfreezing temperatures at the ground surface while the air temperature a few feet above the ground remains above 32 degrees F.

Annual average precipitation is 25.5 inches, with the majority of precipitation falling from May through September. Precipitation can vary significantly from year to year, and location to location within a given year. The heaviest most intense precipitation often occurs with localized downpours associated with thunderstorms in June through August. Significant flash flooding can result from these downpours with over 3 inches of precipitation reported in a few events. Widespread heavy precipitation events of 1 to 2 inches can occur every few years and is most common from April through June and September through early November.

Average winter snowfall ranges up to 24 inches. The heaviest snowstorms often occur from late March through May or mid-October to mid-December. These storms can produce more than 12 inches of snow and are often made more severe as temperatures are warmer, and therefore the snow is heavier and more difficult to travel in and remove. These storms are often accompanied by high winds resulting in blizzard conditions. In spring these storms can coincide with the calving season resulting in livestock loss. Mid-winter snowstorms in general produce less than 6 inches of snow, but heavier amounts up to 19 inches or more have occurred. Despite the generally lighter amounts and drier snow, high winds can result in blizzard conditions. Even without falling snow, in the colder conditions of mid-winter, high winds can pick up loose snow, resulting in local ground blizzards.

Above normal snowfall can lead to exceptionally deep snowpack levels. Unusually cold late spring temperatures will allow the deep snowpack to persist until early April. Unpredictable weather patterns can shift to abnormally warm conditions with temperatures from the 40s to the 70s. These abnormally high temperatures can cause rapid snowmelt which may result in overland flooding in the region. With ever changing weather patterns and associated climate change related severe storms, it is important to understand a new normal higher level of precipitation is expected across the county and state.

Severe thunderstorms are common from June into early September. Typically, the greatest hazards associated with these thunderstorms are very high winds and large hail. Damage to structures and crops occurs every summer from these storms. Tornadoes have been reported but are relatively rare.

An important and unavoidable element of the climate in Kingsbury County is the often-windy conditions. Average wind speeds in Kingsbury County are 22.27 mph. The average and peak sustained winds tend to be stronger over higher more exposed terrain. The highest sustained winds tend to occur in the spring and fall, with sustained winds over 40 mph or greater occurring most years. The highest wind gusts are often associated with thunderstorms during the summer, with gusts over 60 mph occurring every year.

For the purposes of this hazard assessment and mitigation plan, weather is of interest when it threatens property or life and thus becomes a hazard. The National Weather Service (NWS) provides short-term forecasts of hazardous weather to the public. In addition to issuing tornado and severe thunderstorm watches, the NWS also produces regularly scheduled severe weather outlooks and updates on various forms of hazardous weather including heavy rain and winter storms.

Hydrology

Kingsbury County is split by eleven watersheds. These watersheds work their way by means of surface and groundwater to the James, Big Sioux, East Vermillion and West Vermillion Rivers before entering the Missouri River in southern South Dakota.

Esmond, Iroquois, Le Sueur (with the exception of portions of two Sections) and portions of Spirit Lake, DeSmet, and Matthews Townships drain toward the James River. Slightly less than one third of the total area of Kingsbury County drains into these watersheds which are referred to as Pearl Creek Watershed, and the Redstone Creek watersheds. While the James River Lowland is generally characterized by exceptionally flat topography, the western slope of the Coteau de Prairie slopes toward the James River from approximately 200 feet of elevation.

The majority of Spirit Lake, Hartland, Badger, DeSmet, and Denver Townships drain toward the Big Sioux River, as well as the eastern 1-3 miles of Spring Lake Township and approximately six (6) square miles of Baker Township. Drainage patterns on the Coteau de Prairie, west of the Big Sioux River are typically characterized by poorly defined drainage channels and slow absorbing soils; such is the case with much of Kingsbury County.

Water originating in all of Whitewood Township, most of Baker and Spring Lake Townships and portions of Denver, DeSmet, Matthews, Hartland, and Badger Townships all drain into the East Vermillion River via the Lake Whitewood Watershed. The West Vermillion River draws from the Rock Creek and Upper West Fork- Vermillion River watersheds. Those two watersheds include much of Matthews Township and the southwest corner of DeSmet Township. Drainage patterns of the East and West Vermillion River(s), similar to those patterns west of the Big Sioux River on the Coteau des Prairie, are also characterized with generally poor drainage and numerous wetlands and small lakes. Drainage courses do tend to be better defined in the Vermillion Rivers(s) watershed(s) than their counterparts which drain into the Big Sioux River to the east.

Lake Thompson, in central Kingsbury County is the dominant water feature in the county. Historically the "lake" included several thousand acres of marsh land. From 1983 to 1988 the elevation of the lake increased by nearly 23 feet. The total area of the lake increased to approximately 20,000 acres. In 2012, Kingsbury County worked with the State of South Dakota to establish the official outlet elevation of the lake at 1687.5 feet above sea level.

Transportation and Utility Infrastructure

The County's Road network is composed of a total of 1,481 miles including a mixture of state and federal highways, railroads, county roads, municipal road systems, township roads, and private roads. The rural road system performs two basic functions: (1) providing general mobility for the residents in rural areas, and (2) accommodating the movements of agricultural products to market. The rural transportation system was not designed to accommodate large volumes of traffic on a daily basis.

The major transportation infrastructure in the county includes roads, railroads, and airfields. South Dakota Highway 14 is the main east-west route through the county with Highway being the main north-south route. The County Highway Department maintains 350 miles. That road system includes 152 gravel road miles, 198 hard surface rural road miles, and 34 bridges. In Kingsbury County, the transportation choices are limited to mostly private vehicles traveling over state and federal highways and county roads.

Kingsbury County has three small airports in the county located in Arlington, Lake Preston, and De Smet. They are used primarily by local pilots, crop sprayers and other light aircrafts. None of the airports have any nav-aid, communications or flight service capabilities.

The Rapid City, Pierre, & Eastern Railroad Line runs east to west through the central part of the county going from Brookings to Huron, providing local companies the ability to ship bulk loads of agricultural and manufactured commodities to national and international destinations.

The Kingbrook Rural Water home office is in Arlington with a water treatment plant located 4 miles north of De Smet on Highway 25 and a reservoir located at Lake Preston. The system services many communities within the county.

Regarding wastewater disposal, most of the incorporated municipalities within the County have municipal wastewater collection and treatment systems. Rural residences and those without municipal systems rely on individual septic tanks and drain-fields. The density of septic systems and their potential to cause water contamination is an environmental concern. As the County's population continues to grow, new developments need to be controlled through planning and development guidelines.

Electric power is provided to rural county residents and people in the communities by Dakota Energy, East River Electric, Northwestern Energy, Kingsbury Electric Cooperative, Sioux Valley Energy Cooperative, and Otter Tail Power.

The Northern Natural Gas Pipeline runs southeast to northwest through the center of the county servicing Arlington, De Smet, Lake Preston and Oldham. The TransCanada Pipeline also runs through the western portion of the county (from north to south).

Medical and Emergency Services

Emergency and medical services are available within the county. De Smet Memorial Hospital located in De Smet, as well as 5 medical clinics throughout the county, and two long term care facilities, Golden Living Center in Arlington and Good Samaritan Center in De Smet.

Ground ambulances services are provided by Arlington, Lake Preston, De Smet, and Iroquois. Local fire departments within the County are all volunteer-based and located in the municipalities of Arlington, Badger, De Smet, Iroquois, Lake Preston, and Oldham.

The County is governed by five-member board of commissioners. The Sheriff, 4 deputies and 1 city police officer provide law enforcement throughout the county.



CHAPTER 2 | PREREQUISITES

ADOPTION BY LOCAL GOVERNING BODY

The local governing body that oversees the update of the Kingsbury County Pre-Disaster Mitigation Plan is the Kingsbury County Board of Commissioners. The Commission has tasked the Kingsbury County Emergency Management Office with the responsibility of ensuring that the PDM is compliant with Federal Emergency Management Agency (FEMA) Guidelines and corresponding regulations.

MULTI-JURISDICTIONAL PLAN PARTICIPATION

Requirement 201.6(c)(1). Local Mitigation Plan Review Tool – A1(b).

This plan is a multi-jurisdictional plan which serves the entire geographical area located within the boundaries of Kingsbury County, South Dakota. The County has nine incorporated municipalities. All of the incorporated municipalities located entirely within the County elected to participate in the planning process and the update of the existing PDM. Emergency Management Directors of the adjoining counties were also included on the December 2023 invitation correspondence to participate in the Kingsbury County PDM Plan update process. Others invited to participate in the County PDM plan update process include local law enforcement providers, emergency services providers, area utility providers, area health providers, and county school superintendents. Table 2.1 shows the participating local jurisdictions including the following municipalities:

Table 2.1: Plan Participants

Continuing Participants	Do Not Participate*
Arlington	Osceola
Badger	Esmond
Bancroft	All 13 Townships
De Smet	
Erwin	
Hetland	
Iroquois	
Lake Preston	
Oldham	
Kingsbury County	

* Non-participating communities are still eligible for hazard mitigation funding, however, may not directly apply for assistance. Instead, any assistance would need to be applied for on behalf of the non-participating communities by Kingsbury County. While none of the townships directly participated in the PDM update, they were represented by their local Township Officials.

Unincorporated villages and townships are not direct participating entities in the plan because these entities are too small, both in population and in resources, to be capable of handling disaster needs on their own. The villages are governed by the township boards and are served by the County whenever necessary. The townships were invited to participate in the PDM update. Each township was asked to identify hazard risks, vulnerability, critical infrastructure and potential projects on maps they received via mail and return the information to the First District Association of Local Governments (First District) for incorporation in the plan. All thirteen townships responded to the request. Some of the rural utility providers attended planning meetings and provided system information for the updated plan.

The Kingsbury County Commission and each of the listed participating municipalities will pass resolutions to adopt the updated PDM. The dates of adoption by resolution for each of the jurisdictions are summarized in Table 2.2.

Table 2.2: Dates of Plan Adoption by Jurisdiction

Jurisdiction	Date of Adoption
City of Arlington	
Town of Badger	
Town of Bancroft	
City of De Smet	
City of Erwin	
Town of Hetland	
City of Iroquois	
City of Lake Preston	
City of Oldham	
Kingsbury County Commission	

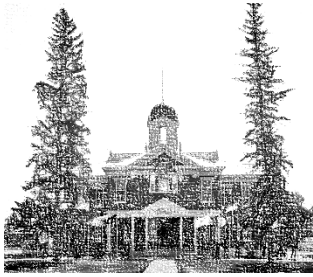
All the participating jurisdictions were involved in the plan update. Representatives from each municipality and the County, adjacent county Emergency Managers, law enforcement providers, rural utilities providers, emergency services, townships, school district superintendents, and local health providers were invited to the planning meetings. Those in attendance provided valuable perspective on the changes required for the plan. All representatives attending took part in the risk assessment exercise at the January 30, 2024 kickoff meeting.

Representatives in attendance took information from the PDM planning meetings back to their respective boards/agencies and presented the progress of the plan update. First District staff also presented progress reports when meeting individually with communities. The local jurisdictions reviewed and commented (via email or telephone) on updated information placed in the 2024 plan. The local jurisdictions have also presented the Resolution of Adoption to their councils and will pass the resolutions upon FEMA approval of the PDM update. The Resolutions are included in Appendix A.

Table 2.3 was derived to help define “participation” for the local jurisdictions who intend on adopting the plan. To be considered “participating”, each jurisdiction must have at least seven of the ten participation requirements fulfilled.

Table 2.3: Record of Participation

Nature of Participation	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Kingsbury County
Attended Meetings or work sessions (a minimum of 1 meeting will be considered satisfactory).	■	■	■	■	■	■	■	■	■	■
Submitted inventory and summary of reports and plans relevant to hazard mitigation.	■	■	■	■	■	■	■	■	■	■
Submitted the Risk Assessment Worksheet.	■	■	■	■	■	■	■	■	■	■
Submitted description of what is at risk (including critical facilities and infrastructure at risk from specific Hazards worksheet).	■	■	■	■	■	■	■	■	■	■
Submitted a description or map of land-use patterns (current and proposed/expected).	■	■	■	■	■	■	■	■	■	■
Developed goals for the community.	■	■	■	■	■	■	■	■	■	■
Developed mitigation actions with an analysis of why those actions were selected.	■	■	■	■	■	■	■	■	■	■
Prioritized actions emphasizing relative cost-effectiveness.	■	■	■	■	■	■	■	■	■	■
Reviewed and commented on the draft plan.	■	■	■	■	■	■	■	■	■	■
Hosted opportunities for public involvement (allowed time for public comment at a minimum of 1 city council meetings after giving a status report on the progress of the PDM update).	■	■	■	■	■	■	■	■	■	■
■ Requirement Met										



CHAPTER 3 | PLANNING PROCESS

BACKGROUND

The effort that led to the development of this plan is part of the larger, integrated approach to hazard mitigation planning in South Dakota that is led by the South Dakota Office of Emergency Management. Production of the plan was the ultimate responsibility of the Kingsbury County Emergency Management Director, who served as the county's point of contact for all activities associated with this plan. Input was received from the PDM Planning Team that was put together by the Emergency Management Director. All invited Planning Team members are listed below in Table 3.1.

The plan itself was written by an outside contractor, First District Association of Local Governments (First District) of Watertown, South Dakota, one of the state's six regional planning entities. The office has an extensive amount of experience in producing various kinds of planning documents, including municipal ordinances, land use plans, and zoning ordinances, and is an acknowledged leader in geographic information systems (GIS) technology throughout South Dakota. First District assisted the County in the development of the county's original PDM in 2003 in addition to the 2012 and 2018 PDM plan updates. The following staff members of the First District Association of Local Governments were involved in the 2024 plan update process: Todd Kays, Director; Luke Muller, Senior Planner; Amy Arnold, Geographic Information System Analyst; Kelli Henricks, Geographic Information System Specialist, and Greg Maag, Planner. Staff attended the PDM Planning Team and community meetings as the plan was being developed. Additional research and information gathering was provided by Payton Carda, an independent technical writing specialist. Carda compiled and formatted all data, information, forms, and maps into the draft and final PDM plan. Arnold assisted by producing many of the maps for the plan and Muller directed the floodplain risk analysis (see next section) and completed the county land cover analysis discussed in the previous chapter. Several other individuals at the state level provided additional support and information that was quite useful. They include:

- James Poppen, CFM Mitigation Branch Chief/State Hazard Mitigation Officer, SD OEM – provided guidance and direction as the plan was being developed.
- Blaire Jonas, South Dakota State NFIP/Mitigation Specialist, SD OEM – provided guidance and direction as the plan was being developed.
- Kyle Kafka, South Dakota Hazard Mitigation Specialist, SD OEM – provided guidance and direction as the plan was being developed.
- Diana Herrera, FEMA Regional Flood Insurance Liaison – supplied classification and information regarding the value and number of flood insurance policies and claims.
- Doug Hinkle, SD State Fire Marshall Office – provided information on fires events throughout the County.

- Whitney Kilts, SD DANR, Water Rights Program – provided information on dams located in the County.
- Greg Pollreis, SD Department of Transportation – provided bridges and road mileage information within the County’s Road system.
- Marc Macy, South Dakota National Flood Insurance Program Coordinator – provided classification and information regarding value and number of flood insurance policies and claims, as well as guidance and direction as the plan was being developed.

DOCUMENTATION OF THE PLANNING PROCESS

Requirement 44 CFR § 201.6(c)(1). Local Mitigation Plan Review Tool – A1(a-b)

Requirement 44 CFR § 201.6(b)(2). Local Mitigation Plan Review Tool – A2

Requirement 44 CFR § 201.6(b)(1). Local Mitigation Plan Review Tool – A3

Methodology

Mitigation planning is a process that communities use to identify policies, activities, and tools to implement mitigation actions. The process that was used to develop this plan consisted of the following steps:

1. Planning Framework
2. Risk Identification and Assessment
3. Mitigation Strategy
4. Review of Plan
5. Plan Adoption and Maintenance

Planning Framework

The planning framework component identified five objectives:

- Develop Plan to Plan;
- Identify Governmental Entities/Stakeholders;
- Establish PDM Planning Team;
- Define Scope of the Plan;
- Generate public participation component
- Establish schedule for planning process

Prior to receiving funding, public meetings were held at the Kingsbury County Courthouse to inform the public about the required PDM update. Funding from FEMA and the South Dakota Office of Emergency Management to prepare the mitigation plan was received by the county on 9/12/2023. Once funding was secured, the Kingsbury County Emergency Management Director and the First District acted as the PDM Planning Team and began to discuss the strategy to be used to develop the plan. The first task was to identify those entities/stakeholders that would have direct and indirect interests in the update of the PDM.

Prior to the first public informational meeting, the Kingsbury County Emergency Management Director wrote letters to all potential stakeholders, community organizations, municipalities, townships, utility providers, emergency responders, and concerned residents who might wish to volunteer their time and serve on a committee, and to those who would act as a resource for the PDM Planning Team. The letters included a brief description of the PDM. The same correspondence was sent to the Emergency Management Directors in the adjoining counties inviting them to participate in the Kingsbury County PDM Plan update process. Public input was solicited via notices regarding the PDM planning process in local media outlets and via the Internet.

Each individual who was contacted for the PDM Planning Team had at least one of the following attributes to contribute to the planning process:

- Significant understanding of how hazards affect the county and participating jurisdictions.
- Substantial knowledge of the county's infrastructure system.
- Resources at their disposal to assist in the planning effort, such as maps or data on past hazard events.

Table 3.1 lists all parties that were invited to participate as a PDM Planning Team member and records their attendance at the planning meetings, all of which were open to the public and held during the drafting of the plan. Agendas were distributed to the PDM Planning Team prior to each meeting, and the meeting minutes were shared afterward to keep everyone was informed of the discussions and decisions that took place.

Table 3.1: PDM Planning Team Members

Invited				Meeting Attendance		
Last Name	First Name	Entity Represented	Position	Meeting 1	Meeting 2	Meeting 3
Anderson	Bert	City of Erwin				
Anderson	Rachel	Kingsbury Electric	Accounting	■		■
Arbeiter	Stephanie	City of Iroquois				
Bau	Cindy	Kingsbury Emergency Management/LEPC/911	Staff	■	■	■
Bertsch	Maria	Lake Preston Finance Office	Staff		■	
Buckmiller	Evan	Kingsbury Electric Co-op Inc.				
Damm	Stephanie	City of Arlington	FO		■	
Doren	Cody	Arlington Fire/EMS & LEPC Board	Staff	■		
Doren	Mandy	Arlington Fire Department/ EMS & LEPC Board	Staff	■		
Felderman	Dana	Lake Preston School District				
First District		First District	Staff	■	■	■
Fonder	Ethan	Badger Fire Dept.				
Frerichs	Adam	SD Emergency Management	Regional Coordinator	■		

Last Name	First Name	Entity Represented	Position	Meeting 1	Meeting 2	Meeting 3
Hansen	Karen	DeSmet Finance Office	Staff		■	
Hulbert	Jim	City of Iroquois				
Jennings	Mary	City of Bancroft				
Jennings	Paul	City of Bancroft				
Jensen	Tanya	City of Badger				
Keating	Trevor	Arlington Fire Dept.				
Krogman	Gary	City of Oldham				
Larson	Tracey	City of De Smet	FO	■		■
Lundquist	Curt	City of Arlington	Mayor	■		■
Miller	Gretchen	City of Oldham				
Klug	Brenda	City of Lake Preston	FO			■
Nielson	Michele	Sioux Valley Energy	Manager	■		
Parry	Lisa	Arlington School District				
Penn	Cystal	City of Erwin				
Representative		Sioux Valley Energy				
Representative		Otter Tail Power Company				
Ruth	Mike	Iroquois School District				
Rybak	Jack	City of Hetland				
Steffensen	Echo	Kingsbury County	Auditor	■	■	■
Steffensen	Joann	City of Hetland				
Strande	Steven	Kingsbury County Sheriff	Sheriff	■		
Strande	Shelley	Kingsbury County Sheriff's Office	Office Manager		■	■
Terwilliger	Kent	Miner County Emergency Manager	Staff	■		
VanRegenmorter	Abi	De Smet School District	Superintendent	■		
Wiebe	Matt	Iroquois Fire Dept.				
Wienk	Andrew	City of Lake Preston				
Wolkow	Gary	City of De Smet	Mayor	■		
Wolkow	Shawn	De Smet Fire Dept.				
Zeeck	Brian	Lake Preston Fire Dept.				

Leadership and guidance in the planning effort and at the planning meetings was provided by the First District staff and the Kingsbury County Emergency Management Director. An agenda was distributed to each PDM Planning Team member prior to each meeting, but free-flowing discussion was always encouraged. When PDM Planning Team members had questions about a topic of discussion, either First District staff or the Emergency Management Director would step in.

Generally speaking, the planning process associated with the plan's development was relaxed and informal. No subcommittees were formed, and all decisions were made by mutual consensus of the PDM Planning Team members - no votes were taken, or motions made. Everyone's opinion

was respected, nobody was discouraged from voicing their opinion, and no one was made to feel any less important than anyone else.

As the PDM Planning Team was being assembled, arrangements were made for the first PDM Planning Team meeting, which took place in the basement of the Sheriff's Office in De Smet on January 30, 2024. An agenda was distributed to prospective PDM Planning Team members. Appendix B includes a copy of each meeting notice, agenda, attendance sheet, and minutes.

Those who attended the January 30th meeting for the PDM update were asked to volunteer to serve on the PDM Planning Team. The PDM Planning Team was tasked with fostering coordination between the various entities involved; reviewing the drafts and providing comments after First District Association of Local Governments staff-initiated changes to the existing plan. Each of the local jurisdictions had a member of their respective boards/councils represent the municipalities in the plan.

The representatives from the municipalities/entities were asked to share the progress of the plan at their own meetings and to ensure that those attending the board/council meetings were aware that they are invited to make comments on and participate in the process of updating the new plan. Comments provided by residents at the local town and PDM Planning Team meetings were collected and incorporated into the plan.

The first meeting of the PDM Planning Team served to introduce the participants to the concept of mitigation planning, why the plan was being updated, and a tentative timeline of how the process would proceed in the months to come (scheduling, assigning responsibilities, etc.). The meeting also included a review of the existing plan, which led to several important decisions. First, it was the consensus opinion of the PDM Planning Team that a rewrite of the plan would be needed. The PDM Planning Team decided that:

- The 2019 PDM plan did not include all the necessary requirements found in the Local Hazard Plan Review Tool (2023). To ensure that the updated plan included everything required by the plan review tool, the PDM Planning Team and community meetings used the plan review tool to guide the discussions.
- Updated information and data regarding the risk assessment was needed, more informative tables and maps would be helpful, and the mitigation strategy needed to be reviewed. FEMA comments received during the approval of the 2019 PDM plan will also be included in the updated plan.
- The risk identification and assessment as well as the identification of critical infrastructure and local municipal goals and objectives should be completed by the First District prior to the next meeting of the PDM Planning Team.

Opportunities for Public Comment

The public was provided several opportunities to comment on the plan during the drafting stages at the PDM Planning Team meetings, Kingsbury County Annual Townships' meeting, and local community meetings. There were several work sessions and public hearings held to keep the public updated and involved in the plan.

Additionally, the County utilized an online survey to provide individuals that were unable to attend any community meetings, work sessions, or public hearings an option to participate in the PDM planning process. Information collected through the survey was analyzed and included in the plan when appropriate. Notices for the survey were published in the county newspapers, placed on the County website, and posted at most County/community offices to encourage local residents to provide information and participate in the planning process. Primarily, public input included the involvement in hazard assessment and mitigation projects. Those who were most involved were the representatives PDM Planning Team and representatives from the municipalities. The municipalities put the PDM update on the agenda at their regular meetings and allowed people to comment at the meetings. Table 3.2 identifies the location and date of each that was provided for the public to comment and how it was advertised.

Table 3.2: Opportunities for Public Comment

Location of Opportunity	Date	Type of Participation			How Was Meeting Advertised	
		City Council or County Commission Meeting	PDM Meeting	City Staff/Township Annual Mtg/Survey	Public Notice	Website
Arlington	02/06/2024	■			■	■
	Reserved for adoption meeting					
Badger	03/11/2024	■			■	
	Reserved for adoption meeting					
Bancroft	04/16/2024	■			■	
	Reserved for adoption meeting					
De Smet	02/15/2024	■			■	■
	Reserved for adoption meeting					
Erwin	03/04/2024	■			■	
	Reserved for adoption meeting					
Hetland	03/19/2024	■			■	
	Reserved for adoption meeting					

Location of Opportunity	Date	City Council or County Commission Meeting	PDM Meeting	City Staff/Township Annual Mtg/Survey	Public Notice	Website
Iroquois	04/15/2024	■			■	
	Reserved for adoption meeting					
Lake Preston	04/08/2024	■			■	■
	Reserved for adoption meeting					
Oldham	04/08/2024	■			■	
	Reserved for adoption meeting					
Kingsbury County	PDM Grant Application 11/29/2022	■			■	■
	01/30/2024		■		■	■
	03/19/2024			■	■	
	2 nd Meeting Date		■		■	■
	3 rd Meeting Date		■		■	■
	Adoption Date	■			■	■

The PDM Planning Team discussed the importance of making the planning process available to vulnerable and disadvantaged populations within the community. While managers of some facilities that provide care and assistance to vulnerable populations (populations to protect) were part of the PDM Planning Team, it was determined that the Emergency Management Director should notify those vulnerable populations with information on how to participate in the planning process. The Emergency Management Director provided information to known places of employment of non-English speakers, and elderly care facilities regarding meetings of the PDM Planning Team, the PDM Draft, the location of the online survey, and other opportunities manners to comment.

At the community meetings elected officials discussed vulnerable populations within their communities. Each community identified where, if at all, elderly individuals; visitors to the community; individuals with developmental, physical, or sensory disabilities; hospitals; mobile home parks; temporary shelters; and non-English speakers live or would be best met to solicit comment. Each community identified those locations (primarily campgrounds, manufactured home courts, elderly/assisted living, schools, and day cares) within their communities. Board members and/or staff volunteered to informally inform individuals and managers of such facilities of the ongoing meetings and opportunities for comment, including directing those individuals to the online survey.

Aside from the inclusion on the PDM Planning Team of some managers of facilities involved in the care or other services to vulnerable populations; most attempts to include such vulnerable populations was passive. It was determined that prior to the next plan update, the list of “populations to protect” should be updated to include places housing or primarily engaged in the service of elderly individuals; visitors to the community; individuals with developmental, physical,

or sensory disabilities; hospitals; mobile home parks; temporary shelters; and non-English speakers. A mitigation activity has been added for all communities to include notification regarding the planning process and opportunities to provide comment directly to the list of populations to protect at the beginning of the planning process.

Online Survey Results

Kingsbury County and First District staff conducted an online survey regarding natural hazards identification and vulnerabilities. The online survey began on January 17, 2024 and ended on April 1, 2024. Public notices for the survey were posted in several offices of the county courthouse and at the finance offices of the participating communities. Some of the communities posted the notice in their local post offices to encourage participation by the public. Samples of posted notices can be found in Appendix F.

The County received 13 completed responses from citizens/locals, community organizations, and companies. A summary of the responses can be found in Appendix F. Of all the respondents, 61.5% percent indicated they had experienced or been impacted by a natural hazard. Additionally, an even higher percentage of respondents (92%) were somewhat or very concerned about the possibility of natural disasters impacting their community, showing that potential fallout from a natural disaster is a high concern.

When asked about the most effective way to receive information, social media was by far the top answer, followed by email, television, and public meetings or workshops. It is evident that smart devices are heavily relied on in this day and age due to the speed and ease of communication. The County and its local jurisdictions must provide weather safety messaging on platforms where members of the population are already spending the majority of their time.

The respondents also reviewed the twelve main natural hazards that affect the County and ranked them from greatest to least great threat. The top three threats were tornado, severe winter weather, and high wind. This answer is not entirely surprising considering the nearby community of Castlewood in Hamlin County was impacted by a devastating tornado in the early summer of 2022. The least threatening hazards were considered to be ice jams, earthquake, and dam failure. This is likely due to their lack of history and unlikelihood of occurring within Kingsbury County. Respondents did not identify any other hazards that were not listed on the survey.

Lastly, respondents were asked to provide potential mitigation projects to address hazards in the county. Most respondent answers were related to tornadoes and severe winter weather. The most commonly suggested projects could mitigate several hazards at once, such as constructing storm shelters, updating storm sirens, purchasing backup generators, and overall better access to weather safety information/supplies.

Most of the responses on the completed surveys reflect the same hazard identification, vulnerabilities, and mitigation activity information from the PDM team, County, and the communities that is included in the 2024 PDM plan. With regards to the suggested mitigation activities proposed by respondents, the County and communities have already accomplished many activities and projects that relate to the local citizens' concerns. The County and communities are proposing to undertake mitigation activities that will address additional respondents' suggestions. Local citizens are encouraged to work with their local governments to alleviate any specific matters they have.

PDM Plan Process Timeline

September 2023

- Kingsbury County receives FEMA/SD OEM funding to update county PDM plan

October - December 2023

- Develop PDM Team list
- Invite persons listed for the PDM Team to January 2024 PDM Team meeting
- Invite adjacent county EM Directors to the January 2024 PDM Team meeting
- Public notices published in local newspapers regarding January 2024 PDM Team meeting

January 2024

- Hold PDM Team kickoff meeting
- Establish the PDM Team
- Review the existing 2019 PDM plan
- Develop PDM Template and planning update process

February - October 2024

- Risk Assessment/Project Identification/Prioritization
 - Notices published
 - First District Staff attend community/township meetings
- Conduct online hazard mitigation survey
- First District research data/information for PDM plan
- First District completes draft PDM plan preparation

November 2024

- Review draft PDM plan
- Notice published draft PDM plan public comment period
- Provide adjacent county EM Directors PDM draft for their review (45 day comment period)
- PDM Team meeting #2 notice published
- Draft plan submitted to SD OEM for pre-review

December 2024

- Hold PDM Team meeting #2
- Review/approve final draft PDM plan
- Plan updated based on any comments received
- PDM Team meeting #3 notice published

January 2025

- Hold PDM Team meeting #3
- Draft plan submitted to FEMA

February - April 2025

- Plan Approval by FEMA pending community adoption
- Approved PDM plan adopted by County and participating communities

Risk Identification & Assessment/Mitigation Strategy/Review of Plan

Requirement 201.6(b)(3). Local Mitigation Plan Review Tool – A4-a.

Requirement 201.6(c)(3). Local Mitigation Plan Review Tool – C1-a-b.

Requirement 201.6(c)(3). Local Mitigation Plan Review Tool – C2-a.

The Risk Identification and Assessment component identified three strategies: Collect and Organize Data, Develop GIS Data, and Analyze Data. The Mitigation Strategy component identified five objectives: Review Existing PDM and other plans, Formation of Goals/Objectives, Compile existing resources to accomplish goals/objectives, Public review of Goals/Objectives, and PDM Planning Team Review of goals/objectives. The Review of PDM component identified three strategies: Writing of PDM, Public Review of PDM, and PDM Planning Team Review of PDM.

Based upon the discussions and information provided at the first meeting, it was determined that the existing PDM Risk Assessment and Mitigation Strategies needed to be updated. Before the second meeting, First District Staff updated the Introduction, Pre-requisites, Risk Assessment, Mitigation Strategy, and Plan Implementation components of the PDM.

Prior to the second PDM Planning Team meeting, First District Staff met with the participating municipalities and the Kingsbury County Townships at public noticed meetings to identify hazards and critical facilities, assess vulnerability, discuss development trends, and develop mitigation goals. First District also met with each participating jurisdiction to review proposed mitigation actions, including estimated costs, responsibility and priority. Meeting dates are referenced in Table 3.2. Staff members from Kingsbury County, Kingsbury County Townships, and rural utility providers were asked to identify hazards and critical facilities, assess vulnerability, discuss development trends, and develop mitigation goals and review these items with each respective governing body (if applicable). First District staff also conducted research regarding the history of disaster events in the county, including events that had occurred since the 2019 updated plan was developed.

During the 2019 PDM Plan update, First District conducted a technical review of existing documents. This review incorporated existing plans, studies, reports, technical information, zoning, and flood damage prevention ordinances into the PDM Update. It should be noted that most planning documents from each of the communities were previously developed by the First District. However, some of the smaller communities do not have such planning documents. Additionally, the 2019 PDM was used as a resource for the new plan because most of the natural hazard profile research had already been completed when it was drafted. In addition to the 2019 PDM, the First District reviewed several other existing documents including but not limited to the 2019 State of South Dakota Hazard Mitigation Plan and Flood Insurance Rate Maps for all applicable local jurisdictions. A summary of the technical review and incorporation of existing plans is included in Table 3.3.

Table 3.3: Record of Review

Technical Documents	Jurisdiction										Referenced in Plan
	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Kingsbury County	
Aquifer Protection Ordinance	The aquifer protection ordinance was reviewed & not determined to be significantly impacted by any natural hazards. (Existing water services are able to handle drought conditions for potable water.)	N/A	The aquifer protection ordinance was reviewed & not determined to be significantly impacted by any natural hazards. (Existing water services are able to handle drought conditions for potable water.)		N/A	N/A	The aquifer protection ordinance was reviewed & not determined to be significantly impacted by any natural hazards. (Existing water services are able to handle drought conditions for potable water.)				N/A
Building Code	N/A**										NA
Comprehensive Plan and Existing Land Use Maps	Reviewed existing and future land use maps, master street plan, and limitations on development due to perceived or objectively probable natural hazards; The goal was to maximize efficacy of mitigation strategies/ projects and align them with development strategies.		N/A	Reviewed existing and future land use maps, master street plan, and limitations on development due to perceived or objectively probable natural hazards; The goal was to maximize efficacy of mitigation strategies/ projects and align them with development strategies.	N/A			Reviewed existing and future land use maps, master street plan, and limitations on development due to perceived or objectively probable natural hazards; The goal was to maximize efficacy of mitigation strategies/ projects and align them with development strategies.	N/A	Reviewed existing and future land use maps, master street plan, and limitations on development due to perceived or objectively probable natural hazards; The goal was to maximize efficacy of mitigation strategies/ projects and align them with development strategies.	Chapters 1, 3, 4, 6, & Appendix F

Capital Improvement Plan	Reviewed capital improvement plan to review recommended projects and the community's monetary capacity to implement each project. This information assisted in prioritizing all mitigation strategies.	N/A	N/A	Reviewed capital improvement plan to review recommended projects and the community's monetary capacity to implement each project. This information assisted in prioritizing all mitigation strategies.	N/A	Reviewed capital improvement plan to review recommended projects and the community's monetary capacity to implement each project. This information assisted in prioritizing all mitigation strategies.	N/A	Reviewed capital improvement plan to review recommended projects and the community's monetary capacity to implement each project. This information assisted in prioritizing all mitigation strategies.	N/A
Drainage Ordinance	N/A								N/A
Flood Damage Prevention Ordinance	Reviewed effective flood maps to determine vulnerable private and public structures; their assessed values; & anticipated number of displaced individuals. This information assisted in prioritizing flood-related projects.	N/A		Reviewed effective flood maps to determine vulnerable private and public structures; their assessed values; & anticipated number of displaced individuals. This information assisted in prioritizing flood-related projects.	N/A	Reviewed effective flood maps to determine vulnerable private and public structures; their assessed values; & anticipated number of displaced individuals. This information assisted in prioritizing flood-related projects.			Chapters 4, 5, 6 & Appendices D & E
Economic Development Plan	N/A			Reviewed economic development plan to review strengths, challenges, and opportunities with the community. This information assisted in prioritizing all mitigation strategies.	N/A			Reviewed economic development plan to review strengths, challenges, and opportunities with the community. This information assisted in prioritizing all mitigation strategies.	N/A
Emergency Operations Plan	The County Emergency Manager reviewed the County's Emergency Operations Plan with the LEOP at regular meetings. Since this has been done during every update of the PDM over the last 12 years, no changes were necessary to the PDM to account for this plan unless specified by the given jurisdiction in Chapter 5.								Chapter 4

<i>Flood Insurance Studies or Engineering Studies for Streams</i>	Reviewed effective flood maps to determine vulnerable private and public structures; their assessed values; anticipated number of displaced individuals. This information was used to assist in prioritizing flood related projects.	N/A	Reviewed effective flood maps to determine vulnerable private and public structures; their assessed values; anticipated number of displaced individuals. This information was used to assist in prioritizing flood related projects.	N/A	Reviewed effective flood maps to determine vulnerable private and public structures; their assessed values; anticipated number of displaced individuals. This information was used to assist in prioritizing flood related projects.	N/A	Chapters 4, 5, 6 & Appendices D & E
<i>Hazard Vulnerability Analysis (by the local Emergency Management Office)</i>	While not directly referenced in this document, Kingsbury County maintains a Hazardous Materials Plan. This plan identifies facilities that store hazardous materials across all jurisdictions within the county and outlines strategies/policies for mitigating & responding to spill events (which may or may not occur due to natural events). During each community and Planning Team meeting, members were reminded that discussions about hazardous materials should be addressed within the HAZMAT plan. Additionally, all discussions regarding the major street plan considered evacuation routes in the event of such incidents.						Chapters 1, 3, 4, & 5
<i>Land Use Regulation Near Pipelines</i>	N/A						N/A
<i>State Hazard Mitigation Plan</i>	The State Hazard Mitigation Plan served as a valuable resource, providing examples and background data. Relevant objective data from the state's plan was considered for inclusion and in some instances, reiterated in this plan.						All Chapters
<i>Stormwater Management/ Drainage Plan</i>	N/A						N/A

<i>Subdivision Ordinance</i>	Subdivision regulations were reviewed with specific attention to installation of infrastructure to an ability to meet fire flows and for streets to meet IFC requirements. Though not reflected here, the community will review IFC requirements to determine whether minimum requirements should be placed in ordinance or standard operating procedures.	N/A	Subdivision regulations were reviewed with specific attention to installation of infrastructure to an ability to meet fire flows and for streets to meet IFC requirements. Though not reflected here, the community will review IFC requirements to determine whether minimum requirements should be placed in ordinance or standard operating procedures.	N/A	Subdivision regulations were reviewed with specific attention to installation of infrastructure to an ability to meet fire flows and for streets to meet IFC requirements. Though not reflected here, the community will review IFC requirements to determine whether minimum requirements should be placed in ordinance or standard operating procedures.	N/A	Subdivision regulations were reviewed with specific attention to installation of infrastructure to an ability to meet fire flows and for streets to meet IFC requirements. Though not reflected here, the community will review IFC requirements to determine whether minimum requirements should be placed in ordinance or standard operating procedures.	Chapter 5
<i>Transportation Plan</i>	Reviewed master street plan to identify which, if any, roads were more/less vulnerable to hazards OR more essential to travel during natural hazards.	N/A	Reviewed master street plan to identify which, if any, roads were more/less vulnerable to hazards OR more essential to travel during natural hazards.	N/A	Reviewed master street plan to identify which, if any, roads were more/less vulnerable to hazards OR more essential to travel during natural hazards.	N/A	Reviewed master street plan to identify which, if any, roads were more/less vulnerable to hazards OR more essential to travel during natural hazards.	Chapters 1, 3, 4, & 5

<i>Zoning Ordinance and Site Plan Review</i>	Zoning Ordinance restrictions on setbacks, densities; availability of infrastructure and public facilities to more intensive uses; and Kingsbury County FIS were discussed. It was determined that safety/mitigation related requirements were adequate in the present ordinance. Further, undeveloped lots appropriately zoned for construction within SFHA were reviewed.	N/A	Zoning Ordinance restrictions on setbacks, densities; availability of infrastructure and public facilities to more intensive uses; and Kingsbury County FIS were discussed. It was determined that safety/mitigation related requirements were adequate in the present ordinance. Further, undeveloped lots appropriately zoned for construction within SFHA were reviewed.	N/A	Zoning Ordinance restrictions on setbacks, densities; availability of infrastructure and public facilities to more intensive uses; and Kingsbury County FIS were discussed. It was determined that safety/mitigation related requirements were adequate in the present ordinance. Further, undeveloped lots appropriately zoned for construction within SFHA were reviewed.	Chapters 3, 4, 5, & 6
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* Document was reviewed in reference to the described section. Portions of the technical document may be included, but often times were merely considered/incorporated with no specific reference to the document.

** South Dakota Codified Law 11-10-6 establishes the most recent version of the International Building Code for all structures, excluding agricultural structures and single-family residential structures, within jurisdictions that have not adopted a building code. SDCL 11-10-6 does not provide for enforcement of this statute.

N/A The jurisdiction does not have this program/policy/regulation/technical document.

All jurisdictions within Kingsbury County possess the legislative authority to establish and/or modify the technical documents referenced in Table 3.3. Kingsbury County communities are adopting and enforcing regulations and plans that they determine to provide direct benefit to the respective community without significantly increasing administrative costs. Before adopting regulations and policies, these communities are carefully weighing the measurable benefit (or decrease in expense) with the cost (including social cost) of administration. As a result, very few of the policies/documents/etc. in Table 3.3 above have been significantly updated since 2019.

Since 2019, Arlington and DeSmet have adopted Comprehensive updates to their zoning ordinances. Further, the Town of Erwin agreed to allow Kingsbury County to administer zoning within city limits. All jurisdictions reviewed rules regarding bulk, height, and density of development to determine whether consistent, not only with the established planning principles of the community but also to ensure those regulations practicably employed the goals of the pre-disaster mitigation plan with reference to protection from fire, drought (impacts on water supply), limitation of density in flood prone areas and review of regulations for areas determined to be in a 100-year floodplain.

While reviewing those ordinances and changes at publicly noticed meetings, both entities chose to prioritize the adoption of updated special flood hazard areas as soon as possible. DeSmet was able to adopt the updated map and ordinance while adopting the zoning ordinance update, Arlington will be adopting both the Brookings County and Kingsbury County maps in early 2025 (consistent with the Brookings County timeframe.) The remaining participating communities have adopted their new maps to remain consistent with the goals of this Plan. Each of the communities determined that the public would not support free-board or additional requirements above the minimum requirements to remain compliant.

Chapter 4 presents a comprehensive list of potential hazards that could affect Kingsbury County. During the initial meeting, the Planning Team initiated the development of a detailed profile for each hazard. These profiles incorporated insights from all participating jurisdictions highlighting the specific impacts each hazard can have on their community. Discussion also occurred regarding the existing hazard mitigation strategies, with a particular focus on protecting the critical and essential facilities in each community.

To streamline their efforts, the Planning Team prioritized and reduced the number of hazards to focus on to those that occur more frequently or pose the greatest risk of significantly higher damages. This more targeted approach allows the team to allocate the County's resources more effectively and enhance the resilience of its communities.

Upon completion of the draft plan, Kingsbury County Emergency Management and First District posted the draft plan on their websites. Correspondence regarding the posting of the PDM plan were sent to all the participants and to the emergency managers in the neighboring counties of: Hamlin, Clark, Beadle, Miner, Lake, and Brookings. The County published a notice in the newspapers to notify the public regarding availability of the draft PDM plan for their review and comment. Everyone who received the correspondence regarding the plan was allowed forty-five days to comment on the draft.

At the second meeting, in December of 2024, Risk Identification/Assessment was discussed. The PDM Planning Team reviewed the updates prepared by the First District. This included first a review of the hazards identified in the State of South Dakota Hazard Mitigation Plan and that risk assessment portion of the existing PDM. First District staff also provided an overview of the

information regarding Critical Facilities, Risk Identification, Hazard Vulnerability, and mitigation projects identified by the County's municipalities.

The PDM Planning Team also dealt with the Mitigation Strategy at the December 2024 meeting. Formation of the strategy began with a review of the results of the risk assessment, which led to discussion about the goals to be achieved with the mitigation plan. The list of goals is included in Chapter 5.

The PDM Planning Team reviewed the goals and objectives identified in the 2019 PDM. After review, the Team determined the 2019 goals and objectives were still appropriate and should be included in the updated PDM plan. One minor change was made to add fire prevention educational activities to Goal #1 of the Mitigation Activities for Fire and Drought Hazards. In addition, the PDM Planning Team reviewed the list of proposed actions included in the previous mitigation plan and discussion followed about the progress that had been made on implementing the actions. Specific mitigation actions recently identified by the participating jurisdictions were also discussed.

The rest of the meeting was spent prioritizing the mitigation actions and discussing how the plan would be implemented. It was emphasized that cooperation between the county and the participating jurisdictions was especially important, and discussion occurred about how this could best be achieved. Representatives from the jurisdictions were made aware of the critical role they needed to play to ensure the success of the mitigation strategy, such as implementing specific mitigation actions. The Emergency Management Director emphasized the importance of ensuring that no local decisions are made, or actions taken contrary to the goals of this plan. Also, responsible parties were identified for reporting on progress being made to implement the proposed mitigation actions, for evaluating the plan's overall effectiveness, and for getting the public more involved in the planning process.

At the end of the meeting the First District was instructed to conduct update the plan based on comments received. Then return for the final review and submission of the plan,

The final meeting of the PDM Planning Team was subsequently held later in December of 2024 to review and discuss final draft as amended based upon comments from the planning team, communities, and the public. At the meeting, the PDM Planning Team recommended that the plan be submitted to SD OEM and FEMA. The final draft of the plan was again posted on the First District Association of Local Governments and Kingsbury County websites.



CHAPTER 4 | RISK ASSESSMENT

IDENTIFICATION OF HAZARDS

Requirement 201.6(c)(2)(i). Local Mitigation Plan Review Tool – B1-a;

Requirement 201.6(c)(2)(i). Local Mitigation Plan Review Tool – B1-b;

Requirement 201.6(c)(2)(i). Local Mitigation Plan Review Tool – B1-f.

In this chapter, the hazards that were identified by the PDM Planning Team as having the most significance for the County are analyzed. As part of the analysis, various maps and tables were produced and are included within this chapter. The planning participants began the risk assessment process by reviewing the State of South Dakota Hazard Mitigation Plan (SD SHMP). The PDM Planning Team also reviewed records of hazard events that have occurred in the county since 2000, relying primarily on the Spatial Hazard Events and Losses Database for the United States (SHELDUS), compiled by the University of South Carolina's Hazards and Vulnerability Research Institute and data from the NCDC Storm Events Database. A summary of the findings for hazard occurrences from the past ten years is provided below in Table 4.1: The PDM Planning Team also identified potential hazards by observing development patterns, interviews from towns and townships, public meetings, PDM work sessions, previous disaster declarations and research of the history of hazard occurrences located within the County.

Table 4.1: Hazard Occurrences 2014-2023

Type of Hazard	# of Occurrences Since 2013	Source
Dam Failure	0	SD SHMP
Drought	15+	NOAA/UNL
Earthquake	0	SDGS
Extreme Cold	12	NOAA
Extreme Heat	6	NOAA
Fire (Urban and Wildfire)	268	NOAA & State Fire Marshall's Office
Flood	8	NOAA
Hail	22	NOAA
Heavy Rain	3	NOAA
Heavy Snow	2	NOAA
Ice Jams	0	SD SHMP
Ice Storm	1	NOAA

Type of Hazard	# of Occurrences Since 2013	Source
Landslide	0	SD SHMP
Lightning	0	NOAA
Subsidence	0	SD SHMP
Thunderstorm and High Wind	42	NOAA
Tornado	6	NOAA
Winter Storm and Blizzards	73	NOAA

Hazards were analyzed in terms of the hazard's probability of occurrence in Kingsbury County. Representatives from each participating jurisdiction and the PDM Planning Team were asked to complete worksheets that categorized hazards by the likelihood of occurrence within the county.

Every hazard or disaster that has occurred since 2014 was evaluated and placed into one of two separate columns depending on the likelihood of the disaster occurring in the PDM jurisdiction. Hazards that occur at least once a year or more were placed in the High Probability column; hazards that may have occurred in the past or could occur in the future but do not occur on a yearly basis were placed in the low probability column.

Due to the topographical features of the County and the nature of the natural hazards that affect the geographical area covered by this PDM, most areas of the county have similar likelihood of being affected by the natural hazards identified. Only the natural hazards from the High Probability and Low Probability Columns will be further evaluated throughout this plan, with an emphasis on the High Probability hazards. All hazards in the Unlikely to Occur column will not be further evaluated in the plan. Table 4.2 is an adjusted list of hazards produced from the FEMA worksheets completed by each participating jurisdiction and the PDM Planning Team.

Table 4.2: Hazards Categorized by Likelihood of Occurrence within Kingsbury County

High Probability	Low Probability
Blizzard	Drought
Extreme Cold	Urban Fire
Extreme Heat	
Flood	
Freezing Rain/Sleet/Ice	
Hail	
Heavy Rain	
Heavy Snow	
Lightning	

High Probability	Low Probability
Rapid Snow Melt	
Strong Winds	
Thunderstorm	
Tornado	
Wildfire	

Hazards or disasters for which there is no record of past occurrence in the area before and are unlikely to occur in the PDM jurisdiction any time in the future were not identified for planning purposes, however are included in the disaster profile for reference should the Kingsbury County PDM Planning Team's intent change in the future. Specifically, those hazards for which there is no record of past occurrence such as: landslides, subsidence, dam failures, ice jams, and earthquakes are profiled but are not identified for planning purposes. None of the municipalities have assets that are vulnerable to wildfires. Planning for wildfires within municipalities is limited to response and recovery activities rather than mitigation. All activities to improve response and recovery to urban fires should be considered activities to improve response and recovery to wildfires. Therefore, wildfires are only intended for planning purposes outside of municipalities.

Finally, several types of natural hazards that occur in other portions of the country were not included in the PDM plan hazard assessment due to the zero probability of them occurring in Kingsbury County. The hazards included avalanches, coastal storms, hurricanes, and volcanic activity.

TYPES OF NATURAL HAZARDS IN THE PDM JURISDICTION AREA

Most descriptions of the natural hazards likely to occur in the County were taken directly from the 2019 Kingsbury County PDM. For the purpose of consistency throughout the plan, additional definitions were included to reflect all the hazards that have a chance of occurring in the area. For all of the hazards identified, the probability of future occurrence is expected to be the same for all of the jurisdictions covered in the PDM.

HAZARD PROFILE

Requirement 201.6(c)(2)(i). Local Mitigation Plan Review Tool – B1-a-f;

Requirement 201.6(c)(2)(ii). Local Mitigation Plan Review Tool – B2a-b.

It should be stated that most of the hazards identified in this section have the potential of occurring anywhere in the County. A brief section about the history of each hazard's occurrence in the county is provided. Table 4.3 below shows all of the Presidential Disaster Declarations that have involved the county. Information on previous occurrences – the location, the extent (i.e., magnitude or severity) of each hazard, and probability of future events (i.e., chance or occurrence) are listed individually by the type of hazard in the following tables.

Table 4.3: Presidential Disaster Declarations in South Dakota Including Clark County

Date	Disaster Dec #	Type	Total Damage	Public Assistance Cost	Hazard Mitigation Assistance
4/18/1969	257	Flooding	\$4,599,306		
07/19/1984	717	Flooding			
05/03/1986	764	Severe Storms and Flooding	\$5,158,130		
7/2/1992	948	Flooding, Severe Storms, and Tornadoes			
07/19/1993	999	Severe Storms, Tornadoes and Flooding	\$53,068,748		
06/21/1994	1031	Severe Storms and Flooding	\$8,187,938		
05/26/1995	1052	Flooding	\$35,649,349		
01/05/1996	1075	Severe Winter Storm	\$13,085,649		
01/10/1997	1156	Severe Winter Storm and Blizzard	\$19,455,263		
04/07/1997	1173	Severe Winter Storm and Severe Flooding	\$87,069,429		
05/17/2001	1375	Severe Winter Storm and Flooding	\$10,441,684	\$5,097,819	
12/20/2005	1620	Severe Winter Storm	\$28,071,441	\$24,647,040	
05/02/2007	1702	Tornadoes and Flooding	\$6,226,611		
05/13/2010	1915	Flooding		\$21,498,619	
05/13/2011	1984	Flooding		\$52,090,678	
08/02/2013	4137	Tornadoes and Flooding		\$1,159,221	
06/07/2019	4440	Severe Winter Storm, Snowstorm, and Flooding		\$60,762,752	\$9,432,655
10/07/2019	4467	Severe Storms, Tornadoes, and Flooding		\$2,693,881	\$164,060
11/18/2019	4469	Severe Storms, Tornadoes, and Flooding		18,594,268	\$2,988,996
06/29/2022	4656	Severe Storm, Straight-line Winds, Tornadoes, and Flooding		\$6,733,541	\$223,607
02/27/2023	4689	Severe Winter Storms and Snowstorm		\$2,413,949	

SOURCE : www.fema.gov/data-visualization/disaster-declarations-states-and-counties

While the PDM Planning Team reviewed all hazard occurrences that have been reported in the last 50 years, the list for some of the hazards was extremely long. The information provided in the tables is not a complete history report, but rather an overview of the hazard events. The PDM Planning Team felt the hazard trend for the last ten years could be summarized in this section and decided to include any new occurrence that have taken place since the previous PDM was drafted.

DAM FAILURE

The risk of dam breach or failure poses a lesser concern to the citizens of the County compared to the threat of flooding. Kingsbury County is home to numerous structures designed to control or regulate flow of water between bodies. The South Dakota Department of Agricultural and Natural Resources (SD DANR) identifies five dams within the County, as listed below in Table 4.4. According to the SD DANR database, all five dams located in Kingsbury County are rated as having low downstream hazard potential. A map (Figure 4.1) illustrating high and significant hazard dams throughout South Dakota can be found below. Additionally, the chart below depicts the dam safety and hazard potential classification rating system. Based on the dam data provided for Kingsbury County, the likelihood of a dam failure resulting in the loss of human life, economic impact, environmental damage, or disruption of essential services is unlikely to occur.

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

SOURCE : FEMA, *Federal Guidelines for Dam Safety -- Hazard Potential Classification System for Dams*, April 2004

Figure 4.1 South Dakota High and Significant Hazard Dams

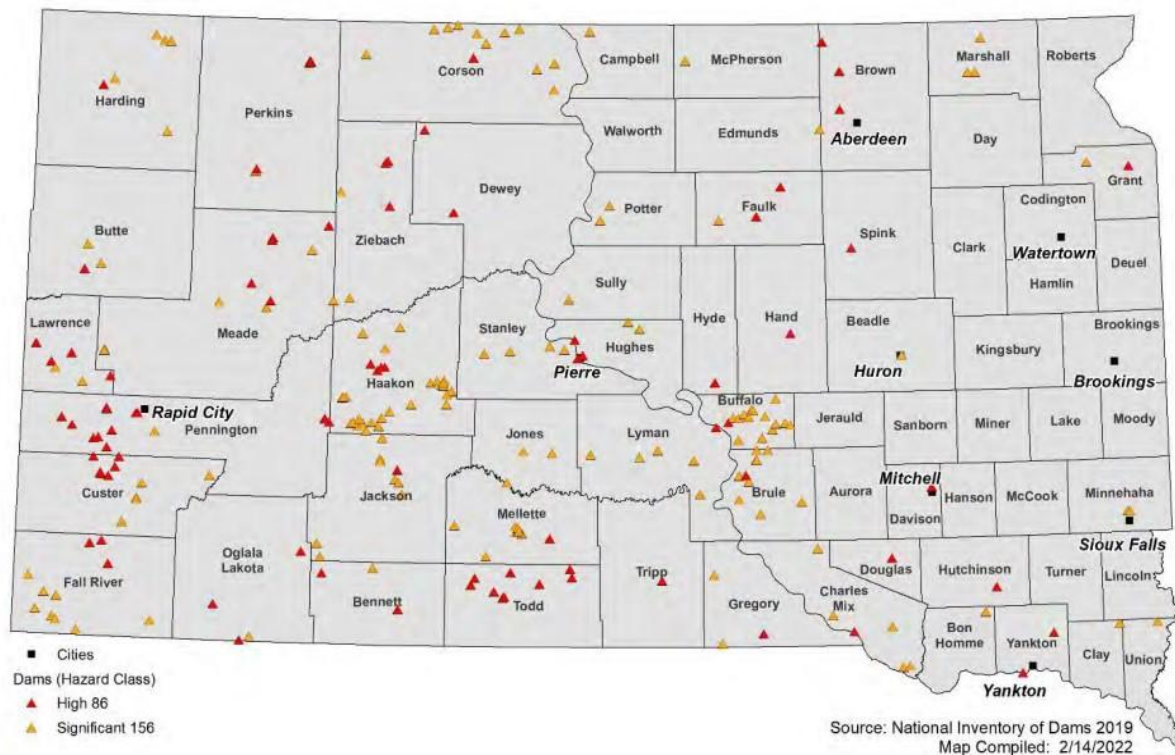


Table 4.4 Dam Locations in Kingsbury County

Dam Name	Owner	Location	Water Body
Bancroft/Lake Agnew Dam	School & Public Lands Fund (State)	SE1/4 of NW1/4 of Section 20-112N-57W	Marsh Creek Tributary
Osceola Dam	School & Public Lands Fund (State)	NE1/4 of NW1/4 of Section 32-112N-58W	Pearl Creek Tributary
Ole Lake WPA Dam	US Fish & Wildlife Service (Federal)	NE1/4 of SE1/4 of Section 31-111N-53W	Lake Preston Tributary
Geyer Dam	Art Geyer (Private)	SW1/4 of NW1/4 of Section 29-111N-57W	Redstone Creek Tributary
Reinicke Dam	Daryl Reinicke (Private)	SW1/4 of NW1/4 of Section 4-110N-53W	Lake Preston Tributary

SOURCE : SD DANR-Office of Water - Water Rights Program

Climate Change Considerations

There is no comprehensive assessment of how climate change might affect flooding in South Dakota. The TNCA, EPA-Climate Impacts on the Great Plains study plus other studies proposed climate change projections show that future precipitation patterns will vary across the Great Plains. Winter/spring precipitation and very heavy precipitation events are both projected to increase in the northern portions of the Great Plains, leading to increased runoff and potential flooding. Increased snowfall, rapid spring warming, and intense rainfall can combine to produce significant flooding.

Since 1990, South Dakota has averaged 22% more 2-inch rain events compared to the long-term average. Some historic rain and flooding events have occurred in recent years. Climate projections for the Great Plains indicate that 1-day, 20-year return events will increase in frequency by 8-16% in the coming decades. Kingsbury County is confident that existing dam capacity will be able to accommodate an increase of one flood, every 12 to 25 years (according to data elsewhere in this report, Kingsbury County currently experiences flooding at a frequency of less than once annually).

DROUGHT

South Dakota's climate is characterized by cold winters and warm to hot summers. There is usually light moisture in the winter and marginal to adequate moisture for the growing season for crops in the eastern portion of the state. Semi-arid conditions prevail in the western portion. This combination of hot summers and limited precipitation in a semi-arid climatic region places South Dakota present a potential position of suffering a drought in any given year. The climatic conditions are such that a small departure in the normal precipitation during the hot peak growing period of July and August could produce a partial or total crop failure.

The fact South Dakota's economy is closely tied to agriculture only magnifies the potential loss which could be suffered by the state's economy during drought conditions. The Keetch-Byron and Palmer Drought Indexes measure drought impact. The SD SHMP states that based on historical records, notable droughts have occurred somewhere in the state on average about every 12 years, which is equivalent of an 8% chance any given year. The FEMA National Risk Index (FEMA NRI) states Kingsbury County has an annualized frequency of 4 drought events per year.

The following chart depicts the intensity of dry conditions and is used on the U.S. Drought Monitor maps and in reports to show potential drought conditions in the country. This chart also correlates to the maps below representing the severity of drought conditions across Kingsbury County at the severest extent referenced in Table 4.5 identifying the ten-year drought history for the County.

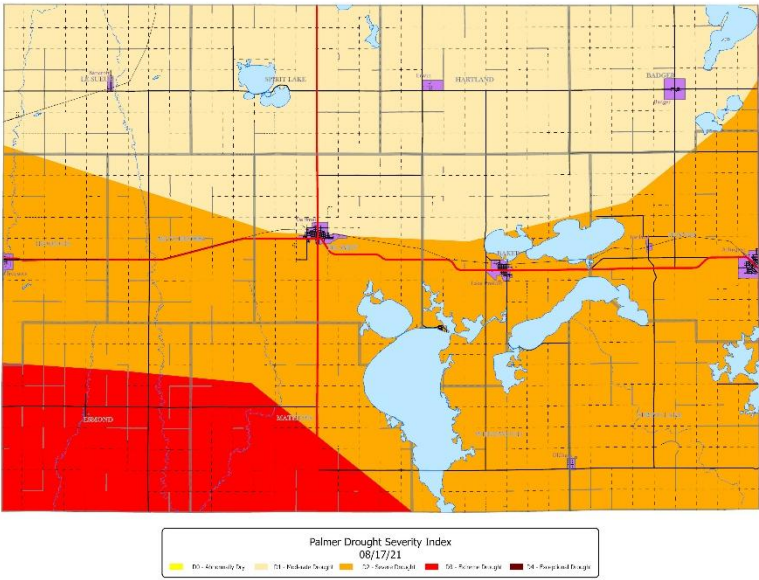
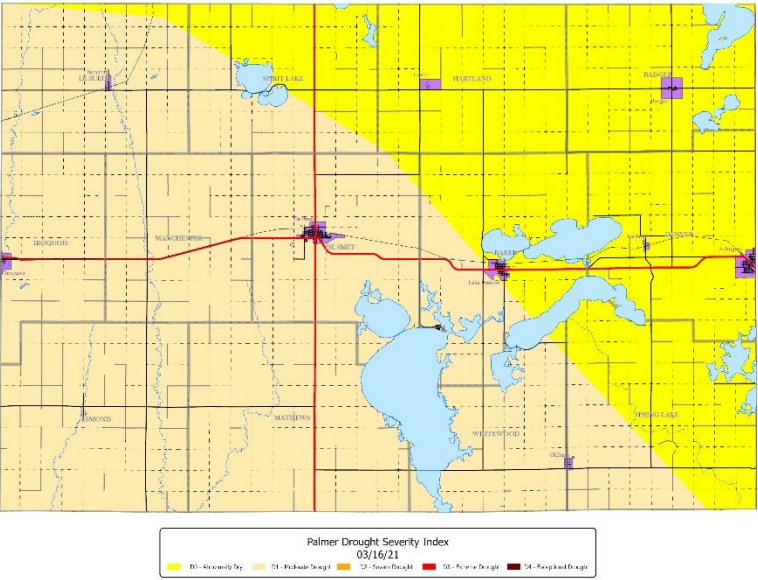
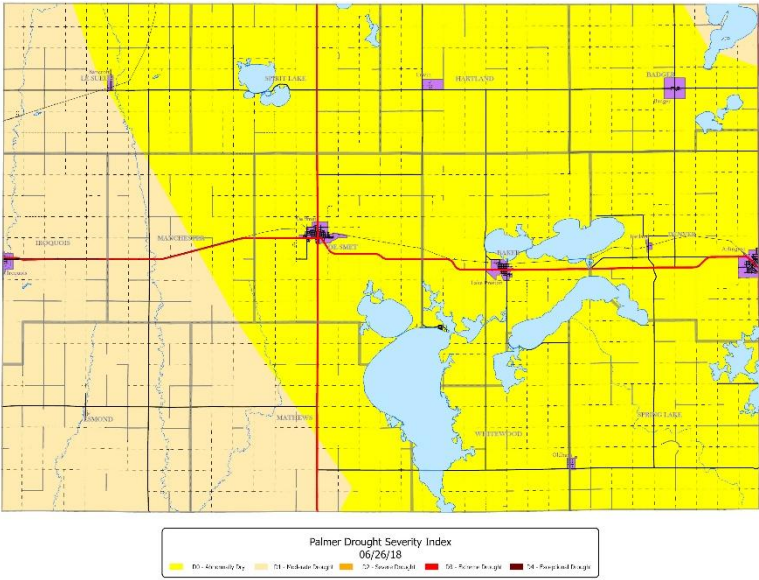
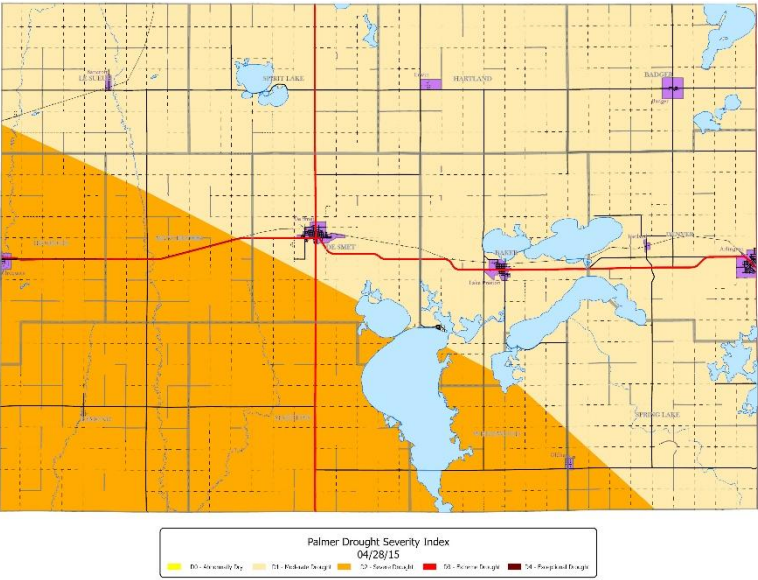
Category	Description	Possible Impacts
D0	Abnormally Dry	Going into drought: • short-term dryness slowing planting, growth of crops or pastures Coming out of drought: • some lingering water deficits • pastures or crops not fully recovered
D1	Moderate Drought	• Some damage to crops, pastures • Streams, reservoirs, or wells low, some water shortages developing or imminent • Voluntary water-use restrictions requested
D2	Severe Drought	• Crop or pasture losses likely • Water shortages common • Water restrictions imposed
D3	Extreme Drought	• Major crop/pasture losses • Widespread water shortages or restrictions
D4	Exceptional Drought	• Exceptional and widespread crop/pasture losses • Shortages of water in reservoirs, streams, and wells creating water emergencies

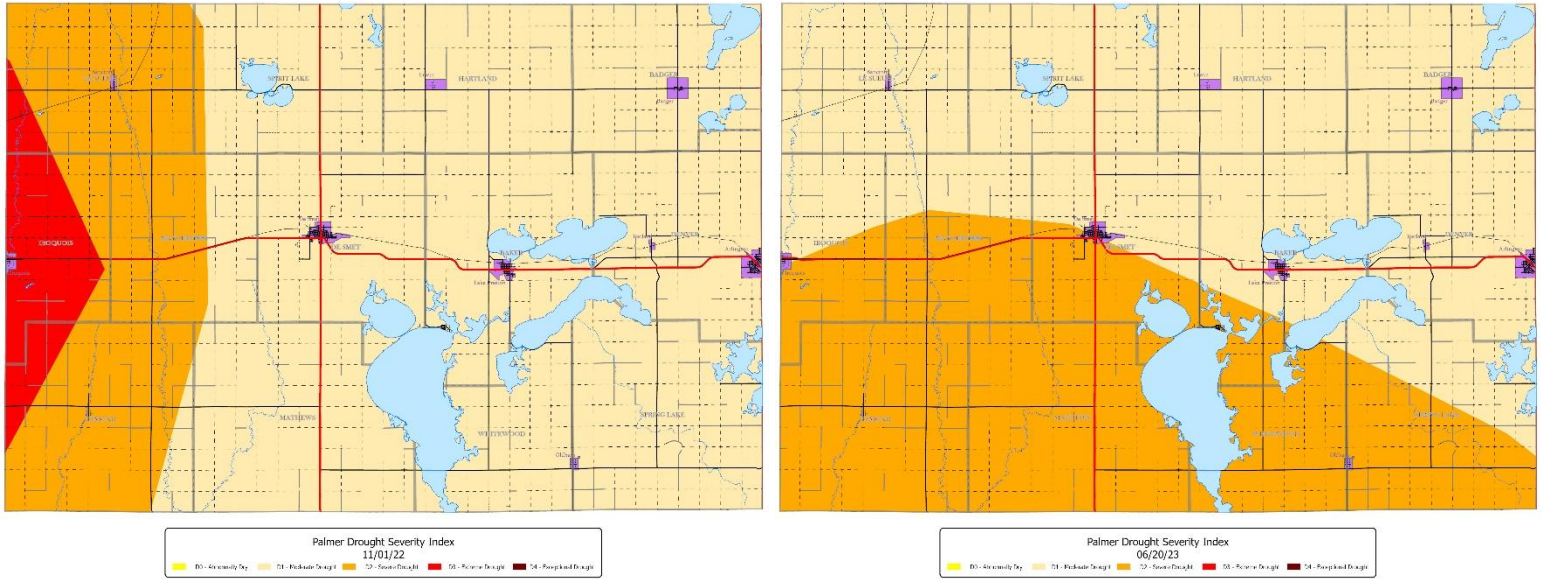
SOURCE : <http://droughtmonitor.unl.edu/archive.html> - (This chart is used as the legend for the following maps).

Table 4.5: Kingsbury County Ten Year Drought History

Severest Extent (By Week – See Map Below for Details)	Date Start	Date End	Type	Crop Damage
04/28/2015	03/31/2015	06/30/2015	Moderate Drought	
06/26/2018	06/19/2018	07/03/2018	Moderate Drought	
03/16/2021	12/01/2020	03/23/2021	Moderate Drought	
08/17/2021	06/08/2021	10/26/2021	Severe to Extreme Drought	1.798M
11/01/2022	10/11/2022	12/20/2022	Severe to Extreme Drought	3.470M
06/20/2023	12/20/2022	09/19/2023	Moderate Drought	7.400M

SOURCE : <http://droughtmonitor.unl.edu/>





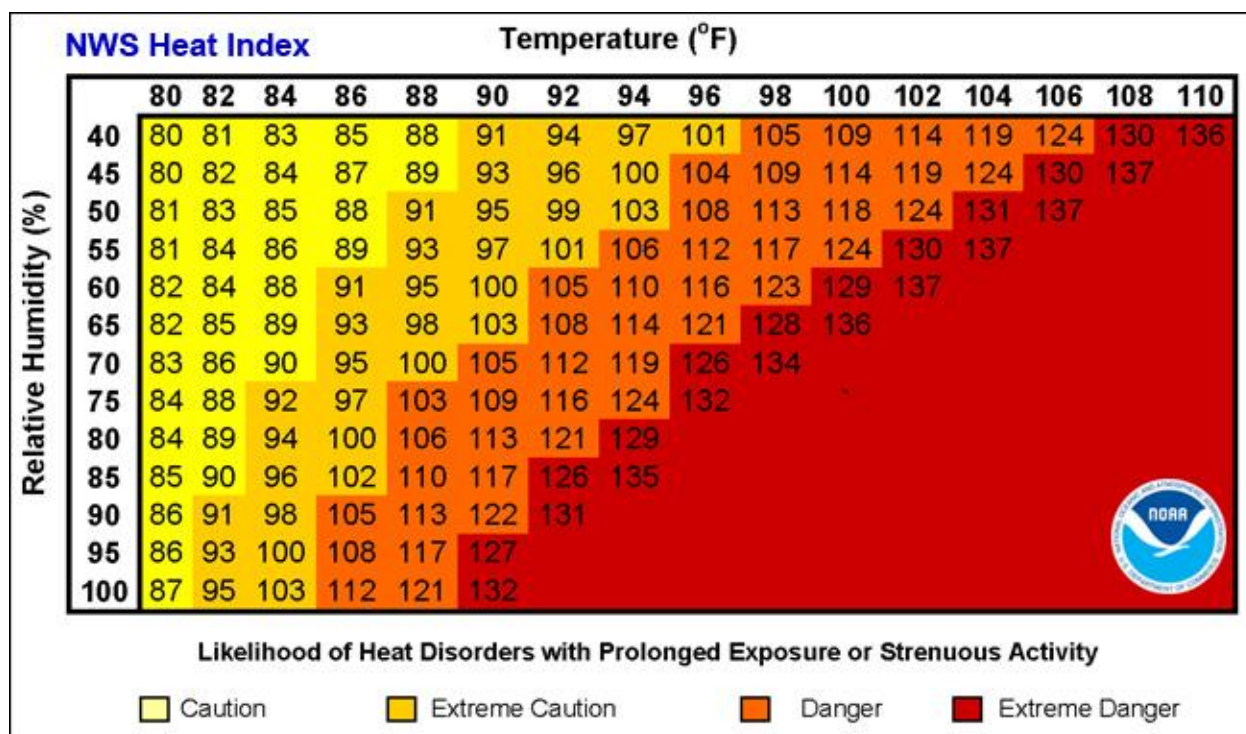
Major Drought Occurrences:

- 1880s-1890s: The years 1887, 1894-1896, 1898-1901 were very dry years. The National Weather Service (NWS) has several fire danger informational items located on their website.
- 1930s: During the infamous dust bowl years, Kingsbury County was not spared a fair share of problems. Particularly dry summers were in 1934 and 1936.
- 1987-1990: An abnormally low amount of precipitation in the summer of 1987 combined with a hot and dry summer during 1988, left South Dakota in dire straits. Agricultural income was down 0.8% and wheat price per bushel decreased significantly.

EXTREME HEAT

Extreme Heat, often referred to as a Heat Wave, is a prolonged period of excessively hot weather that may also be accompanied by high humidity. In the County, temperatures typically range from 0 to 100 degrees Fahrenheit. Therefore, any temperature outside of this range can be considered extreme. This term is applied to both routine weather variations and extraordinary heat spells that might occur only once a century. Extreme heat poses significant risks to people, livestock, and critical infrastructure when certain conditions are present.

The Heat Index, which is detailed below, measures the impact of extreme heat on humans and livestock. According to the FEMA National Risk Index (NRI), Kingsbury County experiences heat waves at an annualized frequency of 0.7 events per year. Table 4.6, located below, outlines the history of extreme heat events in Kingsbury County. This information is sourced from the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information (NCEI) Storm Events Database.



SOURCE : NWS/NOAA

Extreme Heat Occurrences:

July 2011 – A significant upper-level, high-pressure system developed over the region bringing very hot and humid conditions. This was the worst heat wave to hit the region since July 2006. Beginning on Friday July 15, 2011 and persisting through Wednesday July 20th, many locations experienced high temperatures in the 90s to lower 100s, with low temperatures in the 70s at night. In addition, humidity levels rose to extreme levels at times. Surface dew point temperatures in the 70s and lower 80s brought extreme heat index values of up to 110 to 125 degrees. The dewpoints were some of the highest ever recorded in the region. The dewpoint at Aberdeen tied the previous record with 82 degrees. Sisseton also tied their record with 83 degrees. Watertown came a degree shy of tying their record with 80 degrees. The prolonged heat took its toll on livestock with fifteen hundred cattle perishing during the heat. Numerous sports and outdoor activities were cancelled. Some of the highest heat index values included; 110 degrees at Mobridge; 111 degrees at Watertown; 113 degrees at Miller and Gettysburg; 114 degrees at Wheaton and Faulkton; 116 degrees at Pierre; 118 degrees at Sisseton; and 121 degrees at Aberdeen. The highest heat index value occurred at Leola with a temperature of 98 degrees and a dewpoint of 82 degrees, the heat index hit 125 degrees.

July 2016 - A very warm and abnormally large upper-level high pressure area along with high dew points brought high heat indices to central and northeast South Dakota on July 20, 2016. High temperatures were in the upper 80s to the 100s with overnight lows in the upper 60s to the mid-70s. A few of the highest heat index values include: 105 degrees at Britton, 106 degrees at Sisseton and Watertown, 107 degrees at Pierre, 108 degrees at Aberdeen and Clark, 109 degrees at Mobridge, 110 degrees at Eureka and Miller, and 111 degrees at Clear Lake. This event and the two listed below were located throughout regions which include all of Kingsbury County and between fifteen (15) and twenty-five (25) other counties.

Table 4.6: Kingsbury County History of Extreme Heat

Location	Date	Time	Type
Kingsbury County	06/10/2016	11:00	Excessive Heat
Kingsbury County	07/20/2016	12:00	Excessive Heat
Kingsbury County	07/11/2018	11:00	Heat
Kingsbury County	06/29/2019	12:00	Excessive Heat
Kingsbury County	07/26/2023	10:00	Excessive Heat
Kingsbury County	08/19/2023	11:00	Excessive Heat
Kingsbury County	08/21/2023	11:00	Excessive Heat
Kingsbury County	09/02/2023	12:00	Heat

SOURCE : <https://www.ncdc.noaa.gov/stormevents/>

Climate Change Considerations

According to the Fifth National Climate Assessment, (FNCA) the line of demarcation between the arid west and humid east is moving eastward, beyond the traditional border at the 100th Meridian. Since it is known that dryer air, resulting from decreased snowpack in the west/northwest, leads to wider temperature fluctuations it is reasonable to expect increased frequency of extreme temperatures, such as extreme heat and cold. Though stream flow data runs contrary to the prediction of an arid Kingsbury County, it is expected the increased water levels are the result of more frequent extreme moisture events (summer and winter storms) and rapid snow melt.

Furthermore, the FNCA states, since 2000, the winter season is warming at a faster rate than any other season in the Northern Plains region, and this is also true for South Dakota. Higher average low temperatures in winter will shorten the time snow spends on the ground, and in turn lead to earlier Spring temperatures and drier air reaching farther east earlier in the year than in the past. While it is true that the warmer air will converge with moist air to the east, resulting in large rain events, it is expected that warm air will be more likely to increase the frequency of prolonged heat/dry events.

As discussed elsewhere in this plan, climate change is fueling more extreme weather events, such as summer storms and extreme weather variability. Given the increased likelihood of both storms and extreme heat, the importance of temporary emergency shelter with back-up generators for the facility and water/sewer services for that facility in the event of loss of service/shelter due to storms leads to displacement of residents for prolonged period of times during extreme heat events.

EARTHQUAKE

An earthquake results from the sudden release of energy due to an adjustment in the earth's crust. This adjustment causes the ground to tremble and generates vibrations that radiate out from the quake's focus. Earthquakes primarily occur along fault zones, which are fractures in the Earth's crust where stress builds until one side slips. In South Dakota, the likely causes of earthquakes stem from underlying plate movements underlying and ongoing isostatic (glacial) rebound. Severe earthquakes can cause significant damage to infrastructure and result in injury

or loss of life. However, earthquakes in South Dakota are generally minor, typically resulting in low rumbles with no damage. According to the South Dakota Geological Survey, no recorded earthquakes have occurred in Kingsbury County.

Although the Midwest is often referred to by geologists as the “stable midcontinent”, earthquake shock waves can travel farther and faster from the epicenter due to the older, cooler, and denser geological makeup. However, because earthquakes in South Dakota tend to be mild causing little to no damage other than rattling dishes, cracked windows, or stuck doors, this hazard poses a low risk to the County. The Richter Scale measures earthquake intensity, and according to FEMA’s National Risk Index (NRI), the annual probability of an earthquake to occur in the County is 0.020% annually. Earthquakes are not a risk in Kingsbury County.

Richter scale of earthquake magnitude			
magnitude level	category	effects	earthquakes per year
less than 1.0 to 2.9	micro	generally not felt by people, though recorded on local instruments	more than 100,000
3.0–3.9	minor	felt by many people; no damage	12,000–100,000
4.0–4.9	light	felt by all; minor breakage of objects	2,000–12,000
5.0–5.9	moderate	some damage to weak structures	200–2,000
6.0–6.9	strong	moderate damage in populated areas	20–200
7.0–7.9	major	serious damage over large areas; loss of life	3–20
8.0 and higher	great	severe destruction and loss of life over large areas	fewer than 3

John P. Rafferty

Climate Change Considerations

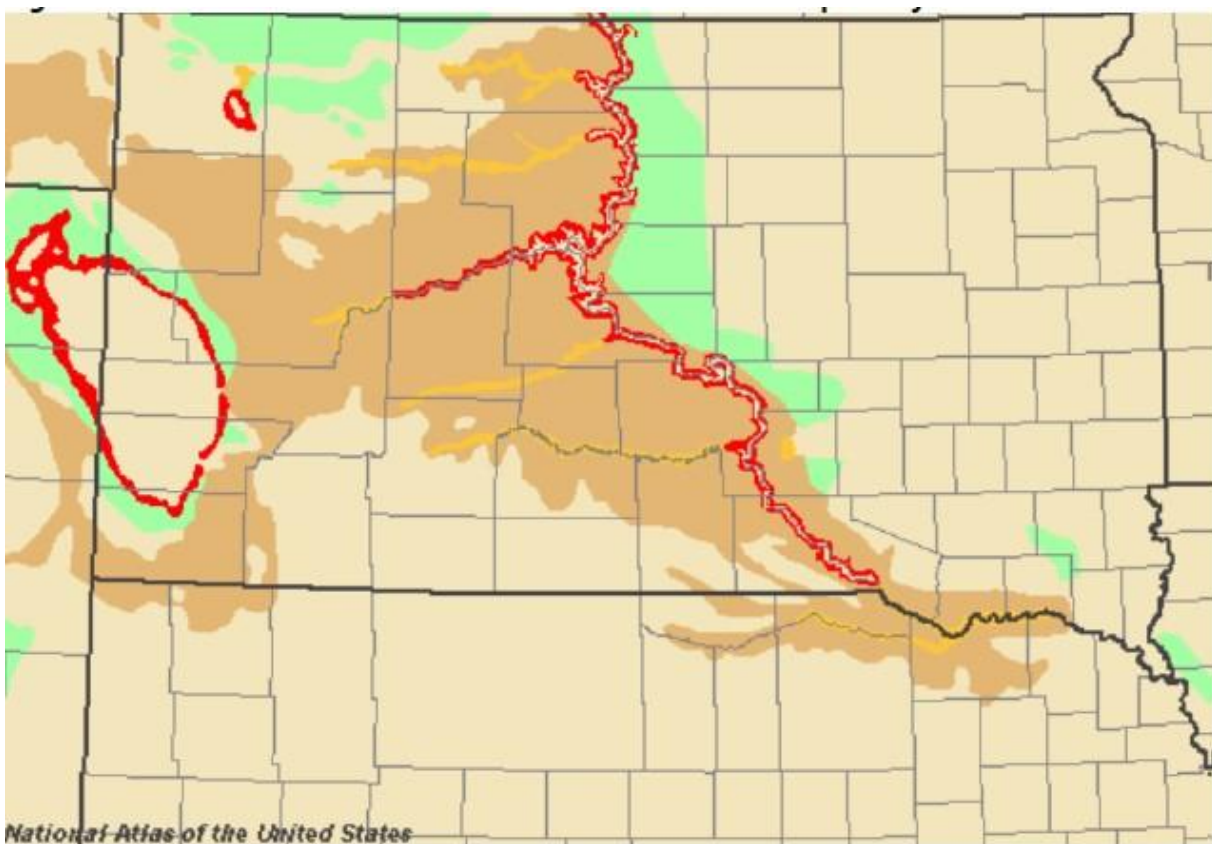
Climate change leads to increased frequency in extreme weather events and increased meltwater. Therefore, increased pressure resulting from additional surface or ocean water may result in increased seismic pressure at faults and over volcanic areas. Further, increased frequency in drought conditions is hypothesized to increase seismic activity in seismically active areas. This hypothesis is based upon Jet Propulsion Laboratories’ research indicating that mountains increase and decrease in size based upon fluctuations in drought/wet conditions. With no known fault lines in or near eastern South Dakota, earthquakes which occur are statistical anomalies. There is no data which would predict future occurrences in a county.

LANDSLIDE

Landslides are a geological phenomenon that encompass a wide range of ground movements, such as rock falls, deep slope failures, and shallow debris flows. All of these movements can occur in offshore, coastal, and onshore environments. While gravity is the primary driving force behind landslides, other contributing factors can build up specific subsurface conditions that make the area or slope prone to failure. However, an actual landslide often requires a trigger to be

initiated. The following map from the SD SHMP illustrates landslide incidence and susceptibility across South Dakota, including Kingsbury County. Landslides are not a risk in the County. The FEMA NRI indicates that zero events per year are expected.

Figure 4.2 South Dakota Landslide Incidence and Susceptibility



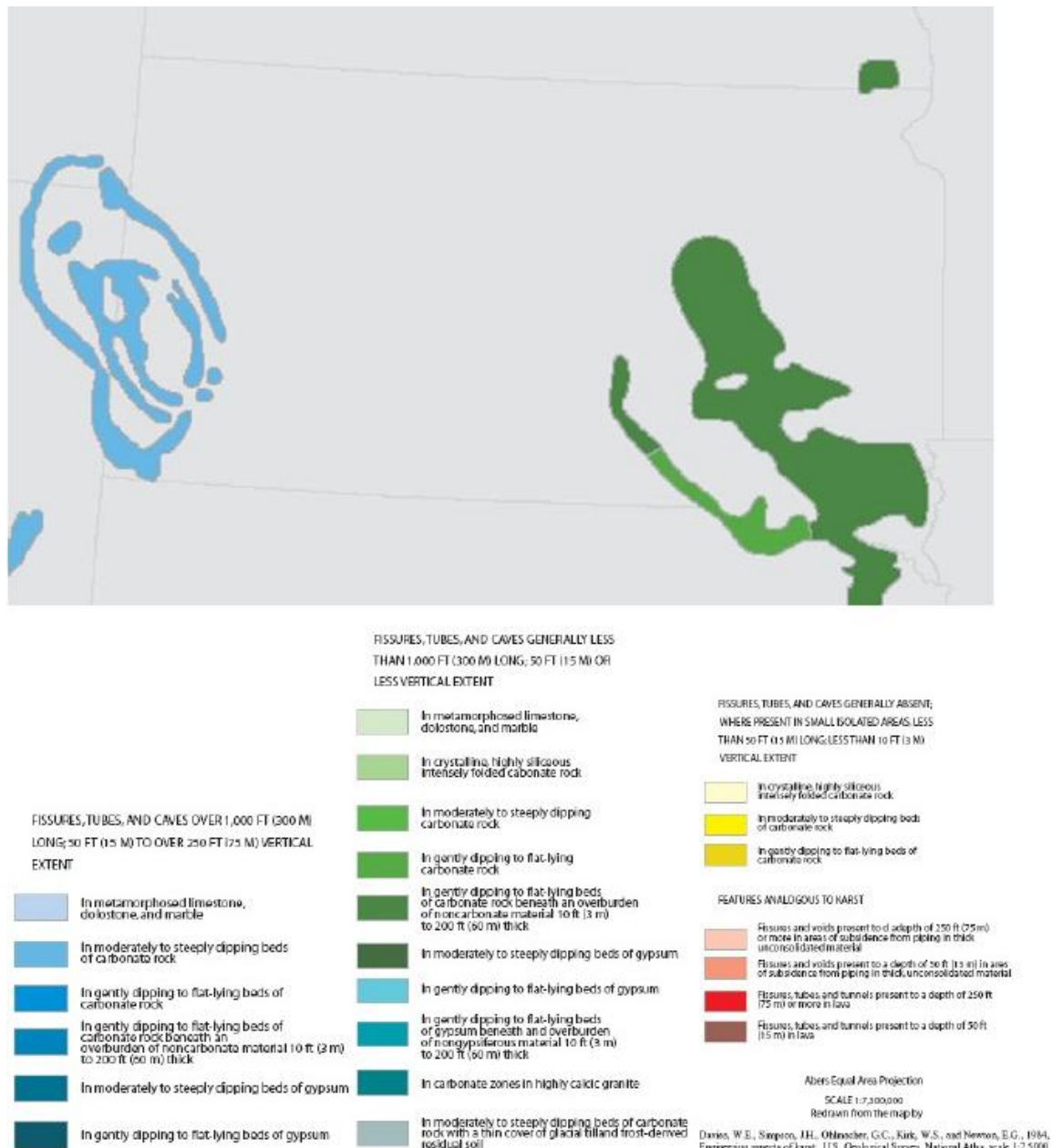
- Landslide Incidence and Susceptibility**
- Landslide Incidence**
- Low (less than 1.5 % of area involved)
 - Moderate (1.5%-15 % of area involved)
 - High (greater than 15 % of area involved)
- Landslide Susceptibility/ Incidence**
- Moderate susceptibility/low incidence
 - High susceptibility/low incidence
 - High susceptibility/moderate incidence

SOURCE : U.S. Geological Survey, map generated by <https://nationalmap.gov/> www.nationalatlas.gov

SUBSIDENCE

Subsidence refers to the downward movement of a surface relative to a reference point, while its opposite, uplift, results in an increase in elevation. Various factors can cause subsidence, including the dissolution of limestone, mining activities, fault movements, isostatic rebound, extraction of natural gas, ground water depletion, and seasonal effects. The accompanying map from the South Dakota State Hazard Mitigation Plan (SD SHMP) illustrates the subsidence risks across South Dakota, including Kingsbury County. The map indicates that subsidence risks in Kingsbury County are not a concern.

Figure 4.3 State of South Dakota Subsidence Risk



SOURCE : The National Karst Map http://www.nckri.org/map/maps/engineering_aspects/davies_map_PDF.pdf

FLOOD

Flooding is a temporary overflow of water onto normally dry land, resulting in measurable property damage or necessitating the evacuation of people and resources. Floods can cause injuries and even loss of life, especially when swiftly moving water is involved. As little as six inches of moving water is enough to sweep a vehicle off a road. Floods can develop slowly due to prolonged rainfall causing rivers to swell, or rapidly during a warming trend following a heavy snowfall. Both heavy rains and rapid snowmelt can lead to flooding or flash flooding, both of which are included under this hazard profile. Even small streams or dry creek beds can overflow and create flooding. Two types of flooding hazards are present within the County.

1. Inundation flooding occurs most often in the spring. The greatest risks are realized typically during a rapid snowmelt before ice is completely off all of the rivers. Ice jams occur when warm temperatures and heavy rain cause snow to melt rapidly. Snow melting combined with heavy rains can cause frozen rivers to swell, which breaks the ice layer on top of the river. The ice layer often breaks into large chunks, which float downstream and often pile up near narrow passages and other obstructions, such as bridges and dams causing localized flooding.
2. Flash flooding is more typically realized during the summer months. This flooding is primarily localized, though enough rain can be produced to cause inundation flooding. Heavy, slow-moving thunderstorms often produce large amounts of rain. The threat of flooding would be increased during times of high soil moisture.

Disruption of communication, transportation, electric service, and community services, along with contamination of water supplies and transportation accidents are very possible.

National Flood Insurance Rate maps designate 100 year and 500-year floodplain zones. Areas subject to inundation by the 1-percent-annual-chance flood event are designated 100-year floodplain. Moderate risk areas within the 0.2-percent-annual-chance floodplain are designated 500-year floodplain. See attached Kingsbury County 100-year flood plain map (Figure 4.4) below. The County should anticipate having at least one flood events every other year. According to the FEMA NRI, Kingsbury County has the potential for 0.5 riverine flooding events to occur annually. Table 4.7 contains the County's flood history for the last ten years.

Figure 4.4

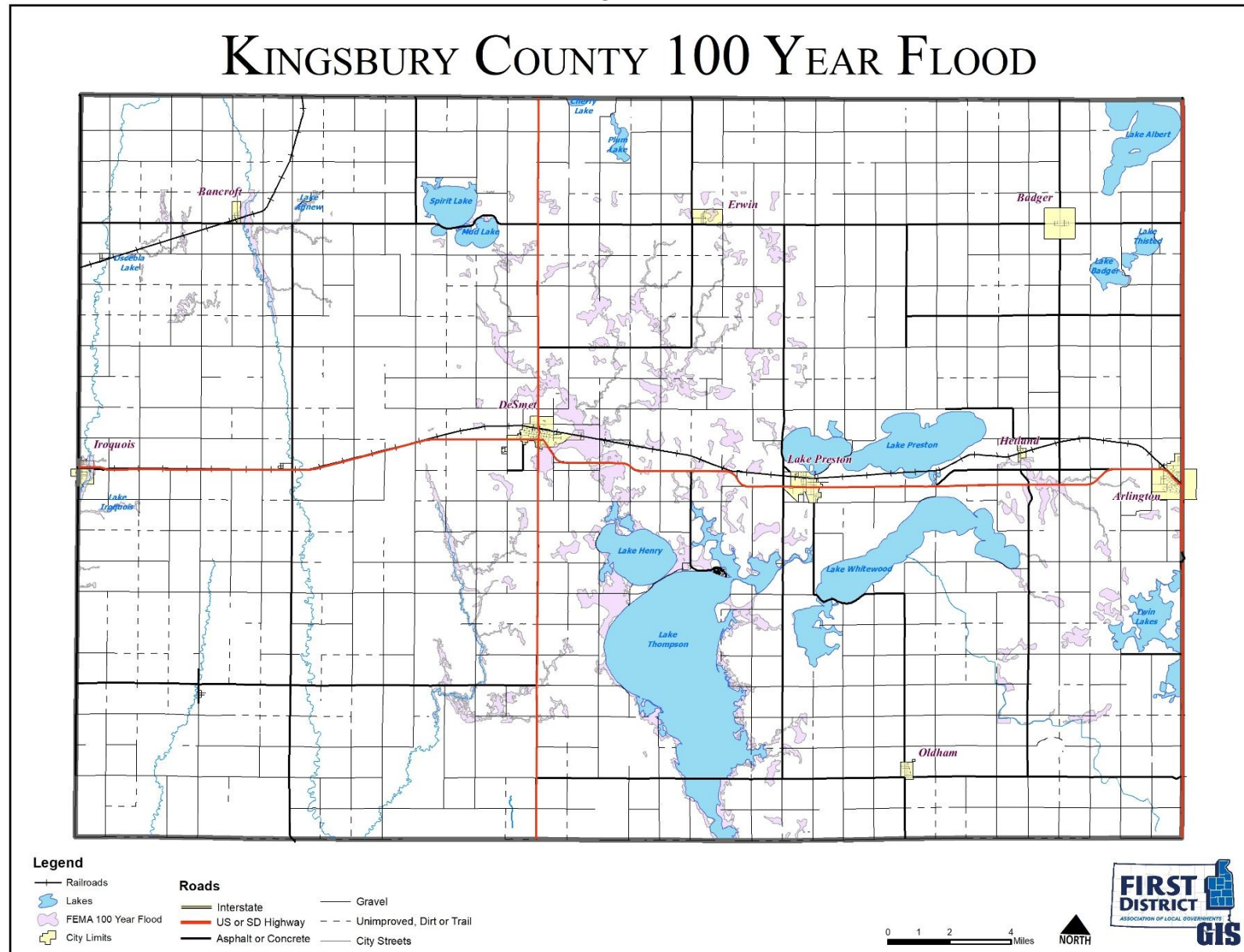


Table 4.7: Kingsbury County Ten Year Flood History

Location	Type	Date	Time	Property Damage	Crop Damage
De Smet	Flash Flood	08/15/2018	17:30		
Esmond	Flood	03/13/2019	12:00	370.00K	
Esmond	Flood	06/01/2019	00:00		32.030M
Esmond	Flood	09/12/2019	00:00	52.00K	277.00K
Esmond	Flash Flood	06/25/2020	23:01		
De Smet	Flash Flood	06/26/2020	03:00		
Erwin	Flash Flood	08/05/2023	21:00	25.00K	
De Smet Muni Airport	Flash Flood	08/05/2023	21:00	25.00K	

SOURCE : <https://www.ncdc.noaa.gov/stormevents/>

Major Flood Occurrences:

- **July, 1993** – Kingsbury County experienced heavy rains as did eastern SD; The County was part of FEMA Presidential Declaration SD-DR-999. Road, Bridge and culvert damage in the county, townships and the town of Oldham were reimbursed approximately \$160,000.
- **1994** – Kingsbury County experienced heavy flooding after spring snowmelt and rains. The county and townships received funds from FEMA- SD-DR-1031 for approximately \$150,000 in road and culvert damage.
- **1995** - Kingsbury County was declared for FEMA- SD-DR-1052 Presidential for severe flooding damaging homes, roads, streets, culverts and bridges. Damages reimbursed were estimated at \$200,000.
- **1997** – Kingsbury County was declared for FEMA SD-DR-1173 Presidential for severe flooding due to snowmelt and spring rains from over 90” of snow from the winter of 96/97. Damages reimbursed estimated at over \$800,000 to the county, townships, cities and private Non-Profit’s such as Rural Electric Cooperatives.
- **April 2011** - Flooding of lakes and lowlands in several counties in southeast South Dakota continued through April. The flooding included farmland and other lowlands, with some roads flooded and damaged. High water and groundwater levels resulting from record precipitation in the previous year contributed to the slowness of any improvement in the flooding situation. While flooding of small streams abated, lake flooding, particularly of Lakes Thompson and Henry, worsened. Numerous roads remained flooded and several were closed. Several homes were flooded, especially along Lake Thompson. The flooding led Kingbrook Rural Water to replace a line at Lake Thompson due to persistent flooding. Total estimated damages were \$1,000,000.
- **September 2019** - A frontal zone remained locked in place under southwest flow aloft as a series of mid-level waves moved across the region over a three-day period. Widespread heavy rainfall resulted and amounts reached two-day records for several locations including Howard (7.05 inches) and 2 miles south of Winfred (7.01 inches). Flooding resulted in crop losses and damage to public infrastructure including county and township roads and culverts.

Overall flooding, both river and areal, tallied nearly \$17 million dollars in damages across southeast South Dakota.

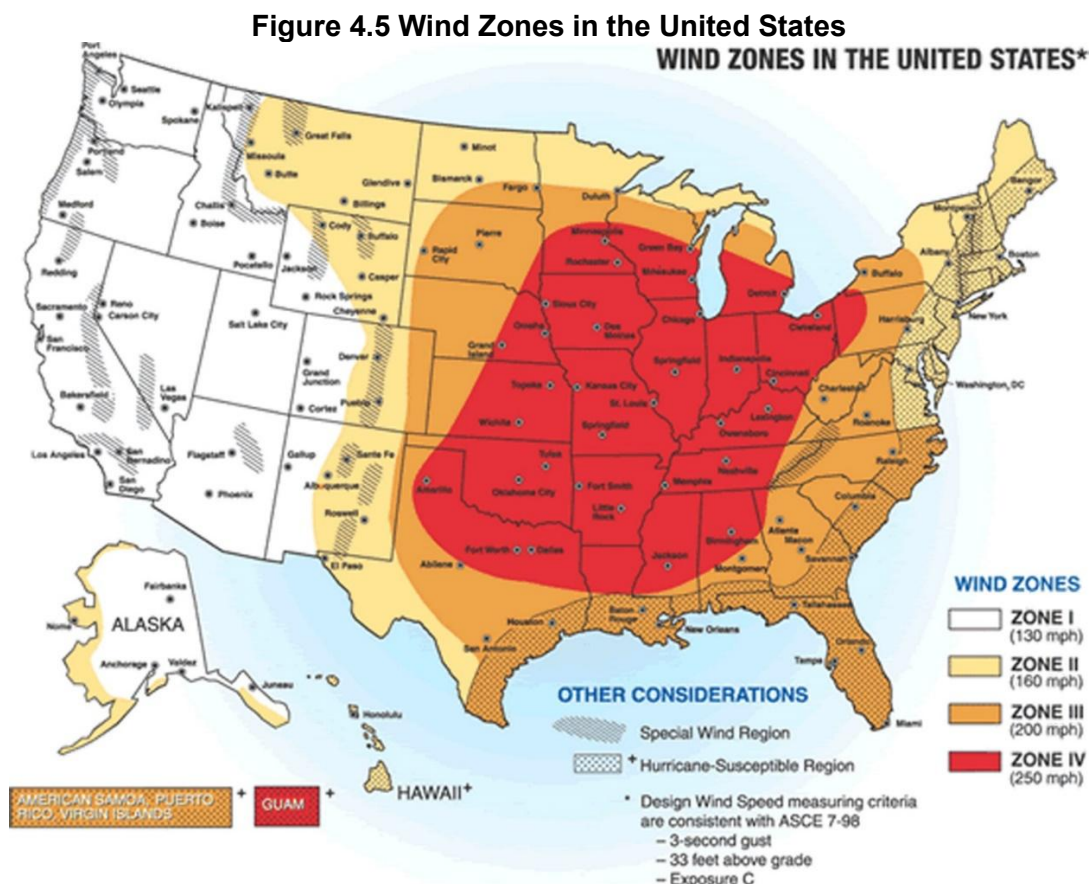
SUMMER STORMS

Summer Storms are generally defined as atmospheric hazards resulting from changes in temperature and air pressure which cause thunderstorms that may cause hail, lightning, strong winds, and tornados.

According to an article by Emily Greenhalgh featured on the NOAA/Climate.gov website, history says mid-to-late June brings a higher probability of severe weather across much of the contiguous United States. As we move from spring to summer, the predominant way severe weather forms across the U.S. changes. Once the jet stream moves north, severe weather occurs mainly due to mesoscale processes as larger areas of the country experience warm, humid conditions. These conditions are, historically, prime ingredients for severe weather events. "Severe weather" is defined as tornadoes, thunderstorm winds over 58 miles per hour, or hail larger than a quarter (one inch in diameter) and lightning.

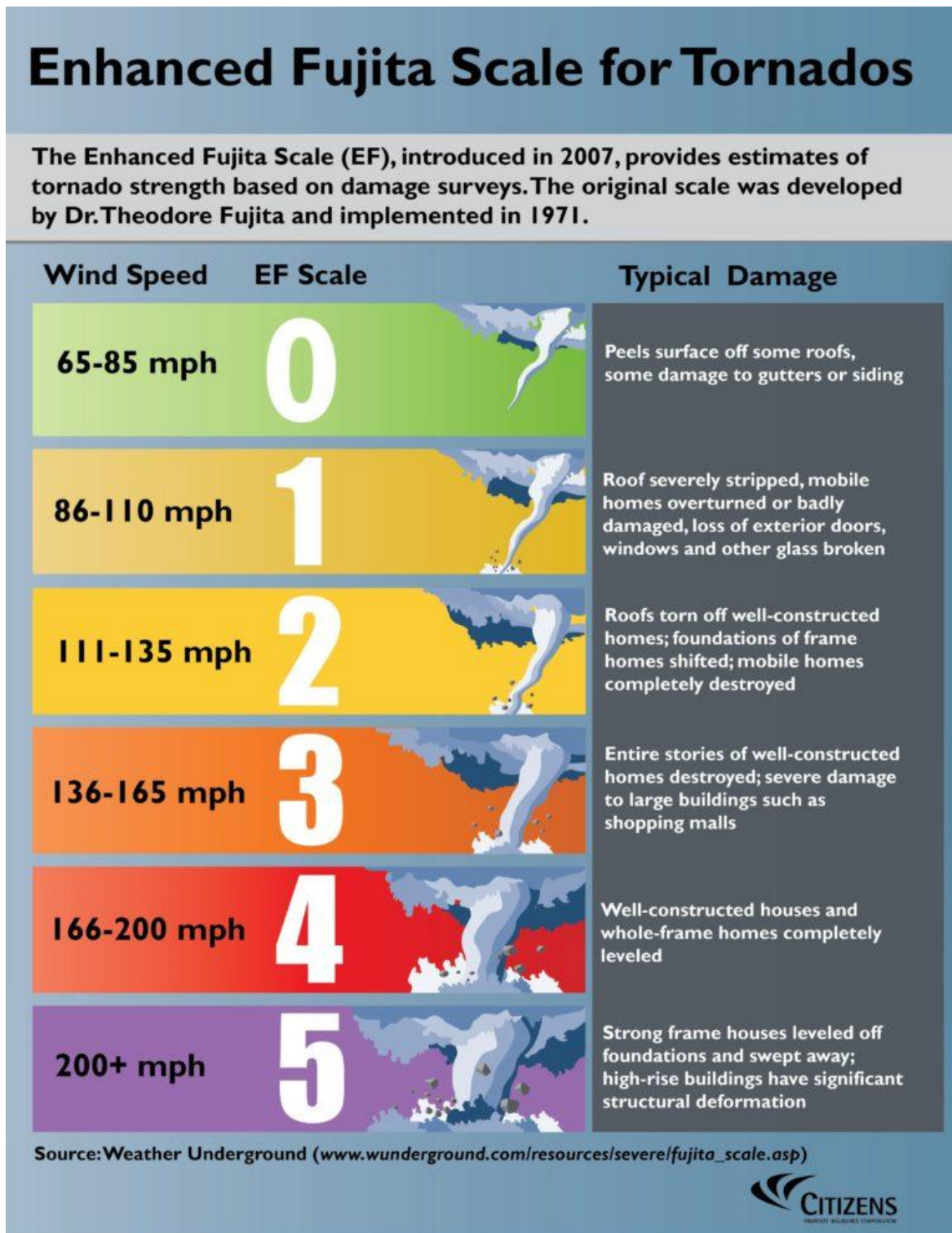
TORNADO

Tornados are violent windstorms that may occur singularly or in multiples as a result of severe thunderstorms. They develop when cool air overrides warm air, causing the warm air to rapidly rise. Many of these resulting vortices stay in the atmosphere, though a touchdown can occur. See Figure 4.5 Wind Zones in the United States Map below.



The Enhanced Fujita Tornado Damage Scale categorizes tornadoes based on their wind speed, see following chart Figure 4.6.

Figure 4.6 Enhanced Fujita Tornado Damage Scale



The annual risk for intense summer storms is high. The entire County is susceptible to summer storms. Warning time for summer storms is normally several hours, sufficient for relocation and evacuation, if necessary. Between the years of 1950 and 2023, the County confirmed forty-seven tornadoes/funnel clouds. However, tornadoes may occur with little or no warning. The table below denotes the tornado history in the County over the past ten years. Throughout these events, most tornadoes caused only minor damages. Kingsbury County has an annualized tornado frequency of 0.5 events per year based on FEMA NRI.

Table 4.8: Kingsbury County Ten Year Tornado History

Location	Date	Time	Type	Magnitude	Property Damage	Crop Damage
De Smet Muni Airport	08/28/2020	00:26	Tornado	EFU		33.00K
De Smet	08/28/2020	00:27	Tornado	EF1	75.00K	
Osceola	06/20/2022	20:31	Tornado	EF1		
De Smet Muni Airport	06/20/2022	20:44	Tornado	EFU		5.00K
De Smet Muni Airport	08/10/2023	18:41	Tornado	EFU		
Erwin	08/10/2023	19:10	Tornado	EFU		

SOURCE : <https://www.ncdc.noaa.gov/stormevents/>

Major Tornado Occurrences:

- June 2003** - A tornado destroyed or heavily damaged all buildings, other structures, and vehicles in the small town of Manchester. Propane and fuel oil tanks were destroyed. Many homes were stripped to the foundation. Of the six residents of the town, four were injured and were transported to hospitals. Three were deemed to be seriously injured, but none of the injuries were life threatening. One of the injured was in a basement, one was blown out of the home on the way to the same basement, and two were in a mobile home which was destroyed. The tornado damaged crops, trees, and power lines south of Manchester prior to reaching the town. The tornado also heavily damaged several farms north of Manchester, including two farms on which several buildings including the homes were destroyed. One of the farms was a "Centennial Farm". About 12 cattle were killed and others injured. The amount of crop damage was not known. During its path, the tornado was observed to have multiple vortices. The tornado was observed and videotaped by numerous storm chasers and researchers. Researchers also deployed weather sensors around the town of Manchester. One of these sensors recorded a 100 millibar pressure drop as the tornado passed. Damages were estimated up to \$3,000,000. Esmond, Manchester and De Smet were affected by the tornado.
- May 2006** - A tornado in Lake Preston destroyed three calf shelters and two hog shelters, killing two cows and about a dozen hogs. The tornado also lifted a calf feeder 50 feet and rolled it 200 yards, and damaged grain bins. The tornado was well observed and photographed, and was classified as a landspout type of tornado. Damages were estimated at 50,000.
- August 2020** - A tornado spun up west of 432nd Avenue and north of 211th Street. As the tornado traveled generally eastward, ground scour was noted to crops. The greatest damage occurred mid-track where a barn collapsed, with the debris blown downstream into another

building. A few other outbuildings were also damaged. Large branches in tree breaks were snapped and the upper half of a concrete silo collapsed. The tornado dissipated one quarter mile east of 432nd Avenue around 3 miles south-southwest of De Smet. Property damage costs are estimated around \$75,000.

Each year, many storms and a few tornadoes affect the county. Summer storms in the County usually produce a wide range of damage making damage estimates difficult. A complete listing of all summer storms having occurred within the county is not possible due to inaccurate reporting. The NOAA NCDC Storm Events online database was the primary source for this information.

THUNDERSTORM/STRONG WIND

Thunderstorms and high wind occurrences in the County are very common. Strong winds can be detrimental to the area. According to the SD SHMP, these winds are the most common type of severe weather in South Dakota. They can exceed 100 mph and are responsible for most wind damage related to thunderstorms. Since thunderstorms do not have narrow tracks like tornadoes, the associated wind damage can be extensive and affect entire (and multiple) counties. Trees, poles, power lines, and any weak structures are susceptible to damage from strong winds. In addition to the damage, when strong winds knock down trees, poles, power lines, and structures, additional traffic hazards are created for travelers and commuters.

Strong winds are defined as winds over forty miles per hour (34.76 knots), are not uncommon in the area. Winds over fifty miles per hour (43.45 knots) can be expected twice each summer. Strong winds can cause destruction of property and create safety hazards resulting from flying debris. Strong winds also include severe localized wind blasting down from thunderstorms. These downward blasts of air are categorized as either microbursts or macrobursts depending on the amount geographical area they cover. Microbursts cover an area less than 2.5 miles in diameter and macrobursts cover an area greater than 2.5 miles in diameter. Based on past records, multiple strong wind events will occur in the County annually. The FEMA NRI suggests the County will experience 3.2 strong wind events per year.

According to the NCDC Storm Events Database, the County experienced 42 wind events from 2014-2023. Table 4.9 denotes the extent and severity of such hazards occurring in the last ten years. The County continues to educate residents of the dangers of such storms through public service announcements and other printed media.

Table 4.9: Kingsbury County Ten Year History for Thunderstorms/High Winds

Location	Date	Time	Type	Magnitude	Property Damage	Crop Damage
Kingsbury County	01/26/2014	12:00	High Wind	50 kts. EG		
Kingsbury County	06/22/2015	3:55	High Wind	70 kts. MG		
De Smet	07/25/2015	20:00	Thunderstorm Wind	52 kts. EG		
Badger	07/25/2015	20:01	Thunderstorm Wind	52 kts. EG		

Location	Date	Time	Type	Magnitude	Property Damage	Crop Damage
De Smet	08/09/2015	16:55	Thunderstorm Wind	56 kts. EG		
Hetland	08/09/2015	17:14	Thunderstorm Wind	61 kts. EG		
Kingsbury County	02/19/2016	4:30	High Wind	50 kts. MG		
Badger	07/16/2016	20:50	Thunderstorm Wind	61 kts. EG		
Kingsbury County	12/25/2016	23:00	High Wind	35 kts. ES		
Lake Preston Airport	06/11/2017	04:07	Thunderstorm Wind	56 kts. EG		
Lake Preston	06/11/2017	04:07	Thunderstorm Wind	56 kts. EG		
Elwin	06/22/2017	6:02	Thunderstorm Wind	52 kts. EG		
De Smet Municipal Airport	07/17/2017	19:17	Thunderstorm Wind	52 kts. EG		
Oldham	07/17/2017	19:40	Thunderstorm Wind	61 kts. EG		
Oldham	07/17/2017	19:40	Thunderstorm Wind	61 kts. EG		
Oldham	07/17/2017	19:45	Thunderstorm Wind	61 kts. EG		
Iroquois	07/20/2019	05:38	Thunderstorm Wind	64 kts. MG		
Bancroft	07/08/2020	21:55	Thunderstorm Wind	56 kts. EG		36.00K
De Smet Muni Airport	08/28/2020	00:32	Thunderstorm Wind	61 kts. EG	5.00K	
Lake Preston Airport	08/28/2020	00:37	Thunderstorm Wind	61 kts. EG	20.00K	
Badger	08/28/2020	00:52	Thunderstorm Wind	56 kts. EG	2.00K	
De Smet	06/11/2021	04:04	Thunderstorm Wind	52 kts. EG	1.00K	
De Smet	08/26/2021	08:50	Thunderstorm Wind	61 kts. EG	12.00K	
Arlington	08/26/2021	09:15	Thunderstorm Wind	52 kts. EG	5.00K	
Kingsbury County	12/15/2021	22:00	High Wind	52 kts. MG		

Location	Date	Time	Type	Magnitude	Property Damage	Crop Damage
Kingsbury County	03/25/2022	09:00	Strong Wind	43 kts. MG		
Kingsbury County	04/07/2022	13:00	High Wind	55 kts. MG		
Kingsbury County	01/14/2022	02:30	High Wind	52 kts. MG		
Kingsbury County	04/23/2022	12:15	High Wind	56 kts. MG		
Lake Preston	05/12/2022	16:23	Thunderstorm Wind	87 kts. EG		17.00K
Hetland	05/12/2022	16:23	Thunderstorm Wind	78 kts. EG		
Arlington	05/12/2022	16:25	Thunderstorm Wind	78 kts. EG		
Bancroft	05/29/2022	00:08	Thunderstorm Wind	65 kts. EG		
Arlington	05/30/2022	00:56	Thunderstorm Wind	63 kts. MG		
Arlington	06/13/2022	01:26	Thunderstorm Wind	50 kts. MG		28.00K
De Smet Muni Airport	06/20/2022	20:50	Thunderstorm Wind	74 kts. EG		
De Smet Muni Airport	06/20/2022	20:53	Thunderstorm Wind	74 kts. EG		
Oldham	08/02/2022	19:50	Thunderstorm Wind	57 kts. MG		
Arlington	08/02/2022	20:06	Thunderstorm Wind	65 kts. EG		
Kingsbury County	04/30/2023	09:00	Strong Wind	47 kts. MG		
De Smet	10/12/2023	21:28	Thunderstorm Wind	56 kts. EG		
Kingsbury County	12/09/2023	02:00	Strong Wind	26 kts. MS		

SOURCE : <https://www.ncdc.noaa.gov/stormevents/>

Major Wind Occurrences:

- **July 1997** - Thunderstorm winds in Arlington caused widespread tree, power line, and pole damage. The winds also damaged a car wash under construction, blew down road signs, and broke windows. Some vehicles were damaged, mainly by trees or tree debris. Damages were estimated at \$200,000.
- **July 1999**- Thunderstorm winds from De Smet to Arlington destroyed a large garage, a 3200-bushel grain bin, at least two large barns, a pole barn, and a carport. A car in the carport was

damaged. The winds also caused extensive tree damage. Damages were estimated at \$100,000.

- **July 2002** - Thunderstorm winds caused widespread tree damage. The winds also blew down power lines and poles, including many in the town of Oldham. The winds, along with large hail, contributed to widespread crop damage, with some corn and soybean crops totally destroyed. The amount of crop damage, as well as the part due to the winds, could not be determined. However, thousands of acres were believed to be affected. Property damages were estimated at \$200,000.
- **March 2005** - Sustained winds of 40 to 45 mph with gusts above 60 mph persisted from mid-morning until late afternoon. The winds caused widespread tree damage with branches and smaller tree debris broken off. Several power lines were knocked down by the wind or by windblown debris. This resulted in several power outages, especially between the Missouri and James Rivers. Damages to buildings were mostly to shingles and gutters. However, a metal storage building was blown over at Mitchell. Also at Mitchell, construction barriers were blown over, and windows were broken in two vehicles by blowing rocks. An aluminum recycling cage was blown away at Woonsocket. A window was blown out at a school in Freeman. In Sioux Falls, there was damage to the airport tower. Damages were estimated at \$530,000.
- **June 2015** - Thunderstorms caused damaging winds at numerous locations in southeast South Dakota before sunrise on the morning of June 22nd. Some of the winds spread away from the storms, still at damaging levels despite no longer being directly connected with the storms. High winds not directly associated with thunderstorms produced a measured gust to 81 mph 3 miles north northeast of De Smet.
- **April 2022** - Strong low pressure developed across central South Dakota on Saturday, which moved slowly toward northern Minnesota by Sunday morning. Southerly winds gusted as high as 50 to 70 mph at times in the late morning and afternoon, which caused sporadic tree and building damage across the area. A considerable amount of blowing dust also occurred with the strongest winds, with visibility briefly a mile or less. The strong winds combined with very low humidity and dormant vegetation resulted in numerous wildfires. Sustained winds reached 40 to 45 mph at times during the afternoon at South Dakota Road Weather Information System site SD504 near Arlington, with a peak wind gust of 64 mph at 1521CST.

HAIL

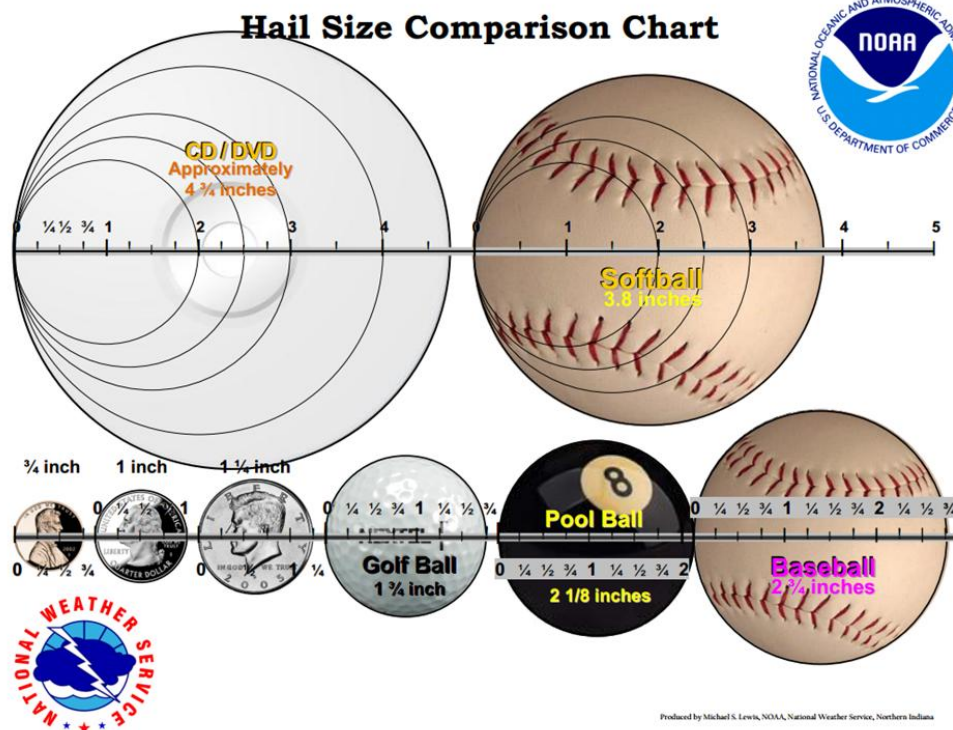
Hail is a form of precipitation consisting of solid ice that forms inside thunderstorm updrafts. The raindrops reach extremely cold areas which causes them to freeze. The semi-frozen droplets grow in size as they come into contact with each other forming the hailstone. Once the updraft can no longer support the weight of the hail, it falls to Earth. Hailstones usually consist mostly of water ice and measure between 5 and 150 millimeters in diameter, with the larger stones coming from severe and dangerous thunderstorms. The largest hailstone recorded in the United States occurred in 2010 in Vivian, South Dakota. The hailstone measured eight inches in diameter. However, even dime sized hail can cause significant damage to vehicles, buildings, livestock, and crops. When viewed from the air, it is evident that hail falls in paths known as hail swaths. These occur as storms move while the hail is falling out. They can range in size from a few acres to an area 10 miles wide and 100 miles long.

The County has a 100% potential for hail occurring each year. Most thunderstorms will produce varying sizes of hail. The FEMA NRI states 5.2 hail events per year. The following charts shows the hail size comparisons.

Hail Size Description Chart		
Hailstone size	Measurement	
	in.	cm.
bb	< 1/4	< 0.64
pea	1/4	0.64
dime	7/10	1.8
penny	3/4	1.9
nickel	7/8	2.2
quarter	1	2.5
half dollar	1 1/4	3.2
golf ball	1 3/4	4.4
billiard ball	2 1/8	5.4
tennis ball	2 1/2	6.4
baseball	2 3/4	7.0
softball	3.8	9.7
Compact disc / DVD	4 3/4	12.1

Note: Hail size refers to the **diameter** of the hailstone.

SOURCE : NWS/NOAA



The table below indicates hail occurrences throughout the County over the last ten years. However, the information provided by the NOAA website is incomplete due to inconsistent reporting after such hazards occur. Because hail can occur in a high number of occurrences, it is reasonable to expect that at least some property or crop damage was sustained during the events listed, even though the damage may not have been reported or recorded. It is possible that such damage was not reported because it was believed to be insignificant at the time or because those responsible for reporting such information did not report to the proper agencies.

Table 4.10: Kingsbury County Ten Year Hail History

Location	Date	Time	Type	Magnitude	Crop Damage
Erwin	07/24/2014	09:55	Hail	1.00 in.	
Esmond	06/09/2015	17:05	Hail	1.00 in.	
Hetland	06/03/2016	15:35	Hail	1.50 in.	
Badger	07/05/2016	15:45; 15:49	Hail	1.00 in; 0.75 in.	
Oldham	08/18/2016	19:45	Hail	1.00 in.	
Oldham	06/13/2017	18:20	Hail	1.25 in.	
Bancroft	07/17/2017	16:25	Hail	1.00 in.	
Iroquois	07/17/2017	21:01	Hail	0.75 in.	
De Smet	07/21/2017	05:00	Hail	1.00 in.	
De Smet Muni Airport	05/08/2018	19:32	Hail	0.88 in.	
De Smet Muni Airport	08/17/2019	20:02	Hail	0.75 in.	
De Smet	05/12/2022	02:00	Hail	1.00 in.	160.00K
Lake Preston Airport	05/30/2022	11:16	Hail	0.88 in.	88.00K
Arlington	10/23/2022	17:34	Hail	0.88 in.	
Bancroft	07/03/2023	19:48	Hail	0.75 in.	75.00K
Erwin	07/13/2023	15:48	Hail	1.50 in.	
De Smet Muni Airport	08/10/2023	18:38	Hail	1.75 in.	4.00K
De Smet	08/10/2023	18:44; 18:45; 18:45	Hail	0.75 in; 1.00 in; 0.75 in.	
Lake Preston Airport	08/10/2023	19:01	Hail	1.50 in.	

SOURCE : <https://www.ncdc.noaa.gov/stormevents/>

LIGHTNING

Lightning results from a buildup of electrical charges that happens during the formation of a thunderstorm. The rapidly rising air within the cloud, combined with precipitation movement within the cloud, results in these charges. Giant sparks of electricity occur between the positive and negative charges both within the atmosphere and between the cloud and the ground. When the potential between the positive and negative charges becomes too great, there is a discharge of electricity, known as lightning. Lightning bolts reach temperatures near 50,000° F in a split second. The rapid heating and expansion, and cooling of air near the lightning bolt causes thunder. There is a 100% chance of lightning occurring in Kingsbury County each year. The FEMA NRI shows 34.3 lightning events per year.

The extent or severity of lightning can range from significant to insignificant depending on where it strikes and what structures are hit. Water towers, cell phone towers, power lines, trees, and common buildings all have the possibility of being struck by lightning.

Lightning strikes can also start wildfires, structure fires, or damage electrical systems. Most people are struck by lightning before it starts raining or after it stops raining. People who leave shelter during thunderstorms to watch or follow lightning also have the possibility of being struck by lightning. According to the NWS, an average of 49 people a year are killed by lightning strikes. The following chart shows the lightning activity levels that are used.

Lightning Activity Levels	
Level	Description
1	No thunderstorms
2	Isolated thunderstorms . Lightning is very infrequent, 1–5 cloud-to-ground strikes in a five-minute period.
3	Widely scattered thunderstorms . Lightning is infrequent, 6–10 cloud-to-ground strikes in a five-minute period.
4	Scattered thunderstorms. Lightning is frequent, 11–15 cloud-to-ground strikes in a 5-minute period.
5	Numerous thunderstorms. Lightning is frequent and intense, greater than 15 cloud-to-ground strikes in a five-minute period.
6	Dry lightning (same as LAL 3 but without rain). This type of lightning has the potential for starting fires , and is normally highlighted in fire weather forecasts with a red flag warning.

SOURCE : NWS

The NCEI (National Center for Environmental Information) Storm Events Database indicated no lightning occurrences were reported over the past ten years where damage was reported. However, the possibility exists that the information reported is incomplete. It is also important to note that while no damage was reported, lightning strikes are common in all South Dakota counties.

Climate Change Considerations

See “URBAND FIRE/WILDFIRES.”

WINTER STORMS

Winter storms deposit four or more inches of snow in a twelve-hour period or six inches of snow during a twenty-four-hour period. Such storms are generally classified into four categories with some taking the characteristics of several categories during distinct phases of the storm. These categories include freezing rain, sleet, snow, and blizzard. Generally winter storms can range from moderate snow to blizzard conditions and can occur between October and April. The months of May, June, July, August, and September could possibly see snow, though the chances of a storm is very minimal. Blizzard, freezing rain/sleet/ice, and heavy snow are components of winter storms and included under this profile. The FEMA NRI states the County should anticipate 6.3 winter weather events per year.

Blizzards are a snow storm that lasts at least three hours with sustained wind speeds of thirty-five miles per hour (mph) or greater, visibility of less than one-quarter mile, temperatures lower than 20°F and Lake Preston out conditions. Snow accumulations vary, but another contributing factor is loose snow existing on the ground which can get whipped up and aggravate the Lake Preston out conditions. When such conditions arise, blizzard warnings or severe blizzard warnings are issued. Severe blizzard conditions exist when winds obtain speeds of at least forty-five mph plus a great density of falling or blowing snow and a temperature of 10°F or lower. At least one blizzard should occur each year in the County.

Freezing Rain/Ice occurs when temperatures drop below thirty degrees Fahrenheit, and rain starts to fall. Freezing rain coats objects with ice, creating dangerous conditions due to slippery surfaces, sidewalks, roads, and highways. Sometimes ice is unnoticeable, and is then referred to as black ice. Black ice creates dangerous conditions, especially for traffic. Additionally, a quarter inch of frozen rain can significantly damage trees, electrical wires, weak structures, and other objects due to the additional weight bearing down on them. The potential for ice storms in Kingsbury County annually is minimal, but can cause significant damages when they occur. The FEMA NRI indicates 0.5 ice storm events per year.

Sleet does not generally cling to objects like freezing rain, but it does make the ground very slippery. This also increases the number of traffic accidents and personal injuries due to falls. Sleet can severely slow down operations within a community. Not only is there a danger of slipping, but with wind, sleet pellets become powerful projectiles that may damage structures, vehicles, or other objects. Sleet normally occurs several times each year.

Heavy Snow is a common occurrence throughout the County during the months from October to April. Average annual snowfall for the county can range up to thirty-four inches. Accumulations in dry years can be as little as five to ten inches, while wet years can see yearly totals up to eighty inches. Snow is a major contributing factor to flooding, primarily during the spring months of melting. The County should expect approximately several heavy snow events each year.

Table 4.11 shows just how common blizzards, snow and ice storms are in the County. While such storms would be considered extreme in many parts of the State, the consistent nature of such weather hazards are expected in this area. Thus, planning and response mechanisms for snow and ice storms are vital to the County and are routine procedures in the County due to the common nature of such storms. Winter storms in South Dakota are known to cover large geographical areas, often an entire county or multiple counties can be affected by a single storm. All of the storms identified in Table 4.11 were considered to have occurred countywide. Due to the multiple occurrences of storms each year, an exhaustive compilation is not possible.

Table 4.11 Kingsbury County Ten Year History of Snow and Ice Storms

Location	Date	Time	Type	Snowfall Summary	Property Damage
Kingsbury County	01/16/2014	10:00	Blizzard	2" on top of existing snow cover	
Kingsbury County	03/18/2014	09:00	Heavy Snow	4" – 10" over the eastern part of the county (9.5" in Oldham)	
Kingsbury County	01/05/2015	11:00	Winter Storm	3" – 7" along the eastern border of the state	
Kingsbury County	01/08/2015	13:40	Blizzard	Specifics not available – blowing snow & visibility less than ¼ mile	
Kingsbury County	11/30/2015	03:00	Winter Storm	5" – 8" over 30-hour period (6" in De Smet)	
Kingsbury County	12/01/2015	00:00	Winter Storm	Carryover from day before	
Kingsbury County	12/25/2015	19:00	Winter Storm	4" – 7" with visibility less than ½ mile (6" in De Smet)	
Kingsbury County	11/18/2016	03:00	Blizzard	3" – 6" of wet snow (5" in De Smet)	
Kingsbury County	12/16/2016	10:00	Winter Storm	4" – 8" with blowing snow (8" in De Smet)	
Kingsbury County	03/12/2017	17:00	Heavy Snow	+6" across the northern half of the county, mostly north of SD Hwy 14	
Kingsbury County	03/05/2018	09:00	Winter Storm	6" – 9" moderate to heavy snowfall (8" in De Smet)	
Kingsbury County	04/13/2018	11:00	Blizzard	8" – 16" record-breaking snowfall (12.1" in De Smet)	
Kingsbury County	12/26/2018	15:00	Winter Storm	Accumulated 7.3" in Iroquois & 7" in De Smet	
Kingsbury County	03/09/2019	04:00	Winter Storm	2" – 6" over freezing rain	
Kingsbury County	04/11/2019	02:00	Blizzard	3-day snowfall of 26.5" in De Smet & 19.8" in Iroquois – setting the 2 nd greatest total	
Kingsbury County	12/29/2019	02:00	Blizzard	10" – 18" resulted in whiteout conditions (13" in De Smet)	
Kingsbury County	01/17/2020	09:00	Blizzard	4" – 8" snowfall with glaze of ice (6.5" in De Smet)	
Kingsbury County	02/08/2020	20:30	Winter Storm	Heavy snowfall – 12.6" in De Smet, 9" near Arlington, & 6.7" in Iroquois	
Kingsbury County	02/12/2020	11:00	Blizzard	Little snowfall (less than 1") but combined with wind gusting over 40mph	

Location	Date	Time	Type	Snowfall Summary	Property Damage
Kingsbury County	12/23/2020	07:00	Blizzard	2" – 3" snowfall combined with wind gusts over 50mph	
Kingsbury County	01/14/2021	18:00	Blizzard	Snowfall totaled 4.5"	
Kingsbury County	03/14/2021	20:00	Winter Storm	Snowfall rates up to 2" per hour – total of 9" in Lake Preston & 6.8" in De Smet	
Kingsbury County	01/14/2022	02:00	Winter Storm	5" – 11" briefly moderate to heavy	
Kingsbury County	12/12/2022	18:00	Ice Storm	Over ½" freezing rain and drizzle	
Kingsbury County	12/14/2022	19:00	Winter Storm	10" – 17" heavy accumulation with blowing snow	
Kingsbury County	12/22/2022	10:00	Blizzard	1" – 3" fluffy snow combined with strong winds resulted in drifts as high as 5-10'	
Kingsbury County	01/03/2023	10:00	Winter Storm	Snowfall rates up to 2-3" per hour – 2-day total of 10.5" in De Smet	
Kingsbury County	02/21/2023	09:00	Blizzard	2-day total of 13" in De Smet & 11.5" in Iroquois	

SOURCE : <https://www.ncdc.noaa.gov/stormevents/>

The above data was obtained from the storm events database, compiled by the National Oceanic and Atmospheric Administration (NOAA). Specific references to accumulations at communities within Kingsbury County were included above. Where regional accumulations were listed, those were included, otherwise "specifics not available" was listed where no region-wide snowfall/rain/ice was listed. "Blizzard" conditions are based upon wind and temperature, as described above. Many events did not list snowfall for the county or region, but described widespread general effects of wind. The peak wind gust listed specifically for Kingsbury County associated with Blizzard conditions was 57 mph.

Major Winter Storm Occurrences:

- **January 1888** – According to an article on the SDSU website for National History Day in SD, an extreme blizzard in January 1888 led to 170 deaths in South Dakota alone. Many of those who passed away were school children trying to walk home, giving this blizzard its name. This blizzard is also sometimes referred to as the Schoolhouse/Children's Blizzard of 1888.
- **March 1966** – One of the worst blizzards in South Dakota history occurred in the northern Great Plains in March 1966. The blizzard dumped several feet of snow and brought winds of 40-55 MPH with gusts as high as 100 MPH. The storm caused several fatalities, killed numerous livestock and caused structural damages. Roads were blocked and schools and businesses were closed.

- **1969** – Most of South Dakota experienced over 100 inches of snow. The State of South Dakota implemented Plan Bulldozer to assist Kingsbury County and other counties to plow snow. Livestock losses were very heavy.
- **October 1995** - a severe autumn snow and ice storm caused widespread damage in South Dakota. Winds associated with the storm caused lines to slap together and poles to fail, producing widespread power outages to large portions of rural South Dakota. Tree damage also led to significant damage to electrical utilities. Thirteen rural electric cooperatives reported damage from this storm. The cooperatives lost nearly 9,500 poles and 170 transmission lines. Damage was estimated at \$10 to \$10.3 million to rural electric infrastructure only. Approximately 30,290 households were affected by the power outages. The power outages also caused several rural water systems' pumping stations to go off line, causing a loss of water utilities to members of rural water systems. The National Guard provided generators to power these pumping stations to restore water service. This storm also forced major transportation delays as portions of Interstates 90 and 29 had to be closed because of the snow accumulation on the roadway and poor visibility. Twenty-eight counties including Kingsbury County were included in the disaster declaration.
- **March 2002**- Widespread heavy snow was preceded by freezing rain. Precipitation from the Chamberlain to Huron areas and east to Badger was mainly snow, with accumulations ranging from 8 inches in several areas to 19 inches at Huron. The heavy snow on top of the ice made travel difficult, and in places impossible, as some roads were blocked. Cattle losses were suspected from the heavy wet snow occurring during calving season, but in most cases specific numbers were not available. Over the Southeast part of the affected area, including near and just south of Sioux Falls, damage to power lines due to icing was reported, with several power outages in Sioux Falls. Three to six inches of snow fell on top of the ice in this area. Damages were estimated at \$210,000.
- **November 2005** - Snowfall varying from 4 to 15 inches combined with winds gusting over 50 mph to produce blizzard conditions. The heaviest snowfalls were mostly near and west of the James River, in the area where a severe ice storm immediately preceded the blizzard. Several reports of 6-to-8-foot drifts were received from this area. Visibilities were lowered frequently to zero and travel was made impossible in many areas. Roads, including Interstate Highways 90 and 29 were closed for extended periods of time. Most schools and businesses that were not already closed because of the ice storm were forced to close. The winds during the blizzard continued to bring down power lines and poles, most of which had been coated and weighted down by ice in the area hit by the ice storm. In addition, minor damage was caused to homes and vehicles by the strong winds and by windblown debris, mainly from trees. Damages were estimated at \$1,900,000.
- **December 2016** - This storm was unusually warm for the region for late December and produced record breaking heavy rain along with flooding in some cases. Significant icing occurred across areas at or just below the freezing point, which resulted in widespread tree and power pole and line damage to the area. Some downed branches and trees fell onto homes across the region. This storm also brought high winds along with snow and blizzard conditions to the region. This significant storm resulted in massive power outages, stranded motorists and closed roads. Roads and walkways became treacherous ice rinks and remained as such for many days. There were numerous injuries from slips on the ice, as well as several vehicular accidents and flight cancellations. Livestock was also affected, though most made it through the storm. Dairy operations dealt with frozen drinking water tanks.

High winds gusting to over 70 mph impacted the entire region on the 25th and 26th. The combination of snow and ice and high winds snapped or otherwise damaged hundreds of power poles, downed several thousand miles of power lines, damaged several hundred transmission structures and brought many substations down. Many roads were blocked by power lines. Overall, more than one hundred linemen worked to bring the power back. Twenty-one counties encompassing 30 communities and 3 Indian reservations were impacted. Entire communities, thousands of homes and businesses, and ultimately over 12,000 people went without power. For some, power was not restored for 10 days despite tireless efforts. All power was restored by January 4th, 2017. Water and sewer systems shut down for several days for some communities and emergency shelters were necessary. County and city governments were overwhelmed by ice accumulations and blizzard conditions and struggled with maintaining accessibility even for emergency traffic. Road conditions deteriorated to the point where it took up to several hours for emergency officials to respond to 911 calls. The total estimated damage was near 8 million dollars for central and northeast South Dakota.

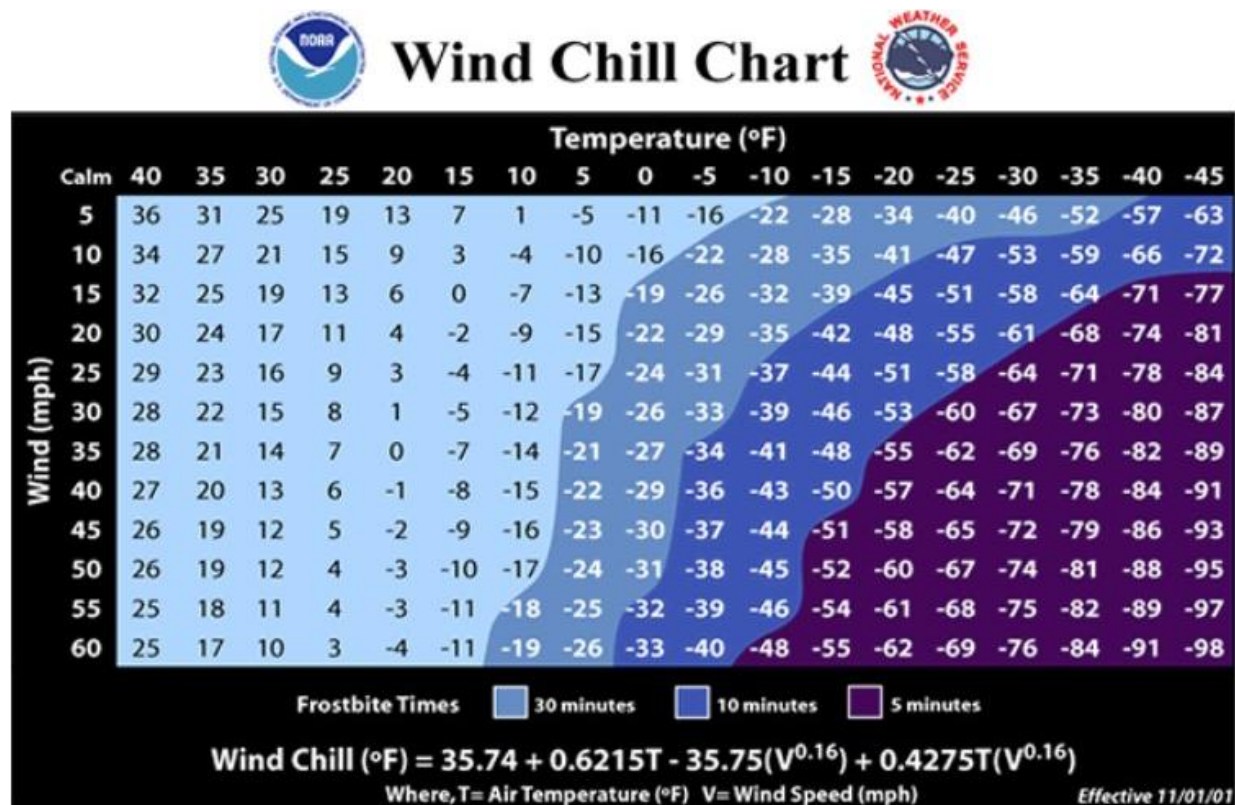
- **April 2018** - An intense surface low pressure area brought scattered showers and thunderstorms along with heavy snow to much of north central and northeast South Dakota from the 5th to the 6th. The scattered showers and thunderstorms moved across the region during the early morning hours of the 5th while heavy snow developed from the mid-morning to the early afternoon. There were several reports of thundersnow across the region. Snowfall amounts ranged from 6 to as much as 18 inches before it ended on the 6th. The very heavy snow resulted in closed businesses, schools, government offices, difficult travel conditions with several accidents reported, along with closed highways and Interstate-29. Many activities and events were also postponed or cancelled. Travel was not recommended for much of the two-day period, if not impossible. A storm total snowfall of 12.1 inches was amassed at DeSmet and 7.7 inches at Iroquois.
- **December 2022** - A strong low-pressure system produced snow and heavy snow prior to the onset of strong northwesterly winds and periods of additional snow, which resulted in blizzard or ground blizzard conditions across much of central and northeastern South Dakota for extended periods of time from the morning of December 14th through the afternoon of December 16th. Heavy snow of at least 6 inches in 12 hours was recorded from December 15th into the 16th in conjunction with the blizzard conditions. Winds gusted generally between 45 and 60 mph.

The South Dakota Department of Transportation placed nearly the entire state under No Travel Advised or had road closures by Thursday, as numerous roads had become impassable. I90 closed from Chamberlain to Rapid City from 10am CST on Tue Dec 13th through mid-day Sat Dec 17th (from Kadoka to Chamberlain), and I29 closed from Watertown to the ND border from 7pm Wed Dec 14th through 9am Sat Dec 17th. Several dozens of semi drivers were stranded for consecutive days and nights at the Coffee Cup Fuel Stop in Vivian, and numerous other vehicle accidents and rescues occurred as well. Additionally, power outages were reported across the area, and school was cancelled at numerous locations for multiple consecutive days.

The blizzard was just one component of a highly impactful, major winter storm. This storm was severe, widespread and prolonged in nature, and produced freezing rain, heavy snow and/or blizzard conditions from December 12th through 16th across the region. A Major Disaster Declaration was declared on February 27th by Governor Noem for several counties across central and northeastern South Dakota for winter weather from December 12-25th.

EXTREME COLD

What constitutes extreme cold, and its effects can vary across different areas of the country. In regions relatively unaccustomed to winter weather, near freezing temperatures are considered “extreme cold,” however, Eastern South Dakota is prone to much more extreme temperatures than other areas in the country. Temperatures typically range between zero degrees Fahrenheit and 100 degrees Fahrenheit, so extreme cold could be defined in the Kingsbury County PDM jurisdiction area as temperatures below zero. The Wind Chill Chart is used to measure extreme cold. The NWS/NOAA Wind Chill Chart can be found below. At least one extreme cold event should occur each year. The FEMA NRI suggests 2.3 cold wave events per year.



Extreme Cold temperatures often accompany a winter storm, so you may have to cope with power failures and icy roads. Whenever temperatures drop decidedly below normal and as wind speed increases, heat can leave your body more rapidly. These weather-related conditions may lead to serious health problems. Extreme cold is a dangerous situation that can bring on health emergencies in susceptible people, such as those without shelter or who are stranded, or who live in a home that is poorly insulated or without heat. Exposure is the biggest threat/vulnerability to human life; however, incidences of exposure are isolated and thus unlikely to happen in masses. The following information was found on the NOAA website. Table 4.12 identifies dates and times of the temperature extremes. The location in table 4.12 is not specifically identified in the table by jurisdiction due to the vast area across the State of South Dakota affected by extreme temperatures.

Table 4.12: Kingsbury County Ten Year History of Extreme Cold Temperatures

Location	Date	Time	Type
Kingsbury County	03/02/2014	02:00	Extreme Cold/Wind Chill
Kingsbury County	01/16/2016	21:00	Extreme Cold/Wind Chill
Kingsbury County	12/30/2017	08:00	Extreme Cold/Wind Chill
Kingsbury County	01/01/2018	00:00	Extreme Cold/Wind Chill
Kingsbury County	01/15/2018	00:00	Extreme Cold/Wind Chill
Kingsbury County	03/03/2019	02:00	Extreme Cold/Wind Chill
Kingsbury County	02/12/2020	22:00	Extreme Cold/Wind Chill
Kingsbury County	02/14/2021	00:00	Extreme Cold/Wind Chill
Kingsbury County	12/31/2021	19:00	Extreme Cold/Wind Chill
Kingsbury County	01/01/2022	00:00	Extreme Cold/Wind Chill
Kingsbury County	01/06/2022	07:00	Extreme Cold/Wind Chill
Kingsbury County	12/21/2022	20:00	Extreme Cold/Wind Chill

SOURCE : <https://www.ncdc.noaa.gov/stormevents/>

- January 2009** - After a clipper system dropped from one to four inches of snow, Arctic air and blustery north winds pushed into the area. The coldest air and the lowest wind chills of the season spread across much of central and northeast South Dakota. Wind chills fell to thirty-five to fifty degrees below zero late in the evening of the thirteenth and remained through the fourteenth. By the morning of January 15, 2009, the Arctic high-pressure area settled in across northeast South Dakota, bringing wind chills as low as sixty degrees below zero. Many vehicles did not start because of the extreme cold and several schools had delayed starts. Daytime highs remained well below zero across the area. This was one of the coldest days that most areas experienced since the early 1970s.
- January 2014** - The combination of sub-zero temperatures with north winds produced dangerously cold wind chills from 40 below to around 55 degrees below zero. Winds gusted to over 40 mph at times. Several area activities were cancelled, as well as many schools on Monday the 6th. Some of the coldest wind chills included 50 below in Hayti. With these types of temperature extremes, the biggest concern for people is exposure because prolonged exposure means almost certain death.
- December 2017** - Extreme wind chills of 35 to near 55 degrees below zero occurred off and on during this time. Record lows set on the morning of January 1st were in the 30s below zero with even some 40s below zero. Temperatures did not respond well for daytime highs on January 1st as several record low highs in the single digits below zero occurred.
- February 2021** – A potent and persistent outbreak of Arctic air affected the entire region. The coldest days of the outbreak for many occurred Valentine's Day weekend, when high temperatures averaged around ten below zero, in northeastern South Dakota, to the single digits above zero, in central South Dakota. On February 14th, low temperatures dropped into the 20s to the 30s degrees below zero range. Extreme wind chills of 35 degrees to 55 degrees below zero also occurred on several days during the outbreak. The magnitude of the cold

during this outbreak was fairly rare compared to the past 50 years, at least in terms of the persistence of the Arctic air. This was especially impressive considering the lack of deep, fresh snow cover across most of the area. If there had been widespread deep, fresh snowpack ahead of this Arctic outbreak, low temperatures would have been more severe and more often approaching record territory. Impacts from this extreme and persistent cold included many frozen and/or broken water pipes (the limited snow depth did not help in this regard) and froze-over home sewer vents, dead vehicle batteries, school delays, and church cancellations. The prolonged cold caused significant strains to the power grid as demand spiked both locally and across several other states. Thousands of customers were at least briefly without power locally, particularly during the morning of Tue, Feb 16th. Concerns for rolling blackouts lingered for several days in this regard due to the continued extreme demand/strain, and people were repeatedly asked to conserve energy however possible.

Climate Change Considerations

According to the Fifth National Climate Assessment, the line of demarcation between the arid west and humid east is moving eastward, beyond the traditional border at the 100th Meridian. Since it is known that dryer air, resulting from decreased snowpack in the west/northwest, leads to wider temperature fluctuations it is reasonable to expect increased frequency of extreme temperatures, such as extreme heat and cold. Though stream flow data runs contrary to the prediction of an arid Kingsbury County, it is expected the increased water levels are the result of more frequent extreme moisture events (summer and winter storms) and rapid snow melt. The winter season is warming at a faster rate than any other season in the Northern Plains region, and this is also true for South Dakota. Winter storms and blizzards, however, will continue to be a severe weather hazard in the state. Overall snow cover has decreased in the Northern Hemisphere, due in part to higher temperatures that shorten the time snow spends on the ground.

Warmer winter temperatures could mean more ice and freezing rain events, which often impact electrical utilities and communication systems, but can also affect agricultural livestock and roads and transportation. The increased frequency of ice and freezing rain events increases the likelihood that those events will occur in tandem with extreme cold events. Thereby increasing the importance of temporary emergency shelter with back-up generators for the facility; and water and sewer services for that facility.

URBAN FIRE/WILDFIRE

According to a United Nations Office of Disaster Risk Reduction (UNODRR) Urban Fire article, all fires regardless of trigger, need three elements to sustain themselves: fuel, oxygen, and heat. The heat thermally decomposes the fuel into a hot gas which mixes with the oxygen which then creates a combustible gas namely the flame, the edge of which is where the combustion reaction happens.

UNODRR urban fire article further states urban fires are fire involving buildings or structures in cities or towns with potential to spread to adjoining structures. Triggers of urban fires are numerous, from human actions (e.g., knocking over a candle, arson) and technological triggers (e.g., power surge overloading appliances), to natural triggers (e.g., wildland fires interacting with urban areas).

Urban fires are linked to density of structures and type of construction. Highly dense settlements are likely to have large areas of structures that are in close proximity to one another which will facilitate fire spread. This, when combined with combustible construction can lead to large-scale fire events.

Wildfires are uncontrolled conflagrations that spread freely through the environment. Other names such as brush fire, bushfire, forest fire, grass fire, hill fire, peat fire, vegetation fire, and wildfire may be used to describe the same phenomenon. A wildfire differs from the other fires by its extensive size; the speed at which it can spread out from its original source; its ability to change direction unexpectedly; and to jump gaps, such as roads, rivers and fire breaks.

Fires start when an ignition source is brought into contact with a combustible material that is subjected to sufficient heat and has an adequate supply of oxygen from the ambient air. Ignition may be triggered by natural sources such as a lightning strike, or may be attributed to a human source such as "discarded cigarettes, sparks from equipment, and arched power lines.

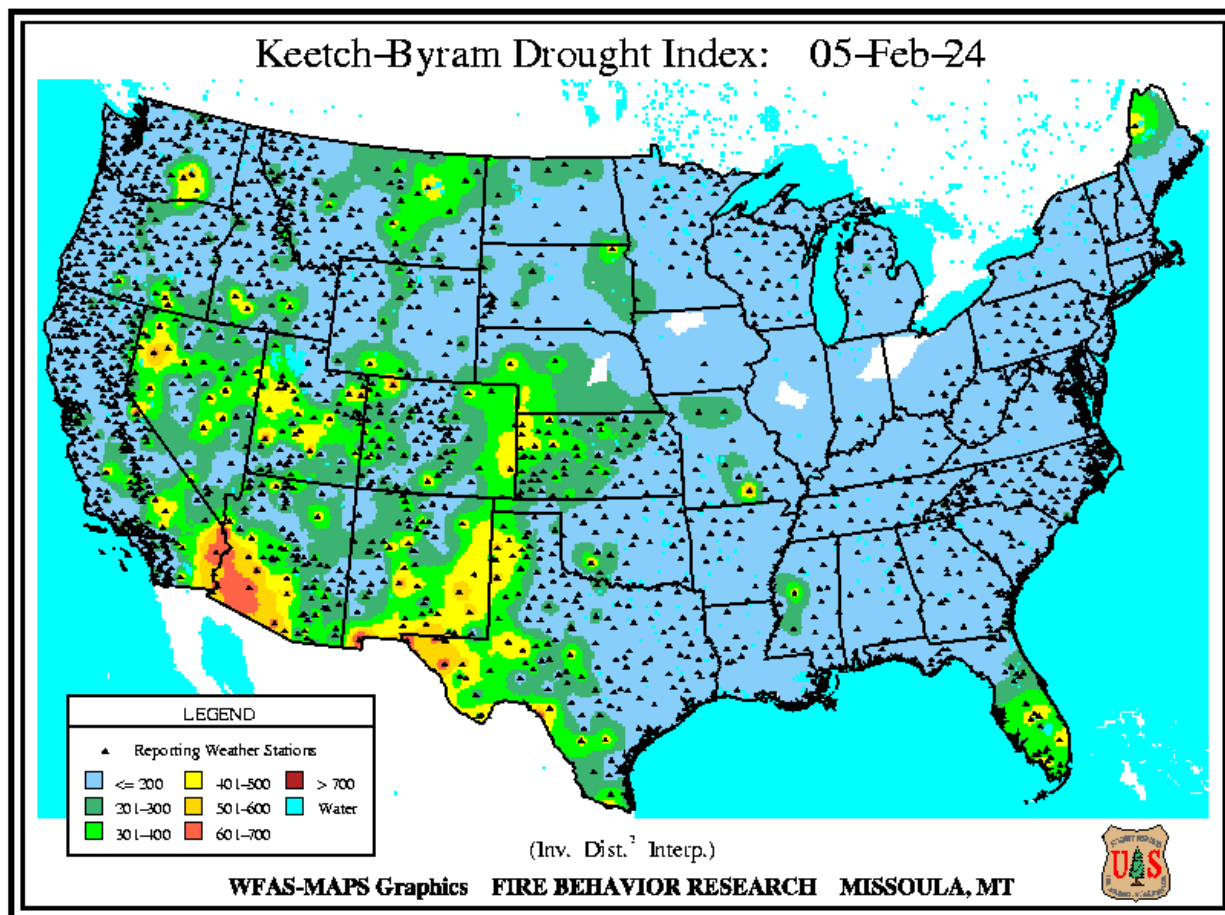
According to the SD Drought Mitigation Plan (SD DMP), lightning fires burn more acreage than human-caused fires, in part, because 1) multiple lightning fire ignitions often occur at the same time; 2) lightning fires can occur throughout the protection area, while most human-caused fires occur in accessible areas; 3) people often detect and report human-caused fires quickly due to their proximity to inhabited areas; and 4) lightning producing thunderstorms typically occur during the hottest portion of the fire season, while many human-caused fires start during spring or fall. When combined with drought, these conditions can create devastating wildfires.

According to Drought.gov and the Wildland Fire Assessment System, the Keetch-Byram Drought Index assesses the risk of fire due to drought. The Keetch-Byram Drought Index (KBDI) assesses the risk of fire by representing the net effect of evapotranspiration and precipitation in producing cumulative moisture deficiency in deep duff and upper soil layers.

The KBDI attempts to measure the amount of precipitation necessary to return the soil to full field capacity. The index ranges from zero, the point of no moisture deficiency, to 800, the maximum drought that is possible, and represents a moisture regime from 0 to 8 inches of water through the soil layer. At 8 inches of water, the KBDI assumes saturation. At any point along the scale, the index number indicates the amount of net rainfall that is required to reduce the index to zero, or saturation.

- KBDI = 0 - 200: Soil moisture and large class fuel moistures are high and do not contribute much to fire intensity. Typical spring dormant season following winter precipitation.
- KBDI = 200 - 400: Typical of late spring, early growing season. Lower litter and duff layers are drying and beginning to contribute to fire intensity.
- KBDI = 400 - 600: Typical of late summer, early fall. Lower litter and duff layers actively contribute to fire intensity and will burn actively.
- KBDI = 600 - 800: Often associated with more severe drought with increased wildfire occurrence. Intense, deep burning fires with significant downwind spotting can be expected. Live fuels can also be expected to burn actively at these levels.

A sample KBDI can be found below.



A strong possibility exists for simultaneous emergencies during droughts. Wildfires are the most common. While researching the hazard occurrences that have taken place in the County, it became evident that the information found on the NCDCE Storm Events Database website was incomplete. Therefore, other sources were contacted whenever possible. Specifically, NCDCE Storm Events Database had zero occurrences listed for wildfires in the County, but the State Fire Marshal's Office (SFMO) was contacted to verify that information.

The information from the SFMO is derived from the reports submitted by local fire departments who respond to the fires. According to SFMO representatives, many of the fire departments in the County are volunteer-based, which often leads to wildfires being extinguished without reports being filed with the State. As a result, the SFMO data is not entirely complete either. For the purpose of this PDM, we have used the numbers provided by the SFMO as a point of reference to assess the likelihood of a wildfire hazard occurring within the jurisdiction.

The information provided by the SFMO identifies 74 structure fire responses, 41 vehicle fire responses, and 153 outdoor fire responses reported from 2014 to 2023. The cause of the outdoor fires is not listed, so it is not known for certain whether all or some of these fires resulted due to a natural hazard occurrence or as a result of human behavior. Additionally, the SFMO provided information about the number of injuries and fatalities reported as a result of these fires. According to the information provided, 1 civilian and 1 firefighter injuries and 0 civilian and firefighter fatalities were reported during that time period.

The table below identifies the number of fire department responses to structural, vehicle and outdoor fires that have been experienced within the county. It should be noted that the number of responses does not necessarily mean that there were 153 outdoor (wildfire) fires as some events required multiple departments to respond.

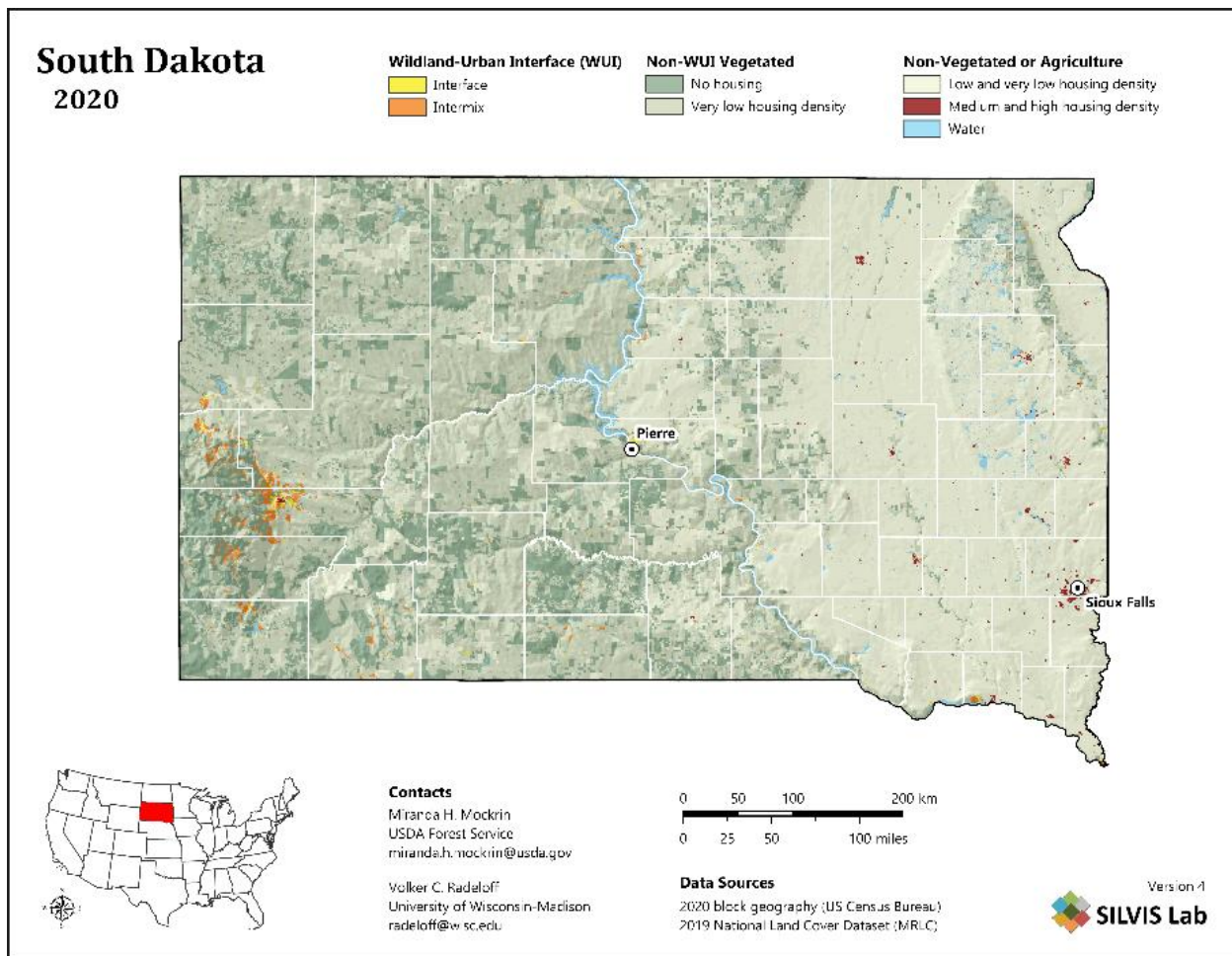
Table 4.13: Kingsbury County Structural, Vehicular, and Outdoor (Wildfire) Department Responses

Year	Structural Fires	Vehicle Fires	Outdoor Fires
2014	5	5	13
2015	4	8	12
2016	15	3	18
2017	7	1	16
2018	12	2	12
2019	4	0	2
2020	5	2	26
2021	5	6	11
2022	11	8	26
2023	6	6	17
Total	74	41	153

SOURCE : South Dakota State Fire Marshall Office

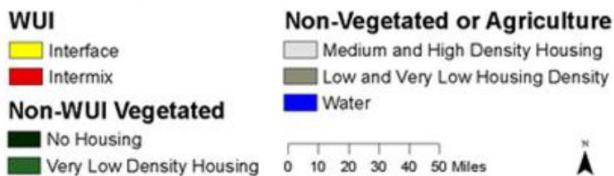
The data compiled by the SMFO is not discriminate enough to determine whether a fire can be classified as an urban or rural. The map from the SD SHMP displayed on the following page shows the South Dakota Wildland Urban Interface areas that can experience wildfires. This shows very little chance of a wildfire occurrence broadly over the entire Kingsbury County jurisdiction. The FEMA NRI shows a 0.048% chance of wildfire per year.

Figure 4.7: SD Wildland-Urban Interface Map



South Dakota

2010 Wildland Urban Interface



Climate Change Considerations

Driven by increased temperature and decreased relative humidity, fire potential in this region is projected to increase under future climate change, especially in summer and autumn, with fire seasons becoming longer, according to the Fifth National Climate Assessment. Increased evapotranspiration and drought risk raise the probability of large fire occurrence. The number of large grassland wildfires in the four semiarid ecoregional grasslands of the Northern Great Plains increased by 213%, from 128 between 1985 and 1995 to 273 between 2005 and 2014, with total area burned increasing in the western ecoregions of the region by 350% but decreasing in eastern ecoregions by 75% or more. Wildfire numbers and fire-season length increased from the 1970s

to the 2000s by 889% and 85 days, respectively, in western Montana and Wyoming forests, with most ignited by lightning strikes rather than humans. Historically, snow cover prevented winter wildfires and increased fuel moisture conditions during snowmelt followed by spring precipitation. However, early spring snowmelt has been correlated with increased fire activity. From 1950 to 2010, the number of snow-cover days declined within the region.

Though urban fires are not expected to be significantly impacted by climate change, wildfires in Kingsbury County may increase. The data for increased frequency of wildfire is based largely west of this County. However, with the creep of earlier warm Spring temperatures will come higher likelihood of existing pasture land being dry enough to ignite in lightning storms. As previously noted elsewhere in this plan, more intense summer storms can be expected which is expected to lead to a higher risk for lightning; and, in turn, lightning ignited grassland fires.

ASSESSING VULNERABILITY: OVERVIEW

Requirement 201.6(c)(2)(i). Local Mitigation Plan Review Tool – B1-d&f.

Requirement 201.6(c)(2)(i). Local Mitigation Plan Review Tool – B2-a-b.

Hazards were also analyzed in terms of the level of the community or county's perceived vulnerability to the hazard. Vulnerability to the hazard is the susceptibility of life, property, and the environment to injury or damage if a hazard occurs.

Representatives from each participating jurisdiction and the PDM Planning Team were asked to complete worksheets that rated their perception to vulnerability of hazards for either their specific geographical location, or for county-wide risks. A low vulnerability hazard is one that has very low damage potential to either life or property (minor damage to less than 5% of the jurisdiction). A "medium" vulnerability hazard is unlikely to threaten human life, although some people may be at risk, but may pose moderate damage potential (causing partial damage to 5% to 10% of the jurisdiction, on an irregular occurrence). A "high" vulnerability hazard may threaten human life, and more than ten percent of the jurisdiction may be at risk on a regular occurrence. Table 4.14 below is an overall summary of perceived vulnerability by jurisdiction produced from the FEMA worksheets completed by each participating jurisdiction and PDM Planning Team.

Table 4.14: Overall Summary of Vulnerability by Jurisdiction

Type of Disaster	Kingsbury County	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Avg. Rating
Drought	M	M	M	M	M	M	M	L	L	H	M
Earthquake	N	N	N	N	N	N	N	N	N	N	N
Extreme Cold	M	M	L	L	L	L	M	L	L	H	L
Extreme Heat	M	M	L	L	L	L	M	L	L	H	M
Flood	H	L	L	M	L	M	M	L	L	H	L
Freezing Rain/Sleet/Ice	H	M	M	H	H	H	L	M	M	H	H
Hail	M	M	M	H	M	H	H	H	H	H	H
Heavy Rain	M	M	M	H	M	M	M	H	M	H	M
Heavy Snow	M	M	M	H	M	M	M	H	M	H	M
Lightning	L	L	L	L	L	L	L	L	L	L	L
Rapid Snow Melt	H	L	L	M	L	M	M	M	M	M	M
Strong Winds	H	H	M	M	M	H	H	H	H	H	H
Thunderstorm	M	M	L	H	L	M	L	H	L	H	M
Tornado	M	H	H	H	H	H	H	H	H	H	H
Urban Fire	M	L	L	L	M	M	L	L	L	L	L

N : Not applicable; not a hazard to the jurisdiction
L : Low risk/vulnerability; little damage potential (minor damage to less than 5% of the jurisdiction)
M : Medium risk/vulnerability; moderate damage potential (causing partial damage to 5-10% of the jurisdiction, and irregular occurrence)
H : High risk/vulnerability; significant risk/major damage potential (for example, destructive, damage to more than 10% of the jurisdiction and/or regular occurrence)

After identifying and assessing the natural hazards that may affect Kingsbury County and discussing their perceived vulnerabilities, the Team decided to concentrate on the following natural hazards: flooding, severe summer storms, severe winter storms, and drought/fire. The remaining natural hazards: earthquakes, dam failure, ice jams, landslides, and subsidence had a low/no probability of occurrence and a low/no vulnerability in the County. These hazards will no longer be considered by this plan.

Regional Climate Change Trends

FEMA requires PDM plans to include climate change projections as a part of the hazard assessment and vulnerability analysis. The Third National Climate Assessment (TNCA), published in 2014, addresses the current and future impacts of climate-related impacts on various sectors and regions throughout the United States. This report was reviewed and its findings were incorporated into this plan.

The TNCA indicates increasing mean temperatures in the northern Great Plains region, where South Dakota is located, and winter temperatures warming faster than summer temperatures. This trend may lead to greater evaporation and more frequent droughts, necessitating new agricultural practices to adapt to changing conditions. Additionally, South Dakota has experienced a long-term trend of increasing annual precipitation, with the majority occurring in spring and fall. The report suggests precipitation extremes will become more frequent and intense, potentially exacerbating flooding, especially in the spring.

The Fourth National Climate Assessment, released in 2018, reaffirms the findings within the TNCA. Other studies reviewed for this plan include the South Dakota State Multi-Jurisdictional Hazard Mitigation Plan, the US Environmental Protection Agency's report on Climate Impacts in the Great Plains, and the NOAA NCDC-State Climate Summaries 2022 for South Dakota, which provide similar information as the third and fourth climate assessments.

HAZARD VULNERABILITIES

The following paragraphs summarize the description of the jurisdiction's vulnerability to each hazard and the impact of each hazard on the jurisdiction.

Flooding

Inundation flooding occurs most often in the spring. The greatest risks are realized typically during a rapid snowmelt before ice is completely off all of the rivers or ice jams that occur when warm temperatures and heavy rain cause snow to melt rapidly. Snow melting combined with heavy rains can cause frozen rivers to swell, which breaks the ice layer on top of the river. The ice layer often breaks into large chunks, which float downstream and often pile up near narrow passages and other obstructions, such as bridges and dams causing localized flooding. Flash flooding is more typically realized during the summer months. This flooding is primarily localized when enough rain can be produced to cause inundation flooding.

Flooding can result in injuries and even loss of life when quickly moving water is involved. Six inches of moving water is enough to sweep a vehicle off a road. Disruption of communication, transportation, electric service, and community services, along with contamination of water supplies and transportation accidents are very possible.

Kingsbury County has experienced severe damages to roads and culverts periodically from flooding. Conditions, at times, make emergency response and evacuation operations difficult, adversely affecting the safety of residents. The flooding of township roads is a concern for the entire county. Township officials have identified areas that are either vulnerable or have experienced recurring damages. These areas are identified in maps contained in the Appendix E.

Flooding, especially county-wide flooding, causes significant damages and disrupts travel on roads in the county. According to the FEMA NRI, Kingsbury County can expect 0.5 riverine flooding events per year. These are mostly localized events. FEMA flood studies provide mapping and detailed flood information for floodplains where the water body has a one percent chance of occurrence in any given year in identified special flood hazard areas. Below data indicates specific reports of flooding. Kingsbury County residents and emergency responders have adjusted to life with dozens of feet of water over former collector streets (county roads) and local streets (township roads) for three decades, in some cases. Flood events listed below were compiled from data available through NOAA. These refer to events where waters subsided over time. It should be noted that, except for flash flooding, the “location” of flooding is considered regional rather than site specific.

Table 4.15: Kingsbury County Ten Year Flooding History

Location	Date	Time	Type	Rainfall/Event Summary	Property Damage	Crop Damage
De Smet	08/15/2018	17:30	Flash Flood	Slow moving storms produced spotty heavy rainfall and localized flash flooding. Water flowed over the road along 215 th St. & State Hwy 25.		
Esmond	03/13/2019	12:00	Flood	Rainfall of 1-3" on frozen ground caused overland flooding.	370.00K	
Esmond	06/01/2019	00:00	Flood	Prolonged flooding led to loss or inability to plant crops.		32.030M
Esmond	09/12/2019	00:00	Flood	Heavy rainfall resulted in crop losses and damage to public infrastructure (county & township roads and culverts).	52.00K	277.00K
Esmond	06/25/2020	23:01	Flash Flood	Scattered thunderstorms developed and resulted in deep flowing water across the road.		
De Smet	06/25/2020	03:00	Flash Flood	Scattered thunderstorms developed and resulted in rapidly flowing water about 1' deep across Hwy 25.		
Erwin	08/05/2023	21:00	Flash Flood	Heavy rainfall & localized flash flooding resulted in damage and partially washing out of 437 th Ave.	25.00K	
De Smet Muni Airport	08/05/2023	21:00	Flash Flood	Heavy rainfall & localized flash flooding washed out 202 nd St.	25.00K	

SOURCE : <https://www.ncdc.noaa.gov/stormevents/>

Climate Change Considerations

There is no comprehensive assessment of how climate change might affect flooding in South Dakota. The TNCA, EPA-Climate Impacts on the Great Plains study, and other studies proposed climate change projections that show future precipitation patterns will vary across the Great Plains. Winter/spring precipitation and very heavy precipitation events are both projected to increase in the northern portions of the Great Plains, leading to increased runoff and potential flooding. Increased snowfall, rapid spring warming, and intense rainfall can combine to produce significant flooding.

Since 1990, South Dakota has averaged 22% more 2-inch rain events compared to the long-term average. Some historic rain and flooding events have occurred in recent years. Climate projections for the Great Plains indicate that 1-day, 20-year return events will increase in frequency by 8-16% in the coming decades.

Vulnerability

There is no comprehensive assessment of how climate change might affect flooding in South Dakota. The TNCA, EPA-Climate Impacts on the Great Plains study plus other studies proposed climate change projections show that future precipitation patterns will vary across the Great Plains. Winter/spring precipitation and very heavy precipitation events are both projected to increase in the northern portions of the Great Plains, leading to increased runoff and potential flooding. Increased snowfall, rapid spring warming, and intense rainfall can combine to produce significant flooding. Since 1990, South Dakota has averaged 22% more 2-inch rain events compared to the long-term average. Some historic rain and flooding events have occurred in recent years. Climate projections for the Great Plains indicate that 1-day, 20-year return events will increase in frequency by 8% to 16% in the coming decades.

Severe Storms

Summer Storms

Summer storms can develop anywhere in the County and historically occur from early spring to early fall. Summer storms can quickly progress into thunderstorms that include strong winds, heavy rains and flooding, lightning, and hail. These storms can also spur the development of funnel clouds and tornadoes. Summer storms range from mild to severe, posing risks of injury or death, destroying property, and killing livestock. This section covers five types of hazards caused by summer storms, particularly thunderstorms: hail, heavy rains, lightning, strong winds, and tornadoes. Flooding was discussed in a previous section.

Hail can cause damage to property such as crops, vehicles, windows, roofs, and structures. The County and its local jurisdictions are vulnerable to hail, like most other areas in the State due to the nature of the hazard. The average hail stone size for these incidents was a little over 1-inch in diameter. Mitigating hail is difficult and is usually found in the form of insurance policies for structures, vehicles, and crops. The County can expect hail several times each year.

Heavy Rain causes damage to public and private property, such as roads and homes. Roads, culverts, and bridges can be washed out, causing traffic hazards for travelers and commuters. Many times the roads have to be closed causing rural traffic to have to take alternate routes which can sometimes be an additional five to ten miles out of the way. All areas of the County are

vulnerable when heavy rains occur. Storm sewers are built for the typical storm and therefore do not accommodate excessive or heavy rains. When heavy rains occur in the County, it may cause sewers to back up in homes due to excess water entering the wastewater collection lines. The excess water sometimes has no place to go and thus basements fill up with water which results in damage to water heaters, furnaces, and damage to living quarters for people who live in basement apartments.

Lightning often strikes the tallest objects within the area. In city limits, trees and poles often receive the most strikes. In rural areas, shorter objects are more vulnerable to being struck. Electrical lines and poles are also vulnerable because of their height and charge. Tall trees located near electrical lines can be broken in wind or by lightning strikes and land on electrical lines, severing connections. Limited loss of power is common on an annual basis. Typical power interruptions last around one to three hours. Most residents are prepared to deal with this.

Cloud-to-ground lightning can kill or injure people by direct or indirect means. Objects can be struck directly, which may result in an explosion, burn, or total destruction. Damage may also be indirect, when the current passes through or near an object, which generally results in less damage. Most injuries from lightning occur before rain begins or near the end of thunderstorms. Individuals who sought shelter leave those areas prior to the entire completion of the thunderstorm. Believing it is safe to freely move around, lightning strikes catch them off guard.

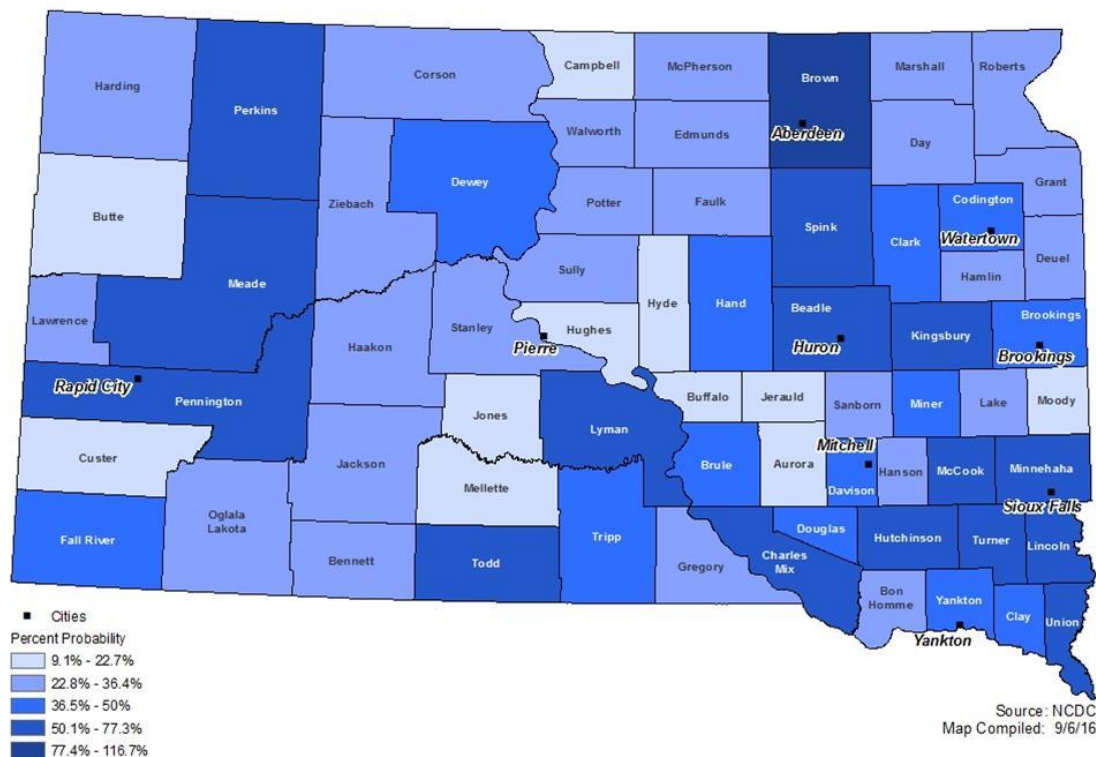
One of lightning's most dangerous attributes includes its ability to cause fires. Since the entire county is vulnerable to lightning strikes and subsequent fires, these fires will be treated under the fire section of this PDM.

Strong Winds can be detrimental to the County. Trees, poles, power lines, and weak structures are all susceptible and vulnerable to strong winds. When strong winds knock down trees, poles, power lines, and structures it creates additional traffic hazards for travelers and commuters. Strong winds are a common occurrence in all parts of the County. The farming community tends to be vulnerable because many old farm sites have weak, dilapidated, or crumbling structures or structures such as grain bins which can easily be blown over. Another area of particular vulnerability would be those areas with dense tree growth where dead or decaying trees lose their stability and can be blown over or knocked down easily. High voltage electrical transmission lines run the length of the County. These lines are susceptible to breaking during high winds and hail.

Tornadoes present significant danger and occur most often in South Dakota during the months of May, June, and July. The greatest period of tornado activity (about 82 percent of occurrence) is from eleven a.m. to midnight. Within this time frame, most tornadoes occur between four p.m. and six p.m.

According to the NCEI, there were 1,885 tornadoes, of which 692 were F1 or higher, in South Dakota between 1950 and 2023 (73 years). Based on this information, the probability that at least one tornado will occur in South Dakota is 100%. Annualized losses are estimated at nearly \$11 million. Figure 4.8 depicts the probability of a damaging tornado occurring in each county based on the historical data. FEMA NRI projects the potential for 0.5 tornado events per year.

Figure 4.8 Damaging Tornado Probability by County



Climate Change Considerations

The annual risk for intense summer storms is very high and will increase. Climate projections are that the frequency and severity of heavy rainfall events will increase. Often associated with summer storms are hail, lightning and strong winds. It is expected that as summer/thunder storms increase, in conjunction with more of the associated hail, lightning, and strong wind events.

The Fourth National Climate Assessment report states, “since the 1970s, the United States has experienced a decrease in the number of days per year on which tornadoes occur, but an increase in the number of tornadoes that form on such days.”

According to the SD SHMP, there is a lot of uncertainty with the influence of climate change on severe summer storms and tornadoes, future updates to the mitigation plan should include the latest research on how the hazards frequency and severity could change.

Winter Storms

Winter Storms have a high risk of occurrence in the County. Several snowstorms each resulting in five to ten inches of snow occur in the County area annually. High winds, heavy and blowing snow, freezing rain/ice, and cold temperatures can impair/immobilize transportation, down power lines and trees, cause the collapsing of weaker structures, and potentially cause flooding. Livestock and wildlife are also very vulnerable during periods of heavy snow. Most winter storms can be considered to have occurred countywide.

Blizzards are characterized by high winds, heavy and blowing snow, cold temperatures, and low visibility. Blizzards subsequently create conditions such as icy roads, closed roads, downed power lines and trees. The County's population is especially vulnerable to these conditions because people tend to leave their homes to get to places such as work, school, and stores rather than staying inside. Traffic is one of the biggest hazards in the County during a blizzard because people often get stuck, stranded, and lost when driving their vehicles which usually prompts others such as family and or emergency responders to go out in the adverse conditions to rescue them.

Freezing rain/ice causes adverse conditions such as slippery surfaces and extra weight buildup on power lines, poles, trees, and structures. The additional weight can often cause weak structures to cave in and cause tree branches and power lines to break and fall. Electric transmission/distribution lines run the length of the County. These lines are susceptible to breaking under freezing rain and icy conditions and severing during high blizzard winds. Loss of power can cause the loss of residential heating and utilities usage. Limited loss of power is not uncommon on an annual basis. A typical power interruption lasts from one to three hours. Most residents are prepared to deal with this type of inconvenience. The elderly and families with children potentially may suffer from a long duration loss of power during winter storms. Traffic on the roads and highways tend to be another hazard during freezing rain and icy conditions because vehicles often slide off the road which prompts emergency responders and others to have to go out on rescue missions in the adverse conditions.

Extreme cold temperatures in the County are common occurrences. It is expected that at least three times each year there will be extreme cold in the area. It is possible that people in the area have adapted to this type of extreme temperatures and thus such weather events are not reported as often as they occur. Extreme cold and a long duration power outage has the potential to cause harm to vulnerable populations, damage structures that are poorly insulated or without heat and disrupt/impair communication facilities. Many communities have designated emergency shelters with generators to provide a location for persons in need of shelter. In South Dakota, most neighbors and relatives will check on vulnerable persons to ensure their safety during these types of events.

Flooding was previously covered in this section.

While winter storms would be considered extreme in many parts of the State, the consistent nature of such weather hazards are expected in this area. Thus, planning and response mechanisms for snow and ice storms are vital to the County and are routine procedures in the County due to the common nature of such storms.

Climate Change Considerations

According to climate reports, there is evidence for the entire Northern Hemisphere of an increase in both storm frequency and intensity during the cold season since 1950, with storm tracks having shifted slightly towards the poles. South Dakota's northern location and proximity to the typical U.S. winter storm track make it highly susceptible to heavy snows, high winds, and low wind chill temperatures. Extremely heavy snowstorms increased in number during the last century in northern and eastern parts of the United States, but have been less frequent since 2000. Total seasonal snowfall has generally increased in the northern Great Plains.

The winter season is warming at a faster rate than any other season in the Northern Plains region, and this is also true for South Dakota. Winter storms and blizzards, however, will continue to be

a severe weather hazard in the state. Overall snow cover has decreased in the Northern Hemisphere, due in part to higher temperatures that shorten the time snow spends on the ground.

Warmer winter temperatures could mean more ice and freezing rain events, which often impact electrical utilities and communication systems, but can also affect agricultural livestock and roads and transportation. There remains some uncertainty in projections for the coming decades, but the rising trend of extreme precipitation events in general (including winter season) will continue to be a hazard.

Drought/Fires

Drought can be defined as a period of prolonged lack of moisture. High temperatures, high winds, and low relative humidity all result from droughts and are caused by droughts. Precipitation, streams, rivers, lakes, reservoirs and groundwater are used to meet a diverse set of water resource needs within the State including drinking water. Each of these water sources can be adversely impacted during drought periods. Crops and other vegetation are harmed when moisture is not present within the soil. Roughly every fifty years a significant drought is experienced within the county, while less severe droughts have occurred as often as every three years. The FEMA NRI states Kingsbury County has an annualized frequency of 4 drought events per year.

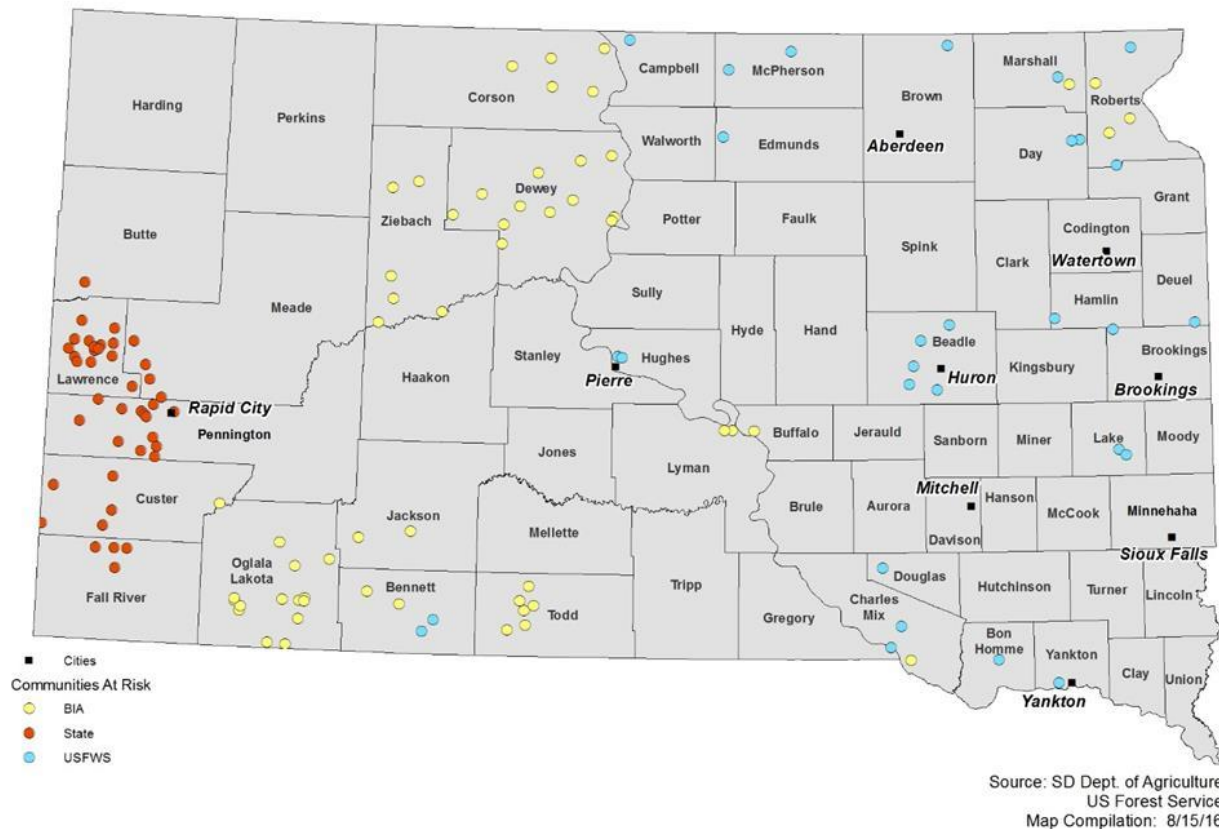
Severe heat waves, a component of drought, have caused catastrophic crop damage, deaths from hyperthermia, and widespread power failures due to increased use of air conditioning. Loss of power and crop damage is the largest vulnerabilities to the county during extreme heat. Both have an effect on quality of life, however, neither are detrimental to the existence of the population of the County.

Wildfires occur primarily during drought conditions. Wildfires can cause extensive damage, both to property and human life, and can occur anywhere in the county. Even though wildfires can have various beneficial effects on wilderness areas for plant species that are dependent on the effects of fire for growth and reproduction, large wildfires often have detrimental atmospheric consequences, and too frequent wildfires may cause other negative ecological effects. Current techniques may permit and even encourage fires in some regions as a means of minimizing or removing sources of fuel from any wildfire that might develop.

Moisture amounts have the biggest impact on fire situations. During wet years, fire danger is low. More controlled burns are conducted, and fewer mishaps occur. During dry years, severe restrictions are placed on any types of burns. For information on dealing with open/controlled burning within the county, see SDCL 34-29B and SDCL 34-35. The FEMA NRI states Kingsbury County has a 0.048% chance of wildfire per year.

Since there are no remote forested regions in Kingsbury County, wildfires can be easily spotted and are capable of being maintained. The County does not have any areas that are considered wildland-urban interface. All communities and the golf course receive fire protection from local fire departments. The following map shows the SD communities at risk from wildfire including Kingsbury County.

4.9: SD Communities at Risk from Wildfire



In addition, fire interference with traffic on highways is not a major concern. The most important factor in mitigating wildfires continues to be common sense and adherence to local burning regulations and suggestions disseminated by the area officials.

Urban fires are a potential threat to the County and its communities. According to the US Fire Administration, many urban fires are caused by human related activities such as cooking, smoking, seasonal activities (candles and X-mas tree lights) or intentionally set. Other causes include home appliances, electrical systems and heating systems. The probability of an urban fire increases with population growth. This is due to human error and carelessness, which are other factors contributing to fires. Urban fires can cause extensive losses of property, lives, injuries and livelihood. The urban poor are the persons who are at greatest risk from urban fire. Generally, they have little means of protection against losses. In addition, those at greatest risk of death and injury are the old and the young due to lack of knowledge in how to respond and lack of mobility when trying to respond.

Inadequate planning, infrastructure, and construction practices related to fire prevention and mitigation significantly increase the potential for fire ignition and spread. Fire risk reduction requires established firefighting capabilities, education and training. Many of the communities have a volunteer fire department for fire suppression or are covered by a neighboring department. Most of the communities in Kingsbury County have smaller populations. The City of Badger is the largest and the city has its own fire department.

Larger communities may implement building and fire regulations, but smaller communities lack personnel for inspections and therefore do not enact building and fire regulations. The State of South Dakota adopted the 2021 International Building Codes (IBC). South Dakota state law requires all commercial and public building to be built to the 2021 IBC standards in the state. Many communities adopt zoning regulations and ordinances to help with development and reduce building densities to reduce fire spread and for fire access. According to the USFA, the number of urban fires, fire casualties, and economic losses has continued to decline over the last several years.

Climate Change Considerations

In the Fourth National Climate Assessment, climate model projections paint a clear picture of a warmer future in the Northern Great Plains, with conditions becoming consistently warmer in two to three decades and temperatures rising steadily towards the middle of the century. Overall, climate models project an increase in the number of heavy precipitation events for much of the region. Most precipitation events are projected to occur during the winter and spring seasons. Rising temperatures will lead to increased evaporation and increasing drought frequency and intensity. The probability for more very hot days (days with maximum temperatures above 90°F) is expected to increase during the summer months, with potential impacts on agriculture, energy production, human health, stream flows, snowmelt, and fires. Less precipitation and warmer temperatures during the summer growing season, potentially causing drought conditions, may adversely affect agriculture (no irrigation), human health and fires.

According to the SD DMP and SD SHMP, wildfire conditions across South Dakota and the western United States in general are likely to worsen in the future due to climate change. The increase in moisture can provide favorable conditions for fuel (vegetation) growth. Longer, hotter summers deplete moisture in soils and vegetation potentially promoting drought conditions. The increase in temperatures can dry out fuels more rapidly allowing them to burn more easily. Hotter temperatures and drought conditions may adversely affect water supplies by decreasing their availability for fire suppression. Climate change is also believed to increase the severity of thunderstorms, leading to more lightning strikes that can ignite fires.

It appears that climate change will not have a major impact on urban fires, except when a wildfire crosses into a community. According to the USFA, the changing climate will create more fire hazard areas because of the increase in dry vegetation and wildland-urban interfaces will continue to grow.

ASSESSING VULNERABILITY: CURRENT AND FUTURE CONDITIONS

Requirement 201.6(c)(2)(i). Local Mitigation Plan Review Tool – B1-e

Requirement 201.6(c)(2)(i). Local Mitigation Plan Review Tool – B2-a&b

Requirement 201.6(d)(3). Local Mitigation Plan Review Tool – E2

The Planning Team determined that each respective community should be tasked with identifying its assets needing protection from hazards. Those assets are listed as “critical infrastructure” in Table 4.17. As a part of the asset/infrastructure listing, each community was asked to identify vulnerable or socially disadvantaged populations within its respective community. Those populations are listed as “populations to protected” in Table 4.17.

The planning team determined that dam failures, subsidence, earthquakes, and ice jams had no record of occurrence. Further, they determined that the primary effect of wildfires to municipalities was that of response and recovery. Therefore, those hazards were not included for planning purposes, despite being included in the Hazard Profile of this plan. Though wildfires were identified as hazards for the rural portions of the county, rural fires are limited to grassland, pasture, (post-harvest) crop ground which catches fire and spreads to another property.

It is expected that climate change will lead to more incidence of grassland fire (wildfire) in Kingsbury County in the future due to more periods of drought, extreme heat, wind, and frequency of lightning strikes. No residences, whether communal or single family, are at a higher risk of wildfire occurring today than any other. Rather crops, pasture, grassland, and other personal property are primarily the vulnerable assets to wildfire. Changes in population and land use are not expected to be significantly impacted by the increase in incidence of wildfire expected from climate change. An increasingly sporadic development of residences in the rural portions of the county, and aging population are unlikely to be affected by the increase in wildfire in any appreciable manner.

A review of all other hazards in relation to the general and unique risks to current and future assets by jurisdiction is included in Tables 4.16 – 4.20. A review of the expected future impacts on each respective community in relation to expected changes in population and land use are included in Tables 4.21 - 4.25. It should be noted that the risks and impacts of many hazards were determined by the PDM Planning Team to be similar. The below tables, as with mitigation activities later in this plan, are grouped into like categories.

Table 4.16: Risks to Current and Future Assets by Community – Extreme Heat

Community	Current Assets	Future Assets	Extreme Heat	
			General Risks	Unique Risks
<i>Kingsbury County</i>	See Table 1.1 [Population]; Table 4.28 Critical Structures in Kingsbury County	Population is expected to remain relatively steady. Lake Preston is expected to see substantial short-term influx of population and need for services during construction of GEVO Plant (east of town). Long-term population will increase but stabilize. For other towns mortality rate and immigration is expected to remain near equal to fertility rate and influx of workforce as in the past decade; No New Capital Infrastructure Planned	Prolonged exposure of residents to extreme temperatures during utility outage or following other natural disaster.	Communal living (employee housing and Hutterite Colonies), and clustered lake development run higher risk of single event affecting more people.
<i>Arlington</i>				Public School, clinic, elderly housing, daycares, parks, manufactured home park, and campground run higher risk of single event affecting more people.
<i>Badger</i>				N/A – no specific Populations listed to protect.
<i>Bancroft</i>				N/A – no specific Populations listed to protect.
<i>De Smet</i>				Public School, clinics, elderly housing, apartments, daycares, parks, churches, manufactured home park, and campground run higher risk of single event affecting more people.
<i>Erwin</i>				N/A – no specific Populations listed to protect.
<i>Hetland</i>				No specific Populations listed to protect.
<i>Iroquois</i>				Public School, apartments, park, and campground run higher risk of single event affecting more people.
<i>Lake Preston</i>				Public School, clinic, elderly housing, daycares, apartments, park, and campground run higher risk of single event affecting more people.
<i>Oldham</i>				Old school, park, and church run higher risk of single event affecting more people.

Table 4.17: Risks to Current and Future Assets by Community – Tornado

Community	Current Assets	Future Assets:	Tornado	
			<i>General Risks</i>	<i>Unique Risks</i>
<i>Kingsbury County</i>	See Table 1.1 [Population]; Table 4.28 Critical Structures in Kingsbury County	Population is expected to remain relatively steady. Lake Preston is expected to see substantial short-term influx of population and need for services during construction of GEVO Plant (east of town). Long-term population will increase but stabilize. For other towns mortality rate and immigration is expected to remain near equal to fertility rate and influx of workforce as in the past decade; No New Capital Infrastructure Planned	Injury, loss of life, loss of/damage to property, loss of essential utility services.	Communal living (employee housing and Hutterite Colonies), and clustered lake development run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in tornado.
<i>Arlington</i>				Public School, clinic, elderly housing, daycares, parks, manufactured home park, and campground run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in tornado.
<i>Badger</i>				Overhead electricity lines feeding town are at risk of going down in tornado.
<i>Bancroft</i>				Overhead electricity lines feeding town are at risk of going down in tornado.
<i>De Smet</i>				Public School, clinics, elderly housing, apartments, daycares, parks, churches, manufactured home park, and campground run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in tornado.
<i>Erwin</i>				Overhead electricity lines feeding town are at risk of going down in tornado.
<i>Hetland</i>				Community museum run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in tornado.
<i>Iroquois</i>				Public School, apartments, park, and campground run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in tornado.
<i>Lake Preston</i>				Public School, clinic, elderly housing, daycares, apartments, park, and campground run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in tornado.
<i>Oldham</i>				Old school, park, and church run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in tornado.

Table 4.18: Risks to Current and Future Assets by Community – Thunderstorm

Community	Current Assets	Future Assets:	Thunderstorm (Including hail, lightning, high wind)	
			<i>General Risks</i>	<i>Unique Risks</i>
<i>Kingsbury County</i>	See Table 1.1 [Population]; Table 4.28 Critical Structures in Kingsbury County	Population is expected to remain relatively steady. Lake Preston is expected to see substantial short-term influx of population and need for services during construction of GEVO Plant (east of town). Long-term population will increase but stabilize. For other towns mortality rate and immigration is expected to remain near equal to fertility rate and influx of workforce as in the past decade; No New Capital Infrastructure Planned	Injury, loss of life, loss of property, loss of essential utility services, loss of function of city operations.	Communal living (employee housing and Hutterite Colonies), and clustered lake development run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in high wind.
<i>Arlington</i>				Public School, clinic, elderly housing, daycares, parks, manufactured home park, and campground run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in high wind.
<i>Badger</i>				Overhead electricity lines feeding town are at risk of going down in high wind.
<i>Bancroft</i>				Overhead electricity lines feeding town are at risk of going down in high wind.
<i>De Smet</i>				Public School, clinics, elderly housing, apartments, daycares, parks, churches, manufactured home park, and campground run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in high wind.
<i>Erwin</i>				Overhead electricity lines feeding town are at risk of going down in high wind.
<i>Hetland</i>				Community museum run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in high wind.
<i>Iroquois</i>				Public School, apartments, park, and campground run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in high wind.
<i>Lake Preston</i>				Public School, clinic, elderly housing, daycares, apartments, park, and campground run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in high wind.
<i>Oldham</i>				Old school, park, and church run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in high wind.

Table 4.19: Risks to Current and Future Assets by Community – Winter Storms

Community	Current Assets	Future Assets:	Winter Storms (Extreme Cold, Blizzard, Freezing Rain, Heavy Snow)	
			<i>General Risks</i>	<i>Unique Risks</i>
<i>Kingsbury County</i>	See Table 1.1 [Population]; Table 4.28 Critical Structures in Kingsbury County	Population is expected to remain relatively steady. Lake Preston is expected to see substantial short-term influx of population and need for services during construction of GEVO Plant (east of town). Long-term population will increase but stabilize. For other towns mortality rate and immigration is expected to remain near equal to fertility rate and influx of workforce as in the past decade; No New Capital Infrastructure Planned	Injury and loss of life due to extreme cold and blowing snow, loss of essential utility services, loss of function of roadways.	Communal living (employee housing and Hutterite Colonies), and clustered lake development run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in freezing rain. Emergency services becoming difficult to impossible due to roads become impassible due to visibility and snowpack.
<i>Arlington</i>				Public School, clinic, elderly housing, daycares, parks, manufactured home park, and campground run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in freezing rain. Emergency services becoming difficult to impossible due to roads become impassible due to visibility and snowpack.
<i>Badger</i>				Overhead electricity lines feeding town are at risk of going down in freezing rain. Emergency services becoming difficult to impossible due to roads become impassible due to visibility and snowpack.
<i>Bancroft</i>				Overhead electricity lines feeding town are at risk of going down in freezing rain. Emergency services becoming difficult to impossible due to roads become impassible due to visibility and snowpack.
<i>De Smet</i>				Public School, clinics, elderly housing, apartments, daycares, parks, churches, manufactured home park, and campground run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in freezing rain. Emergency services becoming difficult to impossible due to roads become impassible due to visibility and snowpack.
<i>Erwin</i>				Overhead electricity lines feeding town are at risk of going down in freezing rain. Emergency services becoming difficult to impossible due to roads become impassible due to visibility and snowpack.
<i>Hetland</i>				Community museum run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in freezing rain. Emergency services becoming difficult to impossible due to roads become impassible due to visibility and snowpack.
<i>Iroquois</i>				Public School, apartments, park, and campground run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in freezing rain. Emergency services becoming difficult to impossible due to roads become impassible due to visibility and snowpack.
<i>Lake Preston</i>				Public School, clinic, elderly housing, daycares, apartments, park, and campground run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in freezing rain. Emergency services becoming difficult to impossible due to roads become impassible due to visibility and snowpack.
<i>Oldham</i>				Old school, park, and church run higher risk of single event affecting more people. Overhead electricity lines feeding town are at risk of going down in freezing rain. Emergency services becoming difficult to impossible due to roads become impassible due to visibility and snowpack.

Table 4.20: Risks to Current and Future Assets by Community – Flooding

Community	Current Assets	Future Assets:	Flooding (Heavy Rain, Rapid Snow Melt, Ice Jam)	
			<i>General Risks</i>	<i>Unique Risks</i>
<i>Kingsbury County</i>	See Table 1.1 [Population]; Table 4.28 Critical Structures in Kingsbury County	Population is expected to remain relatively steady. Lake Preston is expected to see substantial short-term influx of population and need for services during construction of GEVO Plant (east of town). Long-term population will increase but stabilize. For other towns mortality rate and immigration is expected to remain near equal to fertility rate and influx of workforce as in the past decade; No New Capital Infrastructure Planned	Loss of property, loss of essential utility services, loss of function of roadways.	Crops at risk of flooding or not being able to be planted. Roadways under water semi-permanently or seasonal; or roadways inundated for varying periods. Certain developments near Lakes Thompson and Henry become isolated due to roads becoming impassible. (See also Tables on pg. 111)
<i>Arlington</i>				No mapped floodplain (in Kingsbury County). Roadways leading to and from town may be inundated for varying periods. (See also Tables on pg. 111)
<i>Badger</i>				No mapped floodplain. Roadways leading to and from town may be inundated for varying periods. (See also Tables on pg. 111)
<i>Bancroft</i>				No mapped floodplain. Roadways leading to and from town may be inundated for varying periods. (See also Tables on pg. 111)
<i>De Smet</i>				Water collects in low lying areas, inundating some property and deteriorating roadways. (See also Tables on pg. 111)
<i>Erwin</i>				No mapped floodplain. Roadways leading to and from town may be inundated for varying periods. (See also Tables on pg. 111)
<i>Hetland</i>				No mapped floodplain. Roadways leading to and from town may be inundated for varying periods. (See also Tables on pg. 111)
<i>Iroquois</i>				Water collects in low lying areas, inundating some property and deteriorating roadways. Some roadways leading to and from town may be inundated for varying periods. (See also Tables on pg. 111)
<i>Lake Preston</i>				Water collects in low lying areas, inundating some property and deteriorating roadways. Some roadways leading to and from town may be inundated for varying periods. (See also Tables on pg. 111)
<i>Oldham</i>				Water collects in low lying areas, inundating some property and deteriorating roadways. Some roadways leading to and from town may be inundated for varying periods. (See also Tables on pg. 111)

Table 4.21: Risks to Current and Future Assets by Community – Extreme Heat

Community					Extreme Heat		
	Current Assets:	Future Assets:	Expected Changes in Population Patterns	Expected Changes in Land Use and Development	Effects of Climate Change	Impacts	
						Changes in Population Patterns	Change in Land Use and Development
Kingsbury County	See Table 1.1 [Population]; Table 4.28 Critical Structures in Kingsbury County. Description of effects on current assets are included in Tables 5.1 - 5.13 as part of description of mitigation activities to address specified hazards.	Population is expected to remain relatively steady. Lake Preston is expected to see substantial short-term influx of population and need for services during construction of GEVO Plant (east of town). Long-term population will increase but stabilize. For other towns mortality rate and immigration is expected to remain near equal to fertility rate and influx of workforce as in the past decade; No New Capital Infrastructure Planned	Increase in sparsity of population due to aging population; increase in communal living for Hutterite colonies and non-English speakers in employee housing. Expansion of clustered lake development.	Continued dependence upon agricultural land uses, increasing demand for services to clustered lake development and short term / seasonal housing.	Increasing Frequency of Extreme Heat	Less people to provide emergency shelter for; however more communal living and clustered lake development results in higher likelihood of mass shelter need (for displaced worker housing) during extreme heat. The lakes will attract more seasonal residents with more frequent extreme heat.	Increased stress on livestock and crops. Crops will more regularly experience flood and heat stress in same year. Continued emphasis on rural water provision to communities and rural residents.
Arlington			Slight increase in population.	Residential development on the south and west. Industrial development in north and east. Commercial development east/ southeast?		Need for emergency shelter and emergency provision/storage of daily medical services in event of utility failure.	Newer residences will be more energy efficient and provide less strain on electrical usage during extreme heat events.
Badger			Slight increase in population.	No land use plan		Need for emergency shelter and emergency provision/storage of daily medical services in event of utility failure.	No land use plan
Bancroft			Slight decrease in population.	Residential development on the north and west. Industrial/ commercial development in the south.		Less people to provide emergency shelter for	Most residences are being recycled or improved, however are less energy efficient than newer houses would be.
De Smet			Population remain steady.	New Residential development on the west and south, infill throughout. Industrial in the east. Infill and southeast for commercial development. Service sector emerging in west central (north of highway.)		Need for emergency shelter and emergency provision/storage of daily medical services in event of utility failure. Medical facilities need to remain operational regardless of strain on utilities in extreme heat.	Newer residences will be more energy efficient and provide less strain on electrical usage during extreme heat events.
Erwin			Slight decrease in population.	No land use plan		Less people to provide emergency shelter for. Aging population and housing stock increase likelihood of need for care.	No land use plan
Hetland			Population continue to decrease, at lower rate.	No land use plan		Less people to provide emergency shelter for. Aging population and housing stock increase likelihood of need for care.	No land use plan
Iroquois			Slight increase in population.	No land use plan		Need for emergency shelter and emergency provision/storage of daily medical services in event of utility failure.	No land use plan
Lake Preston			Significant increase in short-term housing in and near town; then stable increased population	Residential development to south; industrial to north; Commercial/ industrial to the east. Short term housing, and services expected to extend along HWY 14, east to GEVO plant during construction.		Need for emergency shelter and emergency provision/storage of daily medical services in event of utility failure.	Infrastructure needs to be prepared for significantly increased demand on water, sewer, and electricity during construction of GEVO for workforce housing during construction during periods of extreme heat to avoid "brown-outs."
Oldham			Slight decrease in population.	Infill residential and commercial development. Industrial development east and north.		Less people to provide emergency shelter for. Aging population and housing stock increase likelihood of need for care.	Most residences are being recycled or improved, however are less energy efficient than newer houses would be.

Table 4.22: Risks to Current and Future Assets by Community – Tornado

Community					Tornado		
	Current Assets:	Future Assets:	Expected Changes in Population Patterns	Expected Changes in Land Use and Development	Effects of Climate Change	Impacts	
						Changes in Population Patterns	Change in Land Use and Development
Kingsbury County	See Table 1.1 [Population]; Table 4.28 Critical Structures in Kingsbury County. Description of effects on current assets are included in Tables 5.1 - 5.13 as part of description of mitigation activities to address specified hazards.	Population is expected to remain relatively steady. Lake Preston is expected to see substantial short-term influx of population and need for services during construction of GEVO Plant (east of town). Long-term population will increase but stabilize. For other towns mortality rate and immigration is expected to remain near equal to fertility rate and influx of workforce as in the past decade; No New Capital Infrastructure Planned	Increase in sparsity of population due to aging population; increase in communal living for Hutterite colonies and non-English speakers in employee housing. Expansion of clustered lake development.	Continued dependence upon agricultural land uses, increasing demand for services to clustered lake development and short term / seasonal housing.	Increasing Frequency and Severity	More communal living increases the likelihood that multiple people will be affected if a farm site is destroyed by tornado. Seasonal lake residents increase need for tornado safe room at campgrounds and slab-on-grade housing in clustered subdivisions.	Aging housing stock and sparse development mean less likelihood of tornadoes striking residences, but that combination coupled with increased severity in storms result in higher probability of property damage, or loss of life if tornado does strike existing or new development
Arlington			Slight increase in population.	Residential development on the south and west. Industrial development in north and east. Commercial development east/ southeast?		Tornado safe rooms will need to be in proximity to care facilities with evacuation / transfer plans in place. A single safe room could serve the entire community.	Area of future residential development is farther from center of city so would likely not be walking distance from emergency shelters or safe rooms.
Badger			Slight increase in population.	No land use plan		Increased workers living in the area may not be familiar with emergency storm/tornado protocols.	No land use plan; Aging housing stock vs stronger tornadoes results in higher probability of catastrophic damage
Bancroft			Slight decrease in population.	Residential development on the north and west. Industrial/ commercial development in the south.		Less people to provide tornado safe room for.	Aging housing stock vs stronger tornadoes results in higher probability of catastrophic damage
De Smet			Population remain steady.	New Residential development on the west and south, infill throughout. Industrial in the east. Infill and southeast for commercial development. Service sector emerging in west central (north of highway.)		Care facilities need tornado safe rooms or evacuation plans. Proximity of clinic to recreational/ public facilities provides opportunity for maximizing efficiency of shelter and care near public spaces.	New houses are likely to be constructed with basements and less need for tornado safe rooms. Existing development is walking distance from courthouse and clinic.
Erwin			Slight decrease in population.	No land use plan		Increased workers living in the area may not be familiar with emergency storm/tornado protocols.	No land use plan; Aging housing stock vs stronger tornadoes results in higher probability of catastrophic damage.
Hetland			Population continue to decrease, at lower rate.	No land use plan		Less people to provide tornado safe room for.	No land use plan; Aging housing stock vs stronger tornadoes results in higher probability of catastrophic damage
Iroquois			Slight increase in population.	No land use plan		Tornado safe rooms will need to be in proximity to care facilities with evacuation / transfer plans in place. A single safe room could serve the entire community.	No land use plan; Aging housing stock vs stronger tornadoes results in higher probability of catastrophic damage
Lake Preston			Significant increase in short-term housing in and near town; then stable increased population	Residential development to south; industrial to north; Commercial/ industrial to the east. Short term housing, and services expected to extend along HWY 14, east to GEVO plant during construction.		Short-term housing and care facilities need plans and/or tornado safe rooms within close proximity to development. Transient residents need to be aware of emergency protocols.	Area of future development is farther from center of city and likely not walking distance from emergency shelters or safe rooms.
Oldham			Slight decrease in population.	Infill residential and commercial development. Industrial development east and north.		A single safe room could serve the entire community.	Aging housing stock vs stronger tornadoes results in higher probability of catastrophic damage

Table 4.23: Risks to Current and Future Assets by Community – Thunderstorm

Community					Thunderstorm (Including hail, lightning, high wind)		
	Current Assets:	Future Assets:	Expected Changes in Population Patterns	Expected Changes in Land Use and Development	Effects of Climate Change	Impacts	
						Changes in Population Patterns	Change in Land Use and Development
Kingsbury County	See Table 1.1 [Population]; Table 4.28 Critical Structures in Kingsbury County. Description of effects on current assets are included in Tables 5.1 - 5.13 as part of description of mitigation activities to address specified hazards.	Population is expected to remain relatively steady. Lake Preston is expected to see substantial short-term influx of population and need for services during construction of GEVO Plant (east of town). Long-term population will increase but stabilize. For other towns mortality rate and immigration is expected to remain near equal to fertility rate and influx of workforce as in the past decade; No New Capital Infrastructure Planned	Increase in sparsity of population due to aging population; increase in communal living for Hutterite colonies and non-English speakers in employee housing. Expansion of clustered lake development.	Continued dependence upon agricultural land uses, increasing demand for services to clustered lake development and short term / seasonal housing.	Increasing Frequency and Severity of thunderstorm, lightning, and stronger winds.	More communal living increases the likelihood that multiple people will be affected if a farm site is destroyed by summer storms. Seasonal lake residents increase need for storm shelter at campgrounds and slab-on-grade housing in clustered subdivisions.	Aging housing stock and sparse development mean less likelihood of tornadoes striking residences, but that combination coupled with increased severity in storms result in higher probability of property damage, or injury if summer storm does strike existing or new development
Arlington			Slight increase in population.	Residential development on the south and west. Industrial development in north and east. Commercial development east/ southeast?		Storm shelters will need to be in proximity to care facilities with evacuation / transfer plans in place. A single safe room could serve the entire community.	Area of future residential development is farther from center of city so would likely not be walking distance from emergency shelters or safe rooms.
Badger			Slight increase in population.	No land use plan		Increased workers living in the area may not be familiar with emergency storm/tornado protocols.	No land use plan; Aging housing stock vs stronger tornadoes results in higher probability of catastrophic damage
Bancroft			Slight decrease in population.	Residential development on the north and west. Industrial/ commercial development in the south.		Less people to provide storm shelter for.	Aging housing stock vs stronger tornadoes results in higher probability of catastrophic damage
De Smet			Population remain steady.	New Residential development on the west and south, infill throughout. Industrial in the east. Infill and southeast for commercial development. Service sector emerging in west central (north of highway.)		Care facilities need storm shelters or evacuation plans. Proximity of clinic to recreational/ public facilities provides opportunity for maximizing efficiency of shelter and care near public spaces.	New houses are likely to be constructed with basements and less need for storm shelters. Existing development is walking distance from courthouse and clinic.
Erwin			Slight decrease in population.	No land use plan		Increased workers living in the area may not be familiar with emergency storm/tornado protocols.	No land use plan; Aging housing stock vs stronger tornadoes results in higher probability of catastrophic damage.
Hetland			Population continue to decrease, at lower rate.	No land use plan		Less people to provide storm shelter for.	No land use plan; Aging housing stock vs stronger tornadoes results in higher probability of catastrophic damage
Iroquois			Slight increase in population.	No land use plan		Storm shelters will need to be in proximity to care facilities with evacuation / transfer plans in place. A single safe room could serve the entire community.	No land use plan; Aging housing stock vs stronger tornadoes results in higher probability of catastrophic damage
Lake Preston			Significant increase in short-term housing in and near town; then stable increased population	Residential development to south; industrial to north; Commercial/ industrial to the east. Short term housing, and services expected to extend along HWY 14, east to GEVO plant during construction.		Short-term housing and care facilities need plans and/or storm shelters within close proximity to development. Transient residents need to be aware of emergency protocols.	Area of future development is farther from center of city and likely not walking distance from emergency shelters or safe rooms.
Oldham			Slight decrease in population.	Infill residential and commercial development. Industrial development east and north.		A single safe room could serve the entire community.	Aging housing stock vs stronger tornadoes results in higher probability of catastrophic damage

Table 4.24: Risks to Current and Future Assets by Community – Winter Storm

Community					Winter Storms (Extreme Cold, Blizzard, Freezing Rain, Heavy Snow)		
	Current Assets:	Future Assets:	Expected Changes in Population Patterns	Expected Changes in Land Use and Development	Effects of Climate Change	Impacts	
						Changes in Population Patterns	Change in Land Use and Development
Kingsbury County	See Table 1.1 [Population]; Table 4.28 Critical Structures in Kingsbury County. Description of effects on current assets are included in Tables 5.1 - 5.13 as part of description of mitigation activities to address specified hazards.	Population is expected to remain relatively steady. Lake Preston is expected to see substantial short-term influx of population and need for services during construction of GEVO Plant (east of town). Long-term population will increase but stabilize. For other towns mortality rate and immigration is expected to remain near equal to fertility rate and influx of workforce as in the past decade; No New Capital Infrastructure Planned	Increase in sparsity of population due to aging population; increase in communal living for Hutterite colonies and non-English speakers in employee housing. Expansion of clustered lake development.	Continued dependence upon agricultural land uses, increasing demand for services to clustered lake development and short term / seasonal housing.	Increasing Frequency and Severity of Winter Storms: including freezing rain, extreme cold, Blizzard, and heavy snow.	Burden of maintenance for roads and utilities will fall on individual users as population decreases. Population clusters may be expected to establish road associations or districts to provide increased level of service.	Intensive ag uses and communal living, rural subdivisions will requiring higher provision of service (roads maintenance, utility provision) and continue to require special permitting to ensure proper maintenance (even if private) of services; and/or proper location for easier emergency services.
Arlington			Slight increase in population.	Residential development on the south and west. Industrial development in north and east. Commercial development east/southeast?		Aging population may need help with care/recovery following storms; more severe events increase difficulty of emergency service provision. Increased dependence on Emergency Care resulting for more powerful storms	Exposed/above ground utilities are at risk of damage with increased frequency. New development will account for those risks, but is at mercy of existing/aging/ exposed infrastructure.
Badger			Slight increase in population.	No land use plan		Aging population may need help with care/recovery following storms; more severe events increase difficulty of emergency service provision. Increased dependence on Emergency Care resulting for more powerful storms	No land use plan.
Bancroft			Slight decrease in population.	Residential development on the north and west. Industrial/ commercial development in the south.		Aging population may need help with care/recovery following storms; more severe events increase difficulty of emergency service provision. Increased dependence on Emergency Care resulting for more powerful storms	Exposed/above ground utilities are at risk of damage with increased frequency. New development will account for those risks, but is at mercy of existing/aging/ exposed infrastructure.
De Smet			Population remain steady.	New Residential development on the west and south, infill throughout. Industrial in the east. Infill and southeast for commercial development. Service sector emerging in west central (north of highway.)		Aging population may need help with care/recovery following storms; Increased dependence on Emergency Care resulting for more powerful storms	Exposed/above ground utilities are at risk of damage with increased frequency. New development will account for those risks, but is at mercy of existing/aging/ exposed infrastructure.
Erwin			Slight decrease in population.	No land use plan		Aging population may need help with care/recovery following storms.	No land use plan.
Hetland			Population continue to decrease, at lower rate.	No land use plan		Aging population may need help with care/recovery following storms.	No land use plan.
Iroquois			Slight increase in population.	No land use plan		Aging population may need help with care/recovery following storms.	No land use plan.
Lake Preston			Significant increase in short-term housing in and near town; then stable increased population	Residential development to south; industrial to north; Commercial/ industrial to the east. Short term housing, and services expected to extend along HWY 14, east to GEVO plant during construction.		Aging population may need help with care/recovery following storms; more severe events increase difficulty of emergency service provision. Transient/work force housing will need services/trade and emergency shelter during prolonged storms.	Exposed/above ground utilities are at risk of damage with increased frequency. New development will account for those risks, but is at mercy of existing/aging/ exposed infrastructure. Short term housing may need ability to accommodate mixed (commercial/residential) uses.
Oldham			Slight decrease in population.	Infill residential and commercial development. Industrial development east and north.		Aging population may need help with care/recovery following storms.	Exposed/above ground utilities are at risk of damage with increased frequency.

Table 4.25: Risks to Current and Future Assets by Community – Flooding

Community					Flooding (Heavy Rain, Rapid Snow Melt, Ice Jam)		
	Current Assets:	Future Assets:	Expected Changes in Population Patterns	Expected Changes in Land Use and Development	Effects of Climate Change	Impacts	
						Changes in Population Patterns	Change in Land Use and Development
Kingsbury County	See Table 1.1 [Population]; Table 4.28 Critical Structures in Kingsbury County. Description of effects on current assets are included in Tables 5.1 - 5.13 as part of description of mitigation activities to address specified hazards.	Population is expected to remain relatively steady. Lake Preston is expected to see substantial short-term influx of population and need for services during construction of GEVO Plant (east of town). Long-term population will increase but stabilize. For other towns mortality rate and immigration is expected to remain near equal to fertility rate and influx of workforce as in the past decade; No New Capital Infrastructure Planned	Increase in sparsity of population due to aging population; increase in communal living for Hutterite colonies and non-English speakers in employee housing. Expansion of clustered lake development.	Continued dependence upon agricultural land uses, increasing demand for services to clustered lake development and short term / seasonal housing.	Increasing Frequency and Severity of Winter Storms: including freezing rain, extreme cold, Blizzard, and heavy snow.	Increased incidence of isolation of residences due to water over roads, but less individuals living on those roads, except those areas of single access to large subdivisions or campgrounds near Lake Henry and Thompson.	With existing regulations and policies, development is not anticipated within floodplains unless elevated above Base flood elevation.
Arlington			Slight increase in population.	Residential development on the south and west. Industrial development in north and east. Commercial development east/southeast?		Occupancy of structures within mapped floodplain will become tenant occupied due to increased flood frequency.	With existing regulations and policies, development is not anticipated within floodplains unless elevated above Base flood elevation.
Badger			Slight increase in population.	No land use plan		No mapped floodplain. Drainage is well contained and not expected to substantially affect the small change in population.	No land use plan/no mapped floodplain.
Bancroft			Slight decrease in population.	Residential development on the north and west. Industrial/ commercial development in the south.		No mapped floodplain. Drainage is well contained and not expected to substantially affect the decreased population.	No land use plan/no mapped floodplain.
De Smet			Population remain steady.	New Residential development on the west and south, infill throughout. Industrial in the east. Infill and southeast for commercial development. Service sector emerging in west central (north of highway.)		Occupancy of structures within mapped floodplain will become tenant occupied due to increased flood frequency.	With existing regulations and policies, development is not anticipated within floodplains unless elevated above Base flood elevation.
Erwin			Slight decrease in population.	No land use plan		No mapped floodplain. Drainage is well contained and not expected to substantially affect the small change in population.	No land use plan/no mapped floodplain.
Hetland			Population continue to decrease, at lower rate.	No land use plan		No mapped floodplain. Drainage is well contained and not expected to substantially affect the small change in population.	No land use plan/no mapped floodplain.
Iroquois			Slight increase in population.	No land use plan		Occupancy of structures within mapped floodplain will become tenant occupied due to increased flood frequency.	With existing regulations and policies, development is not anticipated within floodplains unless elevated above Base flood elevation.
Lake Preston			Significant increase in short-term housing in and near town; then stable increased population	Residential development to south; industrial to north; Commercial/ industrial to the east. Short term housing, and services expected to extend along HWY 14, east to GEVO plant during construction.		Occupancy of structures within mapped floodplain will become tenant occupied due to increased flood frequency.	With existing regulations and policies, development is not anticipated within floodplains unless elevated above Base flood elevation.
Oldham			Slight decrease in population.	Infill residential and commercial development. Industrial development east and north.		No mapped floodplain. Drainage is well contained and not expected to substantially affect the small change in population.	No mapped floodplain.

ASSESSING VULNERABILITY: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Requirement 201.6(c)(2)(ii). Local Mitigation Plan Review Tool – B2-c.

Requirement 201.6(c)(3)(ii). Local Mitigation Plan Review Tool – C2/C2-a.

Kingsbury County and the municipalities of De Smet, Iroquois, Lake Preston, and Oldham participate in the National Flood Insurance Program (NFIP). Table 4.15 below shows the entities that participate in the NFIP. Those municipalities adopted maps in 2024 to update their respective floodplain regulations and maps to come into compliance with federal requirements. The County and the communities of De Smet and Iroquois will continue to participate and ensure compliance of the participating local jurisdictions located within the floodplain. Lake Preston and Oldham will also maintain compliance with the NFIP, however all regulations for these municipalities are still based off of “Flood Hazard Boundary Maps” created in 1975 for the communities.

Kingsbury County requires all structures constructed at Lake Thompson to be built three feet above the highest known elevation of Lake Thompson’s outlet despite no information provided by FEMA.

Table 4.26: Communities Participating in the National Flood Program

Community Name	Community ID	Current Map Effective Date
Kingsbury County	460275A	05/22/24
Arlington	Not Participating	
Badger	Not Participating	
Bancroft	Not Participating	
De Smet	460168A	05/22/24(M)
Erwin	Not Participating	
Hetland	Not Participating	
Iroquois	460121A	05/22/24
Lake Preston	460189A	(NSFHA)
Oldham	460129A	(NSFHA)

In order to remain in good standing with FEMA/NFIP, each participating community has implemented and continues to enforce the local floodplain management regulations to regulate and permit development in SFHAs in accordance with the model ordinance provided by FEMA. The Kingsbury County Auditor maintains the flood zone maps and the Zoning Officer utilizes DFIRMS for all planning mechanisms occurring in the unincorporated areas of the county; specifically, development of new structures. Each individual participating community has flood zone maps available at the Finance Office and is available via interactive map at: <https://www.1stdistrict.org/kingsburyts/>.

Further, each individual community has appointed a designated floodplain administrator that requires elevation certificates and issues floodplain development permits for structures constructed within Zone A of the identified flood hazard areas, including those repairs or replacements on structures requiring permits due to substantial damage for substantial

improvement in accordance with adopted floodplain regulations. The DFIRMS are used to determine where the natural drainage occurs and ensures that new development will not interrupt the natural drainage.

For all entities, with the exception of Badger, Erwin, and Hetland, any application for building permit, use permit, subdivision, and public project is reviewed by the floodplain administrator of each respective community (See Table 4.18 for floodplain administrator). During the review for compliance with other terms of the zoning ordinance, the administrator (same as zoning officer in all cases) the floodplain administrator/zoning officer determines whether the proposed development is located within the Floodplain Protection District.

The floodplain administrators use the interactive map at <https://www.1stdistrict.org/kingsburyts/>, which includes the effective flood hazard areas from the most recent Flood Insurance Study to determine whether proposed development is within the Floodplain Protection District. If further assistance is needed in the review, staff consults with First District Association of Local Government Staff, representatives of the applicant, state NFIP coordinator, and/or applicable representatives from FEMA Region 8. If it is determined the proposed development will be within the 100-year floodplain, the applicant is required to contact a surveyor or engineer to complete an elevation certificate. The applicant may choose to add fill to the property, then use the surveyor or engineer to assist in submitting for a Letter of Map Change; or the applicant may choose to use the elevation certificate to complete a floodplain development application. The vast majority of projects completed within the floodplain utilize fill to raise the property above the base flood elevation before construction or are completing projects in which water can freely flow through (such as pillars of a deck.)

Badger, Erwin, and Hetland do not require building permits, so in those cases the finance officer contacts the owner of property whenever a project commences within the identified floodplain to ensure that the same process is followed as is described above for the other towns and county.

All of the jurisdictions that are participating in the NFIP require the lowest floor of structures to be constructed above base flood elevation. Requiring any additional free-board was not palatable to the residents, nor elected officials of any of the jurisdictions within Kingsbury County. However, all communities included substantial damage and substantial improvement provisions in accordance with the template provided to communities in South Dakota by FEMA. In all, neither the emergency management director, nor any other staff members are aware of any cases of damage to 50% of the total value of any residence or structure in Kingsbury County. Historically, when damages do occur to structures staff follows up to find out whether the owner intends to replace or remodel. Typically structures within the floodplain either have minor modifications or are entirely replaced.

ADDRESSING VULNERABILITY: REPETITIVE LOSS PROPERTIES

Requirement 201.6(c)(2)(ii). Local Mitigation Plan Review Tool – B2-c.

Requirement 201.6(c)(3). Local Mitigation Plan Review Tool – C2/C2-a.

Due to various geomorphologic and topographical conditions, periodic flooding affects numerous areas in both incorporated and unincorporated areas of the County. Property adjacent to Lake Thompson, Lake Henry, Lake Whitewood, and Lake Albert are most prone to flooding in Kingsbury County. Residential development occurred adjacent to numerous lakes in Kingsbury County due to the lack of flood hazard boundaries around these lakes prior to 1975. Drastic changes in the size of Lake Thompson have brought to light new flood prone areas that were not

a condensation before that time. The County had little guidance in determining what the lowest flood elevation should be on these lakes.

With very little area identified as Zone A in the rural areas or municipalities in the counties there are very few structures required to carry flood insurance. Since Zone D insurance rates are high, property owners have been reluctant to purchase flood insurance in the rural areas of the county. However, this the number of policies is expected to increase due to the County adopting a new Flood Hazard Boundary maps earlier this year (spring of 2024). The County has a total of six (6) flood insurance policy holders.

Table 4.27: Kingsbury County National Flood Insurance Program Statistics

Community Name	Current NFIP Policies	Number of Claims Paid Since 1978	Total Value of Claims Paid	Flood Insurance Coverage	Repetitive Loss Properties
City of Arlington	2	0	\$0.00	0	0
City of Badger	0	1	\$35,340.00	0	0
Unincorporated areas of Kingsbury County	4	32	\$329,662.00	0	0
Totals	6	33	\$365,002.00	0	0

SOURCE : FEMA Region 8 Flood Insurance Liaison

The PDM Planning Team focused attention particularly on flood related issues. An issue of primary concern is the number of times specific properties and structures on those properties flood. Fortunately for Kingsbury County, there have been zero incidence of repetitive loss claims throughout the county. Repetitive loss properties are those for which two or more losses of at least \$1,000 each have been paid under the National Flood Insurance Program (NFIP) within any ten-year period. A goal of the County is to protect specific areas in the county from flooding. This goal aims to protect properties prone to flood losses but does not discount the possibility that in some cases structures located in the floodplain may need to be removed.

ADDRESSING VULNERABILITY: SEVERE REPETITIVE LOSS PROPERTIES

Requirement 201.6(c)(2)(ii). Local Mitigation Plan Review Tool – B2-c.

Requirement 201.6(c)(3). Local Mitigation Plan Review Tool – C2/C2-a.

The Flood Insurance Reform Act of 2004 identified another category of repetitive loss: severe repetitive loss, which is defined as “a single-family property (consisting of one to four residences) covered by the NFIP flood insurance that has incurred flood-related damage leading to either:

1. Four or more separate claims payments (paid under flood insurance coverage) exceeding \$5,000 per claim, with a cumulative total exceeding \$20,000; or
2. At least two separate claims payments where the cumulative amount exceeds the reported value of the property.

Currently, Kingsbury County does not have any properties classified “severe repetitive loss.”

ASSESSING VULNERABILITY: IDENTIFYING STRUCTURES

Requirement 201.6(c)(2)(ii). Local Mitigation Plan Review Tool – B2-a-c.

One of the primary purposes of this PDM is to identify and equip critical facilities, emergency shelters, and summer storm shelters with the ability to provide essential energy for continued access to sanitation and maintain vital functions during a natural hazard occurrence. In the event of a disaster resulting from severe summer or winter storms, terrorist attacks, or hazardous materials incidents, the County and participating entities will have the ability to prevent further loss of life with generator-powered shelters. The communities throughout the County have many structures that are vital to emergency operations.

Each jurisdiction was responsible for listing critical infrastructure within their communities. Table 4.28 is a list of critical facilities that would cause the greatest distress in the county if destruction occurred. The information provided in the table below was compiled via survey of the participating communities.

Table 4.28: Critical Infrastructure in Kingsbury County

Jurisdiction/ Entity	Location	Address	Sector	Sub sector	Name	Owner Type
Matthews Township	Kingsbury County	Intersection 215 th St and SD HWY 25	Non-Emergency Response Facility	Building	Matthews Township Hall	Public
Kingbrook Electric	Kingsbury County	511 W HWY 14	Non-Emergency Response Facility	Electrical Services	Main Office	Private
Kingbrook Water	Kingsbury County (Rural De Smet)	20392 HWY 25	Non-Emergency Response Facilities	Water Services	Water Treatment Plant	Public
Kingbrook Water	Kingsbury County (Rural Lake Preston)	21147 441 st St	Non-Emergency Response Facilities	Water Services – Water Supply	Lake Preston Reservoir	Public
Sioux Valley Energy	Kingsbury County	Denver, Spring Lake & Whitewood Townships	Energy/Electricity	Power lines	Sioux Valley Energy	Private
Sioux Valley Energy	Kingsbury County	Spring Lake Township	Energy/Electricity	Substation	Sioux Valley Energy	Private
	Kingsbury County	21176 Flood Club Rd	Population to Protect	Campground	Lake Thompson Recreation Area	
	Kingsbury County	1730 Twin Lakes Rd	Population to Protect	Campground	Martens Campground	Private
	Kingsbury County	2012 McMasters Ridge Rd	Population to Protect	Campground	Lake Henry Campground	Private
	Kingsbury County	2603 North Shore Dr	Population to Protect	Campground	North Shore Lodging and Campground	Private
Arlington	City of Arlington	202 W Elm Street	Emergency Services	Fire Department	Arlington Fire Department	Public
Arlington	City of Arlington	202 W Elm Street	Non-Emergency Response Facility	Building	Municipal Building	Public

Jurisdiction/ Entity	Location	Address	Sector	Sub sector	Name	Owner Type
Arlington	City of Arlington	202 N 3rd Street	Government Facility	Emergency Fuel Facility	City Shop	Public
Arlington	City of Arlington	203 S Main Street	Non-Emergency Response Facility	Water Supply – Storage Tanks	Arlington Water Tower	Public
Arlington	City of Arlington	45449 208th St	Non-Emergency Response Facility	Sanitary Sewer	Wastewater Lagoon	Public
Arlington	City of Arlington	45449 208th St	Non-Emergency Response Facility	Sanitary Sewer	Lift Station	Public
Arlington	City of Arlington	W. Elm Street	Population to Protect	Park	Maxwell Park	Public
Arlington	City of Arlington	E. Elm Street	Population to Protect	Park	Baseball Park	Public
Arlington	City of Arlington	E. Ash St	Population to Protect	Park	Pool Park	Public
Arlington	City of Arlington	311 S. 3rd St.	Population to Protect	School	Arlington Elementary and Junior High School	Public
Arlington	City of Arlington	306 S. Main St.	Population to Protect	School	Arlington High School	Public
Arlington	Brookings County/ City of Arlington	20624 454th Ave	Transportation	Airport	Arlington Airport	Public
Arlington	City of Arlington	310-317 Washington St; 102, 104, 202, 206, 208 E Ash St; 109 & 111 E Birch St; and 110 Parkview Dr	Population to Protect	Elderly Housing	Park View Apartments	Private
Arlington	City of Arlington	104 W. Birch St	Population to Protect	Clinic	Arlington Medical Center	Private
Arlington	City of Arlington	N 4th St & W Maple St	Utility	Electrical Supply	Substation	Public
Arlington	City of Arlington	306 Main St N	Population to Protect	Manufactured Home Park	Mobile Homes	Private
Arlington	City of Arlington	202 W Elm Street	Emergency Services	Emergency Electrical Supply	Back-up Generator	Public
Arlington	City of Arlington	202 W Elm Street	Emergency Services	Ambulance	Ambulance Building	Public
Arlington	City of Arlington	203 S Main Street	Emergency Services	Emergency Services	Storm Siren	Public
Arlington	City of Arlington	N 4th St & W Maple St	Emergency Services	Emergency Services	Storm Siren	Public
Arlington	City of Arlington	408 S 3rd St	Population to Protect	Daycare	Daycare	Private
Arlington	City of Arlington	109 S Willow St.	Population to Protect	Daycare	Daycare	Private

Jurisdiction/ Entity	Location	Address	Sector	Sub sector	Name	Owner Type
Arlington	City of Arlington	410 S 4th St	Population to Protect	Daycare	Daycare	Private
Arlington	City of Arlington	215 S Main St	Population to Protect	Daycare	Arlington Daycare Facility	Private
Arlington	City of Arlington	202 3rd St N	Population to Protect	Park	City Park	Public
Badger	Town of Badger	322 E. Main	Emergency Services	Fire Department	Badger Fire Department	Public
Badger	Town of Badger	322 E. Main	Emergency Services	Emergency Services	Storm Siren	Public
Badger	Town of Badger	316 E. Main	Non-Emergency Response Facility	Building	City Hall	Public
Badger	Town of Badger	306 E. Main	Non-Emergency Response Facility	Building	Legion (meeting) Hall	Public
Bancroft	City of Bancroft				None	
De Smet	City of De Smet	106 Calumet Ave.	Non-Emergency Response Facility	Building	City Hall	Public
De Smet	City of De Smet	102 SD HWY 25 South	Emergency Services	Fire Department	De Smet Fire Department	Public
De Smet	City of De Smet	601 Front St. NW	Government Facility	Emergency Fuel Facility	City Shop	Public
De Smet	City of De Smet	609 Front St. NW	Government Facility	Emergency Fuel Facility	City Shop	Public
De Smet	City of De Smet	801 3 rd St. SW	Population to Protect	Clinic	De Smet Community Health Center	Private
De Smet	City of De Smet	801 3 rd St. SW	Population to Protect	Hospital	De Smet Memorial Hospital	Private
De Smet	City of De Smet	405 3 rd St SW	Emergency Services	De Smet School District	Armory	Public
De Smet	City of De Smet	405 3 rd St SW	Population to Protect	School	De Smet High School	Public
De Smet	City of De Smet	405 Ingalls Ave SW	Population to Protect	School	De Smet Elementary School	Public
De Smet	City of De Smet	N. Intersection of US HWY 14 and Prairie Ave.	Non-Emergency Response Facility	Water Supply – Well	Well House #6	Public
De Smet	City of De Smet	SD HWY 25 and Garland Ave.	Non-Emergency Response Facility	Water Supply – Well	Well House #7	Public
De Smet	City of De Smet	SD HWY 25 and 432 nd Ave	Non-Emergency Response Facility	Water Supply – Well	Well House #8	Public
De Smet	City of De Smet	3 rd St and Prairie Ave.	Non-Emergency Response Facility	Water Supply – Storage Tanks	De Smet Water Tower	Public
De Smet	City of De Smet	4 th Ave SE and Lyle Ave	Non-Emergency Response Facility	Sanitary Sewer	Main Lift Station	Public

Jurisdiction/ Entity	Location	Address	Sector	Sub sector	Name	Owner Type
De Smet	City of De Smet	Calumet Ave. S	Non-Emergency Response Facility	Sanitary Sewer	South Lift Station	Public
De Smet	City of De Smet	Front St NE	Non-Emergency Response Facility	Sanitary Sewer	Prairie Park Lift Station	Public
De Smet	City of De Smet	20351 SD HWY 25	Transportation	Airport	Wilder Airport	Public
De Smet	City of De Smet	411 Calumet Ave. NW	Population to Protect	Elderly Housing	Good Samaritan Center	Public
De Smet	City of De Smet	513 Loftus Ave. SW	Population to Protect	Park	Swimming Pool	Public
De Smet	City of De Smet	20351 SD HWY 25	Transportation	Airport	Wilder Airport	Public
De Smet	Kingsbury County	101 2 nd St SE	Non-Emergency Response Facility	Building	Courthouse	Public
De Smet	Kingsbury County	204 2 nd St SE	Emergency Services	Building	Kingsbury County Sheriff's Office	Public
De Smet	City of De Smet	Wilder Lane	Population to Protect	Park	Washington Park	Public
De Smet	City of De Smet	Wilder Lane	Emergency Services	Emergency Shelter	Washington Park-Concession Stand	Public
De Smet	City of De Smet	513 Loftus Ave. SW	Emergency Services	Emergency Shelter	Swimming Pool – Bath House	Public
De Smet	City of De Smet	103 Olivet Ave. SE	Emergency Services	Emergency Shelter	4-H Grounds	Public
De Smet	City of De Smet	507 Front Street	Emergency Services	Emergency Shelter	Rose Vincent Memorial Park - Restrooms	Public
De Smet	Kingsbury County	43189 HWY 14	Non-Emergency Response Facility	Emergency Fuel Supply	Kingsbury County Highway Shop	Public
De Smet	City of De Smet	Wilder Lane	Emergency Services	Emergency Shelter	Washington Park	Public
De Smet	City of De Smet	310 Olivet Ave SE	Population to Protect	Day Care	Feltman Day Care	Private
De Smet	City of De Smet	Sherwood Ave and US HWY 14	Population to Protect	Apartments	Spire Apartments	Private
De Smet	City of De Smet	US HWY 14 (Approx at Olivet Ave)	Population to Protect	Campground	SPOT	Private
De Smet	City of De Smet	Third St & Harvey Dunn Ave	Population to Protect	Park	Washington Park & Campground	Public
De Smet	City of De Smet	Joliet Ave and 3 rd St	Population to Protect	Apartments	Bee Hive Apartments	Private
De Smet	City of De Smet	Joliet Ave and 1 st St	Population to Protect	Low Income Housing	White Willow Estates Apartments	Private
De Smet	City of De Smet	Sherwood Ave and 1 st St	Population to Protect	Apartments	Michael Apartments	Private

Jurisdiction/ Entity	Location	Address	Sector	Sub sector	Name	Owner Type
De Smet	City of De Smet	408 Calumet Ave NE	Population to Protect	Apartments	Prairie Park	Private
De Smet	City of De Smet	218 Calumet Ave SW	Emergency Services	Emergency Services	Storm Siren	Public
De Smet	City of De Smet	3 rd Street and Industrial Avenue	Emergency Services	Emergency Services	Storm Siren	Public
De Smet	City of De Smet	Washington Park and Wilder Lane	Emergency Services	Emergency Services	Storm Siren	Public
De Smet	City of De Smet	309 Front Street	Emergency Services	Emergency Services	Storm Siren	Public
De Smet	City of De Smet	206 2 nd St SE	Emergency Services	Storm Shelter	Emergency Management Basement	Public
De Smet	City of De Smet	206 2 nd St SE	Emergency Services	Storm Shelter	St. Thomas Aquinas Catholic Church Basement	Private
De Smet	City of De Smet	206 2 nd St SE	Emergency Services	Storm Shelter	Avera De Smet Memorial Hospital Basement	Private
De Smet	City of De Smet	516-522 Calumet Ave	Population to Protect	Calumet Townhomes	Elderly Living	Private
De Smet	City of De Smet	705 Wilder Lane	Population to Protect	Building	De Smet Event & Wellness Center	Private
De Smet	City of De Smet	401 Ingalls Ave SW	Population to Protect	Building	Village Assisted Living	Private
De Smet	City of De Smet	310 Olivet Ave	Population to Protect	Building	Ann Feltman Daycare	Private
De Smet	City of De Smet	609 1 st St NW	Population to Protect	Building	Ashley Harty Daycare	Private
De Smet	City of De Smet	227 Calumet Ave	Population to Protect	Building	Doodlebugs & Dinosweets Academy	Private
De Smet	City of De Smet	43529 206 th St	Population to Protect	Building	Janet Flood Daycare	Private
De Smet	City of De Smet	414 Chase St NW	Population to Protect	Building	Sommer Larson Daycare	Private
Erwin	Town of Erwin	100 Main St	Emergency Response Facility	Building	Fire Hall	Public
Erwin	Town of Erwin	100 Main St	Emergency Services	Warning System	Storm Siren	Public
Erwin	Town of Erwin	Intersection of Owens Ave & Main St	Population to Protect	Park	RV Park	Public
Erwin	Town of Erwin	Corner of Adams Ave & Main St	Population to Protect	Park	City Park	Public
Erwin	Town of Erwin	100 Main St	Non-Emergency Response Facility	Sanitary Services	Lift Station	Public

Jurisdiction/ Entity	Location	Address	Sector	Sub sector	Name	Owner Type
Hetland	Town of Hetland	North St and Main St	Non-Emergency Response Facility	Building	Town Hall	Public
Hetland	Town of Hetland	Main St/S. of Railroad	Emergency Services	Emergency Services	Storm Siren	Public
Hetland	Town of Hetland	Main St/N. of Railroad	Communications	Telephone, Cable, Internet	Cell Booster	Public
Hetland	Town of Hetland	449 th Ave (south of town)	Transportation	Evacuation Route	Bridge	Public
Hetland	Town of Hetland	North St & Main St	Non-Emergency Response Facility	Building (Storm Shelter)	American Legion	Public
Hetland	Town of Hetland	North St & Main St	Non-Emergency Response Facility	Population to Protect	Community Museum	Public
Iroquois	City of Iroquois	111 Washita Street	Emergency Services	Storm Siren		Public
Iroquois	City of Iroquois	120 Ottawa Street	Emergency Services	Fire Department	Iroquois Fire Department/ Rescue	Public
Iroquois	City of Iroquois	330 Ottawa Street	Population to Protect	Campground	H & D Rental	Private
Iroquois	City of Iroquois	710 Quapaw Street	Non-Emergency Response Facility	Sanitary Sewer Services	Lift Station	Public
Iroquois	City of Iroquois	111 Quapaw Street	Non-Emergency Response Facility	Building	Kingsbury County Highway Shop	Public
Iroquois	City of Iroquois	120 Ottawa Street	Non-Emergency Response Facility	Building	Community Center	Public
Iroquois	City of Iroquois	320 Washita Street	Non-Emergency Response Facility	City Hall	Iroquois City Hall	Public
Iroquois	City of Iroquois	320 Washita Street	Non-Emergency Response Facility	Water Services	Water Distribution	Public
Iroquois	City of Iroquois	200 Washita Street	Communications	Telephone, Cable, Internet Service	Century Link	Private
Iroquois	City of Iroquois	111 Washita Street	Population to Protect	School	Iroquois Grade School and High School	Public
Iroquois	City of Iroquois	150 Washita St E	Emergency Services	Emergency Shelter	Trinity Church	Private
Iroquois	City of Iroquois	101 E. Sullivan St	Population to Protect	Building	Prairie Haven Mennonite Church	Private
Iroquois	City of Iroquois	Vinita St.	Population to Protect	Park	City Park	Public
Iroquois	City of Iroquois	110 E Neosho St	Population to Protect	Fuel Station/Food	The Chop Stop	Private
Iroquois	City of Iroquois	201 Quapaw St	Population to Protect	Apartments	Wienbar Apartments	Public
Iroquois	City of Iroquois	203 Quapaw St	Population to Protect	Apartments	Wienbar Apartments	Public

Jurisdiction/ Entity	Location	Address	Sector	Sub sector	Name	Owner Type
Iroquois	City of Iroquois	200 S. Creek St	Population to Protect	Apartments	Seronono Apartments	Private
Lake Preston	City of Lake Preston	Minden Ave & 5 th St NW	Emergency Services	Emergency Services	Storm Siren	Public
Lake Preston	City of Lake Preston	Fremont Ave N & US Hwy 14	Emergency Services	Emergency Services	Storm Siren	Public
Lake Preston	City of Lake Preston	Walters Ave S & 2 nd St SE	Emergency Services	Emergency Services	Storm Siren	Public
Lake Preston	City of Lake Preston	111 3 rd St NE	Emergency Services	Emergency Services	Storm Siren	Public
Lake Preston	City of Lake Preston	103 Walters Ave N	Emergency Services	Building	Ambulance	Public
Lake Preston	Rural Kingsbury	20735 Orange Bridge Road	Non-Emergency Response Facility	Sanitary Sewer	Wastewater Lagoon	Public
Lake Preston	City of Lake Preston	120 Park Avenue S	Non-Emergency Response Facility	Water Supply – Water Lines	Kingbrook water	Public
Lake Preston	City of Lake Preston	111 3rd Street NE	Non-Emergency Response Facility	Water Supply – Storage Tanks	Lake Preston Water Tower	Public
Lake Preston	City of Lake Preston	511 Park Avenue N	Non-Emergency Response Facility	Sanitary Sewer	Lift Station	Public
Lake Preston	City of Lake Preston	106 Airport Dr	Non-Emergency Response Facility	Sanitary Sewer	Lift Station	Public
Lake Preston	City of Lake Preston	402 Main Avenue S	Non-Emergency Response Facility	Sanitary Sewer	Lift Station	Public
Lake Preston	City of Lake Preston	100 Park Avenue S	Population to Protect	Park	City Park/pool	Public
Lake Preston	City of Lake Preston	610 Park Avenue S	Population to Protect	Assisted Living	Silver Plains	Private
Lake Preston	City of Lake Preston	Park Ave S. & 2 nd St SE	Population to Protect	Recreation	Campground	Public
Lake Preston	City of Lake Preston	Walters Ave S. & 2 nd St SE	Communications	Tower	Cellular Tower	Public
Lake Preston	City of Lake Preston	300 1st St. NE	Population to Protect	School	Lake Preston Elementary and High School	Public
Lake Preston	City of Lake Preston	322 Main Ave N	Population to Protect	Clinic	Horizon Health Care Inc	Private
Lake Preston	City of Lake Preston	4th Street NW	Utility	Electrical Supply	Ottertail Power - Substation	Private
Lake Preston	Rural Kingsbury	729 Main Avenue S	Utility	Electrical Supply	Ottertail Power - Substation	Private
Lake Preston	City of Lake Preston	315 1 st St SE	Utility	Telecommunications	Valley FiberCom	Private
Oldham	Town of Oldham	108 S Lillie Ave	Non-Emergency Response Facilities	City Hall	Oldham City Hall	Public

Jurisdiction/ Entity	Location	Address	Sector	Sub sector	Name	Owner Type
Oldham	Town of Oldham	134 N Railroad Avenue	Emergency Services	Fire Department	Oldham Fire Department	Public
Oldham	Town of Oldham	108 S Lillie Ave	Non-Emergency Response Facilities	Emergency Fuel Supplies	City Maintenance Shop	Public
Oldham	Town of Oldham	108 S Lillie Ave	Non-Emergency Response Facilities	Water Services – Water Tanks	Oldham Water tower	Public
Oldham	Town of Oldham	Epton St	Population to Protect	Park	City Park	Public
Oldham	Town of Oldham	134 N. Lillie Ave	Emergency Services	Emergency Services	Storm Siren	Public
Oldham	Town of Oldham	Arthur St & Epton St	Population to Protect	Building	School/ Gymnasium	Public
Oldham	Rural Kingsbury	21730 445th Ave	Non-Emergency Response Facilities	Sanitary Sewer Services	Wastewater lagoons	Public
Oldham	Rural Kingsbury	21736 445th Ave	Non-Emergency Response Facilities	Sanitary Sewer Services	Lift Station	Public
Oldham	Town of Oldham	Epton Avenue/Arthur Street	Population to Protect	Emergency Shelter	Lutheran Church	Private

ASSESSING VULNERABILITY: COMMUNITY CAPABILITIES

Requirement 201.6(c)(3) Local Mitigation Plan Review Tool – C1(a-b).

Requirement 201.6(c)(3). Local Mitigation Plan Review Tool – C2/C2-a.

Each community possesses a unique set of capabilities, including authorities, policies, programs, staff, funding, and other resources for accomplishing effective mitigation. One crucial step in assessing a community's vulnerability is to objectively review the capabilities to implement mitigation strategies and identify any limiting factors.

To achieve this, each community examined its existing administrative documents, procedures, and policies. This review enabled the communities and the planning team to evaluate how current capabilities either alleviate or exacerbate vulnerability to disaster impacts. Table 4.18 identifies the administrative and technical competences of each community, including the individuals responsible for those roles. Table 4.19 encapsulates the efficacy of the specified planning mechanisms regarding disaster mitigation and identifies potential deficiencies in the plans.

Table 4.29: Administrative and Technical Capabilities

Administrative/ Staff Composition	Local Jurisdiction									
	<i>Arlington</i>	<i>Badger</i>	<i>Bancroft</i>	<i>De Smet</i>	<i>Erwin</i>	<i>Hetland</i>	<i>Iroquois</i>	<i>Lake Preston</i>	<i>Oldham</i>	<i>Kingsbury County</i>
Board of Adjustment	Elected Officials	NA	Elected Officials	Elected Officials	NA	NA	Elected Officials	Elected Officials	Elected Officials	Elected Officials
Building Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Community Planner	NA	NA	NA	Appointed	NA	NA	NA	NA	NA	NA
Elected Officials	Aldermanic	Trustee	Trustee	Aldermanic	Trustee	Trustee	Aldermanic	Aldermanic	Trustee	Commission
Emergency Manager	NA	NA	NA	NA	NA	NA	NA	NA	NA	Appointed
Engineer/Highway Superintendent	NA	NA	NA	Appointed	NA	NA	NA	NA	NA	Appointed
Floodplain Administrator	NA	NA	NA	Finance Officer	NA	NA	Finance Officer	Finance Officer	Finance Officer	Auditor
GIS Coordinator	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Planning Commission	Elected Officials	NA	Elected Officials	Elected Officials	NA	NA	Elected Officials	Elected Officials	Elected Officials	Elected Officials
Zoning Officer	Finance Officer	NA	Finance Officer	Finance Officer	NA	NA	Finance Officer	Finance Officer	Finance Officer	Appointed
Grant Writing Capability	Yes*	Yes*	Yes*	Yes*	Yes*	Yes*	Yes*	Yes*	Yes*	Yes*
Non-profit organizations focused on environmental protection.	Yes**	Yes**	Yes**	Yes**	Yes**	Yes**	Yes**	Yes**	Yes**	Yes**
Public-Private partnership initiatives addressing disaster-related issues.	No	No	No	No	No	No	No	No	No	No

NA: This Jurisdiction has nobody serving in this role.

* First District Association of Local Governments provides these services without cost.

** East Dakota Watershed Development District.

Table 4.30: Capabilities of Growth Guidance Instruments

Capabilities of Community Planning Mechanisms	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Kingsbury County
<i>Does the Future Land-Use Map identify natural hazard areas?</i>	Y	NA	Y	Y	NA	NA	NA	Y	N	Y
<i>Do the land-use policies discourage development or redevelopment within natural hazard areas?</i>	Y	NA	Y	Y	NA	NA	NA	Y	Y	Y
<i>Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?</i>	Y	NA	Y	Y	NA	NA	NA	Y	Y	Y
<i>Does the transportation plan limit access to hazard areas?</i>	N	NA	N	N	NA	NA	NA	N	N	N
<i>Is transportation policy used to guide growth in safe locations?</i>	Y	NA	Y	Y	NA	NA	NA	Y	Y	Y
<i>Are movement systems designed to function under disaster conditions (e.g., evacuation)?</i>	Y	NA	Y	Y	NA	NA	NA	Y	Y	Y
<i>Are environmental systems that protect development from hazards identified and mapped?</i>	N	NA	N	N	NA	NA	NA	N	N	N
<i>Do environmental policies provide incentives to development that is located outside protective ecosystems?</i>	N	NA	N	N	NA	NA	NA	N	N	N
<i>Do environmental policies maintain and restore protective ecosystems?</i>	N	NA	N	N	NA	NA	NA	N	N	N
<i>Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?</i>	N	NA	N	N	NA	NA	NA	N	N	N

Capabilities of Community Planning Mechanisms	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Badger County
<i>Is safety explicitly included in the plan's growth and development policies?</i>	Y	NA	Y	Y	NA	NA	NA	Y	Y	Y
<i>Does the monitoring and implementation section of the plan cover safe growth objectives?</i>	N	NA	N	N	NA	NA	NA	N	N	N
<i>Does the Zoning Ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?</i>	Y	NA	Y	Y	NA	NA	NA	Y	Y	Y
<i>Does the zoning ordinance contain natural hazard overlay zones that set conditions for land use within such zones?</i>	Y	NA	Y	Y	NA	NA	NA	Y	Y	Y
<i>Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?</i>	Y	NA	Y	Y	NA	NA	NA	Y	Y	Y
<i>Does the zoning ordinance restrict development within, or filling of, wetlands, floodways, and floodplains?</i>	Y	NA	Y	Y	NA	NA	NA	Y	Y	Y
<i>Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?</i>	Y	NA	Y	Y	NA	NA	NA	Y	Y	Y
<i>Do the subdivision regulations provide for conservation subdivision or cluster subdivisions in order to conserve environmental resource?</i>	N	NA	N	N	NA	NA	NA	N	N	N
<i>Do the subdivision regulations allow density transfers where Hazard areas exist?</i>	N	NA	N	N	NA	NA	NA	N	N	N

NA: This jurisdiction does not have the specified document.

ASSESSING VULNERABILITY: ESTIMATING POTENTIAL LOSSES

Requirement 201.6(b)(3). Local Mitigation Plan Review Tool – A4/A4-a.

Requirement 201.6(c)(2)(ii). Local Mitigation Plan Review Tool – B2-a-c.

Requirement 201.6(c)(3). Local Mitigation Plan Review Tool – C2.

Requirement 201.6(d)(3). Local Mitigation Plan Review Tool – E1-a.

The data presented in the following tables was collected from the Kingsbury County Director of Equalization. Any inconsistencies or gaps in information are due to the absence of existing mechanisms, plans, and technical documents available.

The assessor's office provided the assessed valuation of all structures on every property within the incorporated and rural areas of the county. The data provides the total value for structures a certain use on property. It was not possible to discern the number of structures per lot, so the actual number of structures is based on the number of parcels with the specified use type. For the purposes of this plan only Residential, Commercial/Industrial, Agricultural, and Manufactured Homes were included. More specifically, all agricultural structures were included; only primary residential structures (houses, apartments, etc.) and not including sheds, lean-tos, and garages were included. All commercial or industrial structures were included, whether considered primary or accessory structures. Public or quasi-publicly owned structures and other structures for which the Department of Equalization did not have an assessed value were not included in the calculation.

Structures throughout the incorporated and unincorporated portions of the county were reviewed based upon updated and effective flood hazard areas (Zone "A") boundaries adopted by the applicable jurisdictions in 2024. If it was determined any structures on the applicable lot were located within the flood hazard area, the total assessed value for structures on said lot was included in the value of structures in the hazard area. The information does not account for letters of map amendment or letters of map revision which may have been approved.

All properties with structures, whether owner occupied or not were included in the valuations provided in Tables 4.31 through 4.41. The reports provided by the assessor's office did not include the number of people in each structure; thus, many of the tables are missing this information, so the degree to which the number of people of affected may vary depending upon the occupancy status (owner occupied / leased / seasonal). The following tables also do not address information regarding religious, governmental, or utility structures.

**Table 4.31: Kingsbury County (Rural Area)
Estimated Potential Dollar Losses to Vulnerable Structures**

Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in County	# in HA	% in HA	\$ in County	\$ in HA	% in HA	# in Rural Areas	# in HA	% in HA
Residential	667	78	11.69	\$50,086,298	\$10,247,547	20.46	2,012	12	0.61
Commercial/Industrial	94	14	14.89	\$27,167,807	\$261,846	0.96			
Agricultural	854	14	1.64	\$52,784,115	\$701,186	1.33			
Mobile Homes	53	13	24.53	\$1,889,701	\$710,152	37.58		73	
Total	1668	119	7.13	\$131,927,921	\$11,920,731	9.04	2,012	85	4.25

Table 4.32: Arlington Estimated Potential Dollar Losses to Vulnerable Structures

Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in City	# in HA	% in HA	\$ in City	\$ in HA	% in HA	# in City	# in HA	% in HA
Residential	163	0	0.00	\$9,075,059	\$0	0.00	915	0	0.00
Commercial/Industrial	70	0	0.00	\$12,998,917	\$0	0.00			
Agricultural	6	0	0.00	\$69,132	\$0	0.00			
Manufactured Home	4	0	0.00	\$105,289	\$0	0.00		0	
Total	243	0	0.00	\$22,248,397	\$0	0.00	915	0	0.00

Table 4.33: Badger Estimated Potential Dollar Losses to Vulnerable Structures

Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in City	# in HA	% in HA	\$ in City	\$ in HA	% in HA	# in City	# in HA	% in HA
Residential	32	0	0.00	\$948,160	\$0		129	0	0.00
Agricultural	14	0	0.00	\$3,534,018	\$0				
Commercial/Industrial	2	0	0.00	\$156,346	\$0				
Manufactured Home	1	0	0.00	\$32,034	\$0			0	
Total	49	0	3.00	\$4,670,558	\$0		129	0	0.00

Table 4.34: Bancroft Estimated Potential Dollar Losses to Vulnerable Structures

Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in City	# in HA	% in HA	\$ in City	\$ in HA	% in HA	# in City	# in HA	% in HA
Residential	10	0	0.00	\$203,594	0.00	\$0.00	13	0	0.00
Agricultural	2	0	0.00	\$24,598	0.00	\$0.00			
Commercial/Industrial	0	0	0.00	\$0	0.00	0			
Manufactured Home	0	0	0.00	\$0	0.00	0		0	
Total	12	0	0.00	\$228,192	\$0	0.00	13	0	0.00

Table 4.35: De Smet Estimated Potential Dollar Losses to Vulnerable Structures

Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in City	# in HA	% in HA	\$ in City	\$ in HA	% in HA	# in City	# in HA	% in HA
Residential	195	0	0.00	\$9,333,524	\$0	0.00	1,056	0	0.00
Agricultural	89	8	8.99	\$20,399,775	\$901,897	4.42			
Commercial/Industrial	4	0	0.00	\$16,558	\$0	0.00			
Manufactured Home	2	0	0.00	\$41,412	\$0	0.00		0	
Total	290	8	2.76	\$29,791,269	\$901,897	3.03	1,056	0	0.00

Table 4.36: Erwin Estimated Potential Dollar Losses to Vulnerable Structures

Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in City	# in HA	% in HA	\$ in City	\$ in HA	% in HA	# in City	# in HA	% in HA
Residential	26	0	0.00	\$323,087	\$0	0.00	40	0	0.00
Agricultural	3	0	0.00	\$40,518	\$0	0.00			
Commercial/Industrial	1	0	0.00	\$2,277	\$0	0.00			
Manufactured Home	0	0	0.00	\$0	\$0	0.00		0	
Total	30	0	0.00	\$365,882	\$0	0.00	40	0	0.00

Table 4.37: Hetland Estimated Potential Dollar Losses to Vulnerable Structures

Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in City	# in HA	% in HA	\$ in City	\$ in HA	% in HA	# in City	# in HA	% in HA
Residential	19	0	0.00	\$194,567	0.00	0.00	20	0	0.00
Agricultural	8	0	0.00	\$114,660	0.00	0.00			
Commercial/Industrial	0	0	0.00	\$0	0.00	0			
Manufactured Home	1	0	0.00	\$30,492	0.00	0.00		0	
Total	28	0	0.00	\$339,719	\$0	0.00	20	0	0.00

Table 4.38: Iroquois Estimated Potential Dollar Losses to Vulnerable Structures

Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in City	# in HA	% in HA	\$ in City	\$ in HA	% in HA	# in City	# in HA	% in HA
Residential	49	19	38.78	\$1,707,009	\$476,411	27.91	292	7	2.33
Agricultural	23	8	34.78	\$2,660,492	\$1,000,322	37.60			
Commercial/Industrial	1	0	0.00	\$26,040	\$0	0.00			
Manufactured Home	2	1	50.00	\$115,547	\$29,232	25.30		129	
Total	75	28	37.33	\$4,509,088	\$1,505,965	33.40	292	136	46.50

Table 4.39: Lake Preston Estimated Potential Dollar Losses to Vulnerable Structures

Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in City	# in HA	% in HA	\$ in City	\$ in HA	% in HA	# in City	# in HA	% in HA
Residential	139	0	0.00	\$4,841,093	\$0	0.00	589	0	0.00
Agricultural	62	0	0.00	\$11,163,989	\$0	0.00			
Commercial/Industrial	3	0	0.00	\$100,828	\$0	0.00			
Manufactured Home	3	0	0.00	\$56,141	\$0	0.00		0	
Total	207	0	0.00	\$16,162,051	\$0	0.00	589	0	0.00

Table 4.40: Oldham Estimated Potential Dollar Losses to Vulnerable Structures

Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in City	# in HA	% in HA	\$ in City	\$ in HA	% in HA	# in City	# in HA	% in HA
Residential	48	0	0.00	\$1,739,938	\$0	0.00	121	0	0.00
Agricultural	18	0	0.00	\$567,905	\$0	0.00			
Commercial/Industrial	2	0	0.00	\$1,120	\$0	0.00			
Manufactured Home	0	0	0.00	\$0	\$0	0.00		0	
Total	68	0	0.00	\$2,308,963	\$0	0.00	121	0	0.00

**Table 4.41: Kingsbury County (Total)
Estimated Potential Dollar Losses to Vulnerable Structures**

Type of Structure	Number of Structures			Value of Structures			Number of People		
	# in City	# in HA	% in HA	\$ in City	\$ in HA	% in HA	# in City	# in HA	% in HA
Residential	1348	97	7.20	\$78,452,329	\$10,723,958	13.67	5,187	19	0.37
Agricultural	383	11	2.87	\$78,672,679	\$2,164,065	2.75			
Commercial/Industrial	873	14	1.60	\$53,156,416	\$701,186	1.32			
Manufactured Home	66	14	21.21	\$2,270,616	\$739,384	32.56		202	
Total	2670	136	5.09	\$212,552,040	\$14,328,593	6.74	5,187	221	4.26

Notes:

in HA: Number of structures in hazard area identifies the number of properties of a given use type, with structures located within the floodplain. Aerial photography, Comprehensive Land Use Plans, and DFIRM boundaries provided by FEMA were used for identification. Some structures included may have received LOMA's, removing them from the flood plain, since the effective date of the current DFIRM.

\$ in HA: Value of structures in hazard area was estimated by extrapolating assessed valuations of structures on parcels which had a primary structure within the hazard area. This data was provided by the Kingsbury County Department of Equalization and is classified by land use.

in [Jurisdiction]: The number of people was based on the 2020 Census.

in Hazard Area: The number of people in a hazard area was determined by multiplying the average household size of a given community as identified by the number of structures in the identified hazard area and multiplying that number by the rate of occupancy for the community (All statistics from the US Census 2020). (Occupancy status of the structure was not available, so therefore not considered.)

ASSESSING VULNERABILITY: ANALYZING DEVELOPMENT TRENDS

Requirement 201.6(b)(3). Local Mitigation Plan Review Tool – A4.
Requirement 201.6(c)(2)(ii). Local Mitigation Plan Review Tool – B2-a-c.
Requirement 201.6(c)(3). Local Mitigation Plan Review Tool – C2.
Requirement 201.6(d)(3). Local Mitigation Plan Review Tool – D1.
Requirement 201.6(d)(3). Local Mitigation Plan Review Tool – D2.
Requirement 201.6(d)(3). Local Mitigation Plan Review Tool – E1-a.
Requirement 201.6(d)(3). Local Mitigation Plan Review Tool – E2-c.

The land use and development trends for each jurisdiction were identified by the representatives from each of the jurisdictions. Four out of the nine communities (Arlington, Bancroft, Iroquois, and Lake Preston) within Kingsbury County are experiencing growth. Of those communities, only Arlington and Lake Preston have comprehensive land use plans which identify future areas for development. The other three communities issued building permits for several new homes, including mobile homes, and more than one commercial structures annually over the last five years. The County issued 70 building permits for new homes, mobile homes, and other residential structures over the last five years. Some building permits were issued for new commercial structures over the last five years, mainly related to agricultural purposes. Based on this information, there has been some growth, but it is generally minimal. No major plan revisions were made from 2019.

In addition to Kingsbury County, the municipalities of Arlington, Bancroft, De Smet, and Lake Preston, and Oldham all have adopted Comprehensive Land Use Plans with Future Land Use

Maps. De Smet and Arlington each completed comprehensive updates to their respective zoning ordinances. Kingsbury County expects to start a comprehensive review in 2025. De Smet and Arlington are in the process of updating their land use plans

The Comprehensive Land Use Plans for each community were reviewed by each community utilizing one. Specifically, available undeveloped areas projected for residential, commercial, and industrial uses were reviewed. Based upon their own projected density of development for each land use, the communities then identified the potential number of lots which could be created within flood hazard areas given current land use regulations and controls. Communities in Kingsbury County have adopted the most recently prepared National Flood Insurance Program Flood Hazard and approved recommended ordinances for the proper regulation of property within the floodplain. Those maps have changed since the last update to the PDM Plan. Tables 4.41 – 4.66 identify the projected vulnerability for communities which have adopted land use plans. Future Land Use Maps for each jurisdiction which have adopted Comprehensive Land Use Plans are included in Appendix G.

**Table 4.42: Kingsbury County (Unincorporated Area)
Potential Floodplain Development – By Land Use Type**

Land Use Category	Community Totals		Flood Hazard Area			
	<i>Projected Development Density (Acres/Unit)</i>	<i>Acres of projected future development</i>	<i>Acres of future development in Hazard Area</i>	<i>% Area for future development</i>	<i>Potential # of Lots for future development</i>	<i># of Undeveloped Lots Already Appropriately Zoned</i>
<i>Ag – Residential</i>	2	N/A	13,746	2.5	6,873	71
<i>Lake – Residential</i>	.5	N/A	6	N/A	12	1
<i>Commercial</i>	2	N/A	N/A	N/A	0	0
<i>Industrial</i>	2	N/A	N/A	N/A	0	0
<i>N/A: Most of the rural area is planned to remain agricultural in use with varying degree of land use restrictions. Not all portions of Lake-Residential Lots appropriately zoned are within the 100-year Floodplain</i>						

**Table 4.43: City of Arlington
Potential Floodplain Development – By Land Use Type**

Land Use Category	Community Totals		Flood Hazard Area			
	<i>Projected Development Density (Units/Acre)</i>	<i>Acres of projected future development</i>	<i>Acres of future development in Hazard Area</i>	<i>% Area for future development</i>	<i>Potential # of Lots for future development</i>	<i># of Undeveloped Lots Already Appropriately Zoned</i>
<i>Ag – Residential</i>	2.5	129	0	0	0	0
<i>Commercial</i>	1	6.5	0	0	0	0
<i>Industrial</i>	0.25	75	0	0	0	0

**Table 4.44: Town of Bancroft
Potential Floodplain Development – By Land Use Type**

	Community Totals		Flood Hazard Area			
Land Use Category	Projected Development Density (Units/Acre)	Acres of projected future development	Acres of future development in Hazard Area	% Area for future development	Potential # of Lots for future development	# of Undeveloped Lots Already Appropriately Zoned
Ag – Residential	2.5	20	0.7	3.5	2	1
Commercial	1	7	0.7	10	0	0
Industrial	0.25	17	0.5	5.9	0	1

**Table 4.45: City of De Smet
Potential Floodplain Development – By Land Use Type**

	Community Totals		Flood Hazard Area			
Land Use Category	Projected Development Density (Units/Acre)	Acres of projected future development	Acres of future development in Hazard Area	% Area for future development	Potential # of Lots for future development	# of Undeveloped Lots Already Appropriately Zoned
Ag – Residential	2.5	129	2.4	1.9	6	3
Commercial	1	6.5	0.0	0	0	0
Industrial	0.25	75	47	62.7	15	2

**Table 4.46: City of Lake Preston
Potential Floodplain Development – By Land Use Type**

	Community Totals		Flood Hazard Area			
Land Use Category	Projected Development Density (Units/Acre)	Acres of projected future development	Acres of future development in Hazard Area	% Area for future development	Potential # of Lots for future development	# of Undeveloped Lots Already Appropriately Zoned
Ag – Residential	2.5	44	0	0	0	0
Commercial	1	15	0.0	0	0	0
Industrial	0.25	18	0.0	0	0	0

**Table 4.47: Town of Oldham
Potential Floodplain Development – By Land Use Type**

	Community Totals		Flood Hazard Area			
Land Use Category	Projected Development Density (Units/Acre)	Acres of projected future development	Acres of future development in Hazard Area	% Area for future development	Potential # of Lots for future development	# of Undeveloped Lots Already Appropriately Zoned
Ag – Residential	2.5	9.1	0	0	0	0
Commercial	1	2.5	0.0	0	0	0
Industrial	0.25	40.0	0.0	0	0	0

Despite available acreage for future development in those communities with and without Future Land Use Maps and Zoning Regulations, population counts remain steady or decreasing. While some new building permits have been issued for dwelling units within those jurisdictions which require building permits, the rate of construction and fertility lags behind the rate of individuals leaving communities in Kingsbury County. Most construction within Kingsbury County and its municipalities is in furtherance or repair of existing land uses. In the rural portions of the county, most construction is in support of agricultural land uses or services that support those uses. In municipalities, most construction is in the form of improvements to residences (decks, garages, sheds, fences, etc.) and upgrades or accessory uses to long standing public and commercial/industrial uses. Population in Kingsbury County's communities has declined since the previously adopted PDM Plan, as is evidenced by Table 1.1. A deeper dive into demographics reveals that less work-force aged residents reside in Kingsbury County than at the time of previous plans.

Since new construction would primarily be categorized as "infill" development, which is being outpaced by population leaving these communities overall development has left Kingsbury County and its municipalities less vulnerable to disasters. Specifically, new construction to support existing commercial, industrial, and public land uses are required by state law to meet International Building Code, where they would not have been 15 years prior. New residential construction only encourages protection of existing residences from known hazards the respective community faces. However, in the way out-migration affects the number of people in these communities; it also affects the overall quality of housing stock. As emigration from Kingsbury County outpaces immigration, more houses and properties run the risk of falling into disrepair and thus are more susceptible to complete destruction. Further, as the average age of communities has increased, so too has the need for regular, as well as critical/emergency care for an aging population. A greater dependency on medical services has arisen in Kingsbury County. That need is being served to some degree by expanded medical services within the City of De Smet over the past decade, but still requires care outside the county. Those individuals requiring increased care due to age and decreased income due to exiting the work force are increasingly vulnerable to common hazards such as extreme heat, extreme cold, and severe winter or summer storms.

UNIQUE OR VARIED RISK ASSESSMENT

Requirement 201.6(c)(2)(i). Local Mitigation Plan Review Tool – B1.

Requirement 201.6(c)(2)(ii). Local Mitigation Plan Review Tool – B2-a-c.

After conducting the risk assessment for each jurisdiction, the PDM Planning Team decided that all areas of the county have an equal chance of a natural hazard occurrence in their area. While the extent to which each jurisdiction is affected by such hazards varies slightly between the local jurisdictions, the implications are the same. Thus, the PDM Planning Team decided that all jurisdictions in the County are equally affected by the types of hazards/risks that affect the PDM jurisdiction. Thus, the unique or varied risk requirement is not applicable to the Kingsbury County PDM.

On the following pages, a hazard vulnerability map is shown for each of the jurisdictions participating in this PDM. The maps identify critical infrastructure. The maps identify critical infrastructure and one-hundred-year flood plain. Since most major hazards facing the county are not geographically based. Winter storms and severe summer storms carry an equal probability of occurring throughout the county. While specific locations for above ground electrical distribution lines are not identified on the map(s), they are located throughout the County and are vulnerable to both flooding and severe weather (See Figures 4.1 through 4.10).

Figure 4.10: Kingsbury County Hazard Vulnerability Map

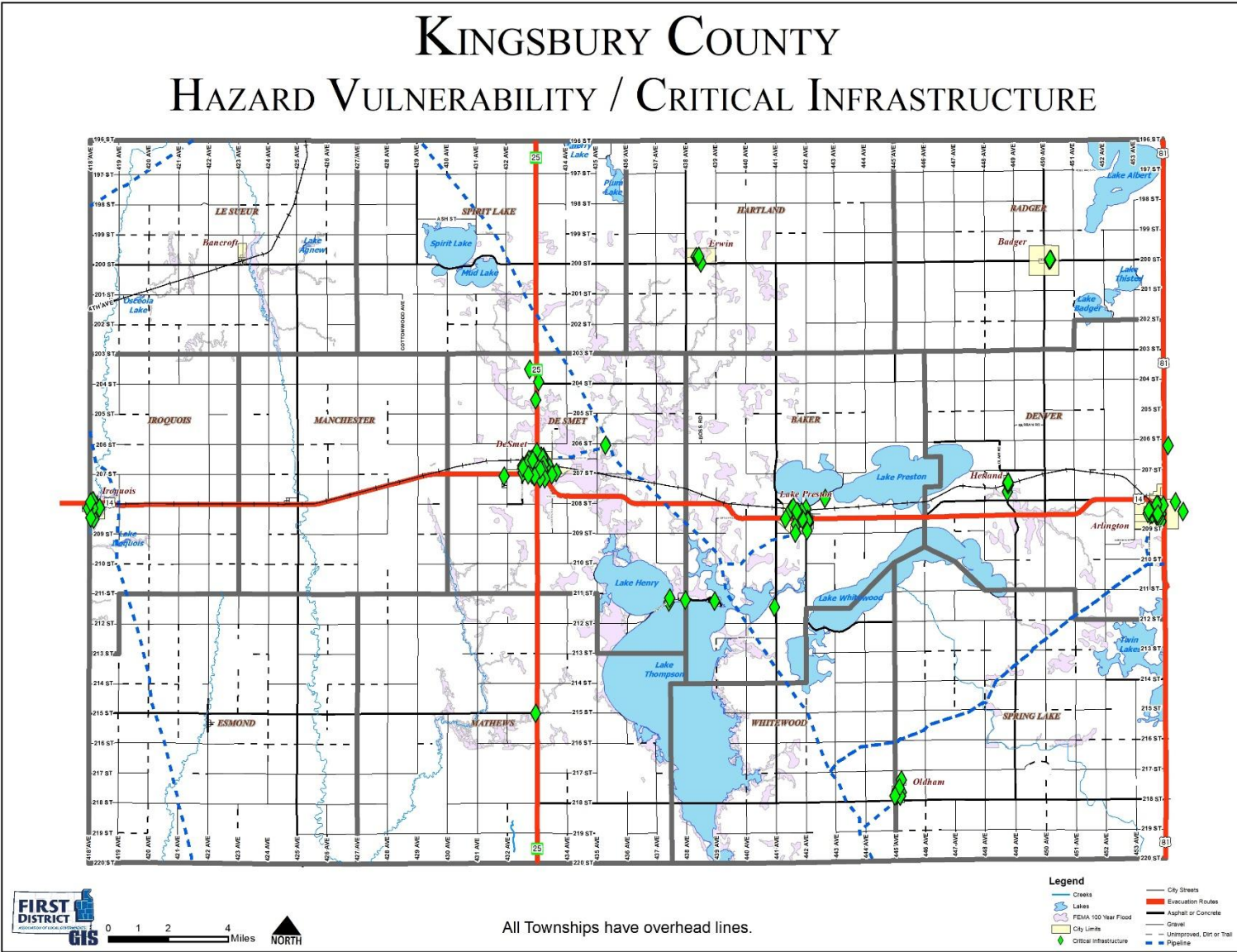


Figure 4.11: City of Arlington Hazard Vulnerability Map

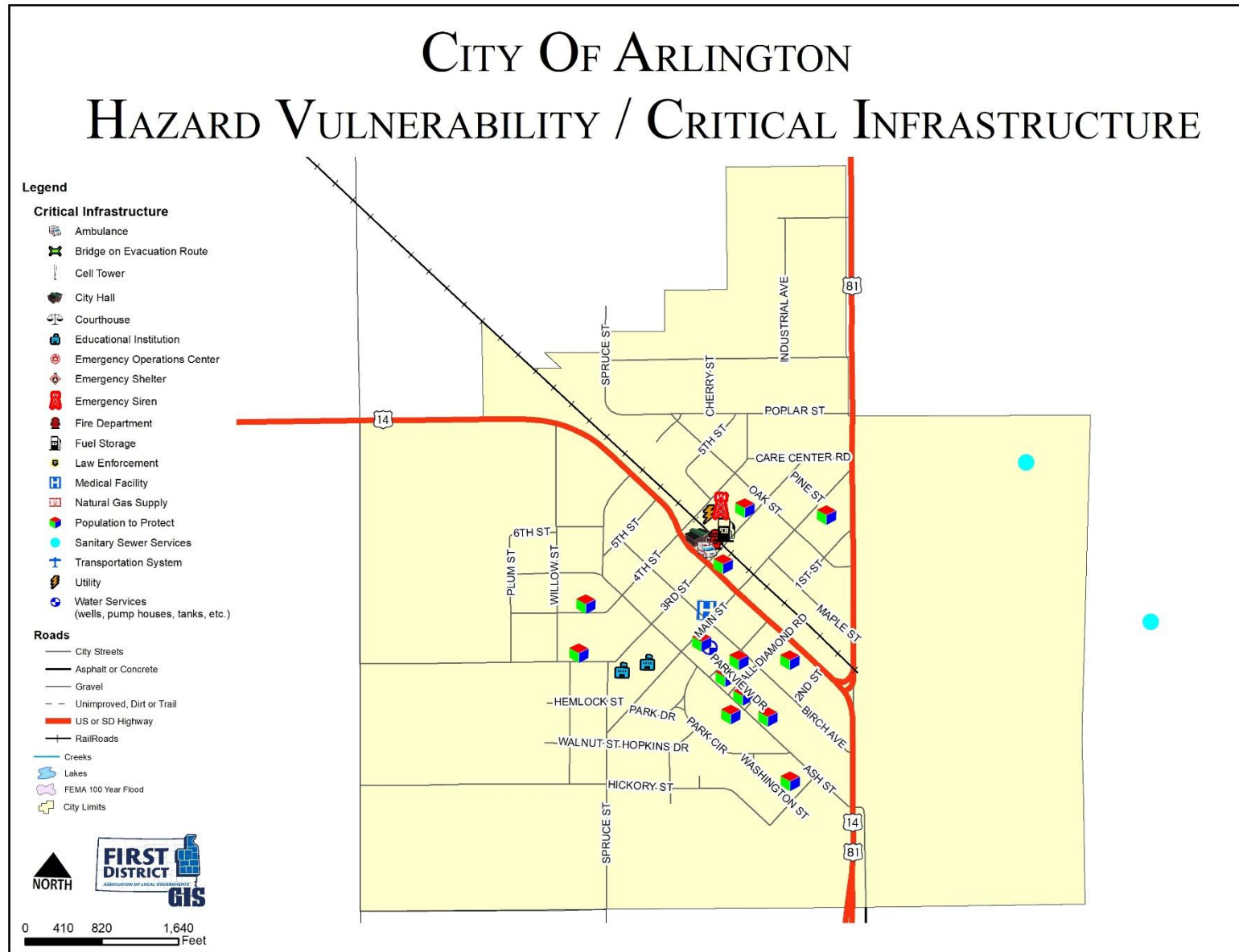


Figure 4.12: Town of Badger Hazard Vulnerability Map

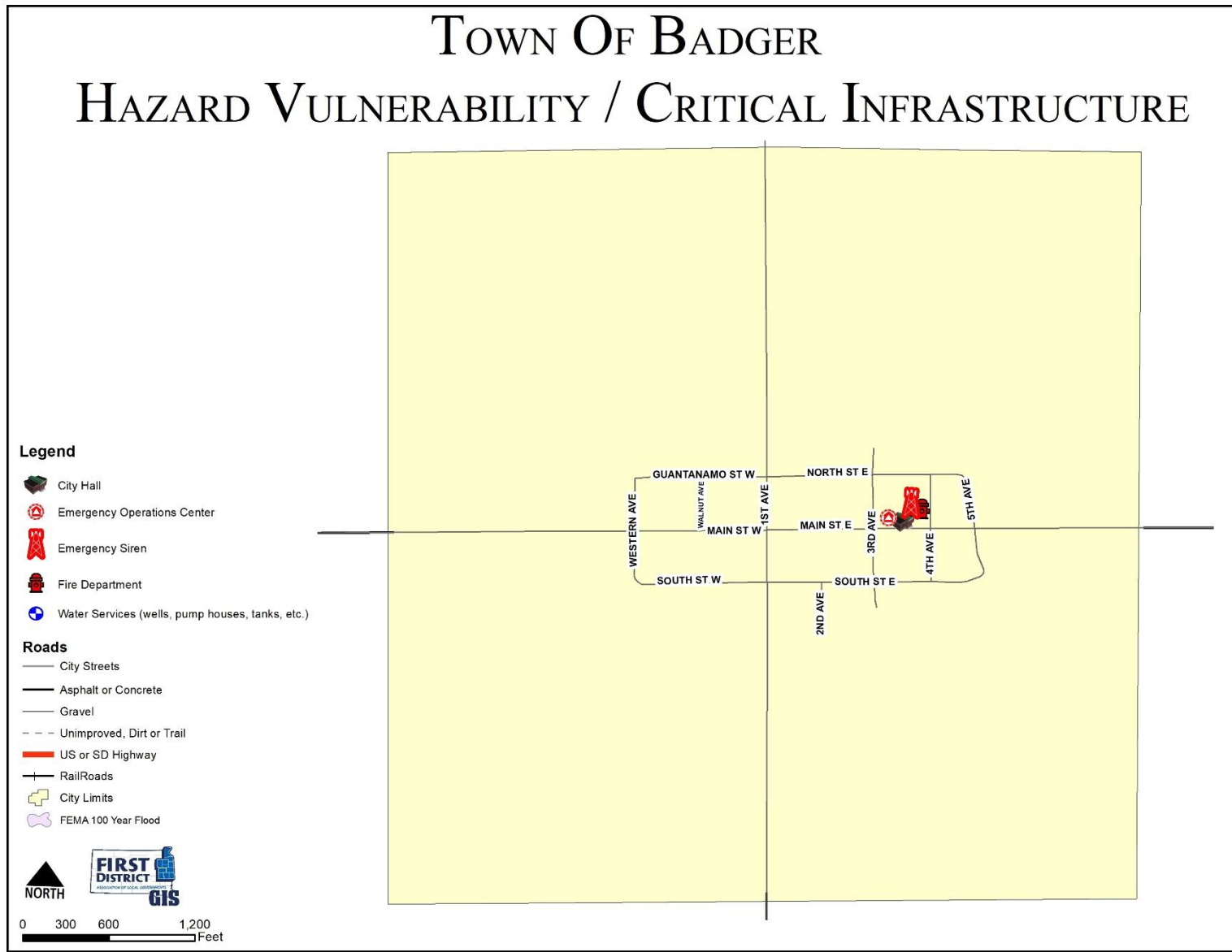


Figure 4.13: Town of Bancroft Hazard Vulnerability Map

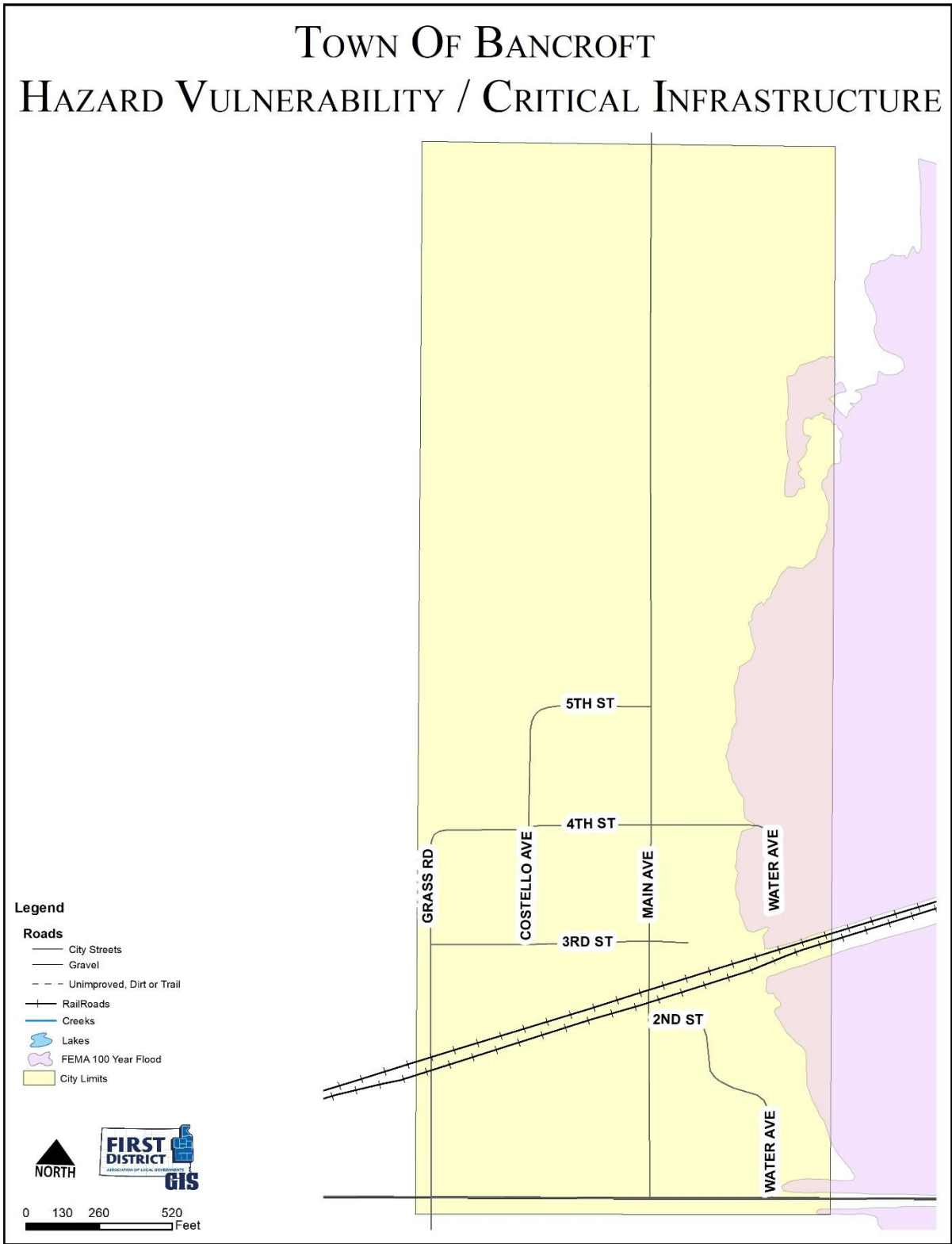


Figure 4.14: City of De Smet Hazard Vulnerability Map

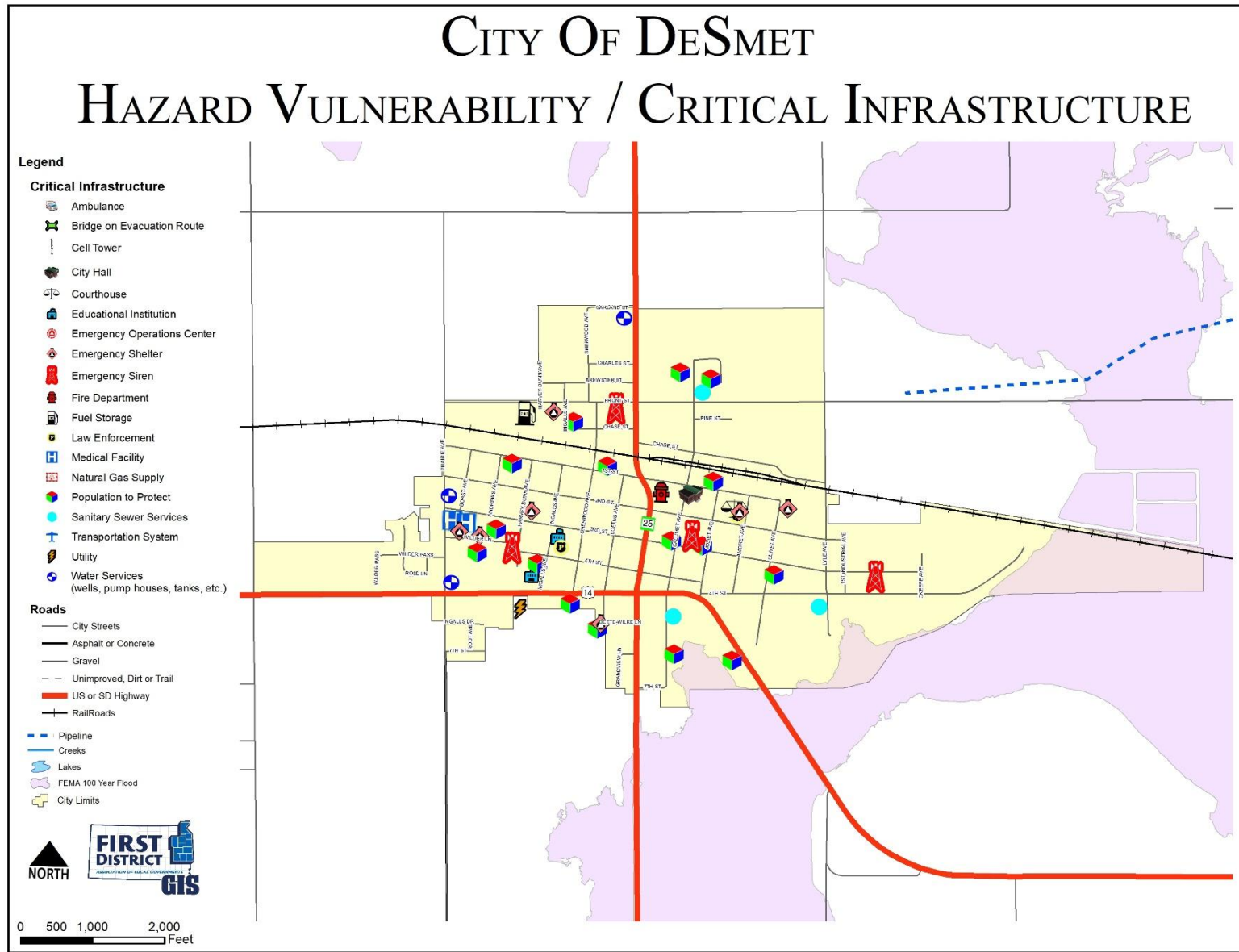


Figure 4.15: Town of Erwin Hazard Vulnerability Map

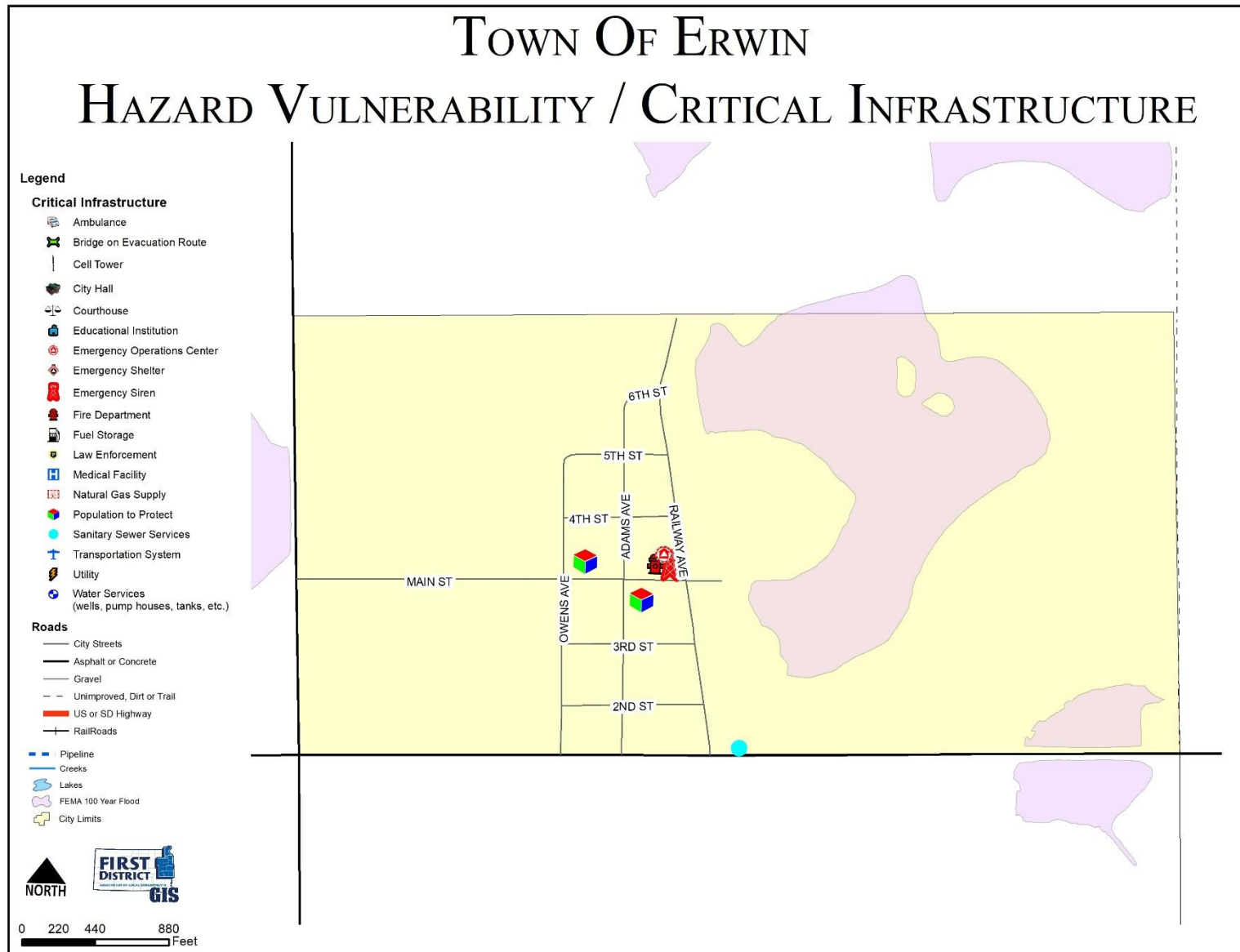


Figure 4.16: Town of Hetland Hazard Vulnerability Map

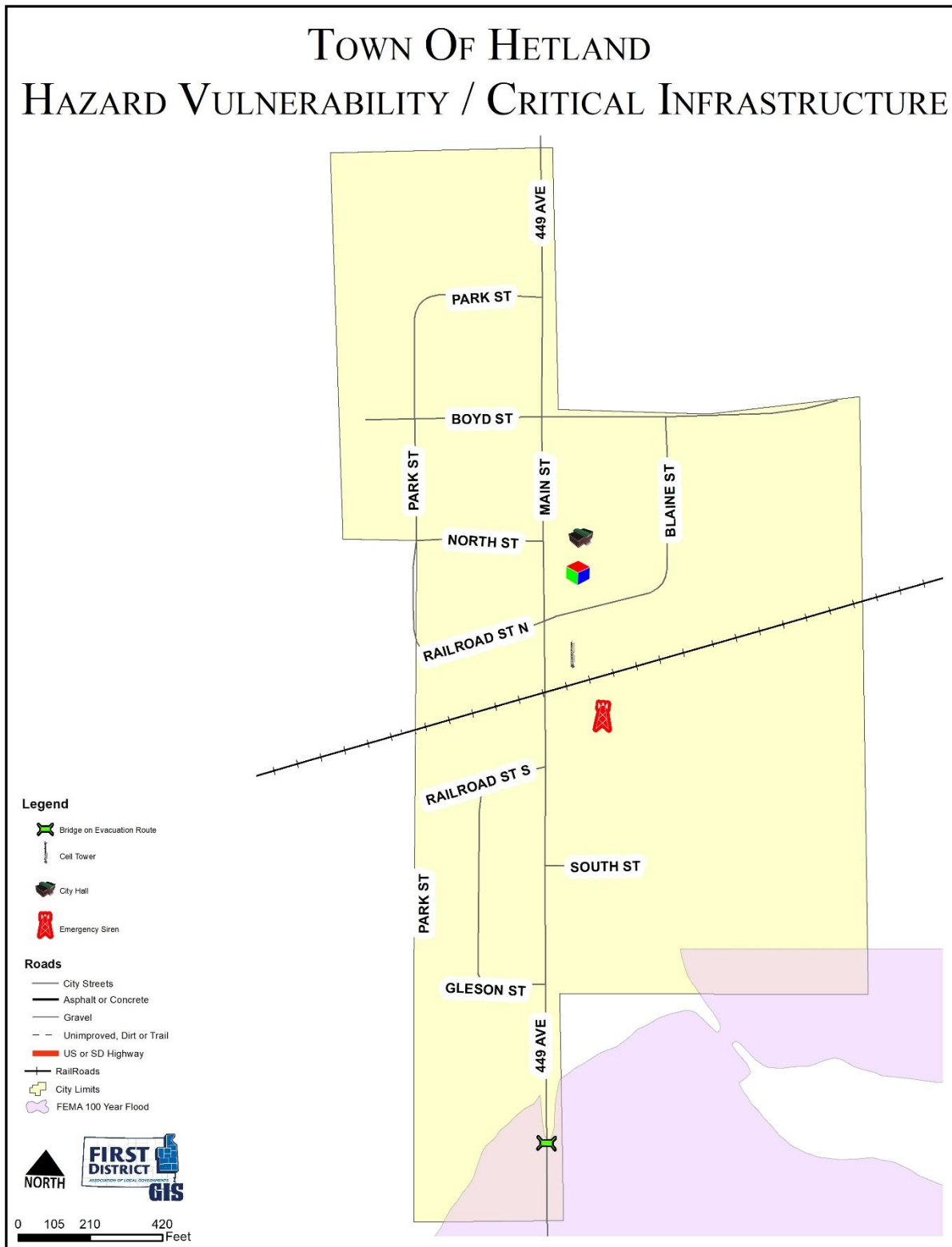


Figure 4.17: City of Iroquois Hazard Vulnerability Map

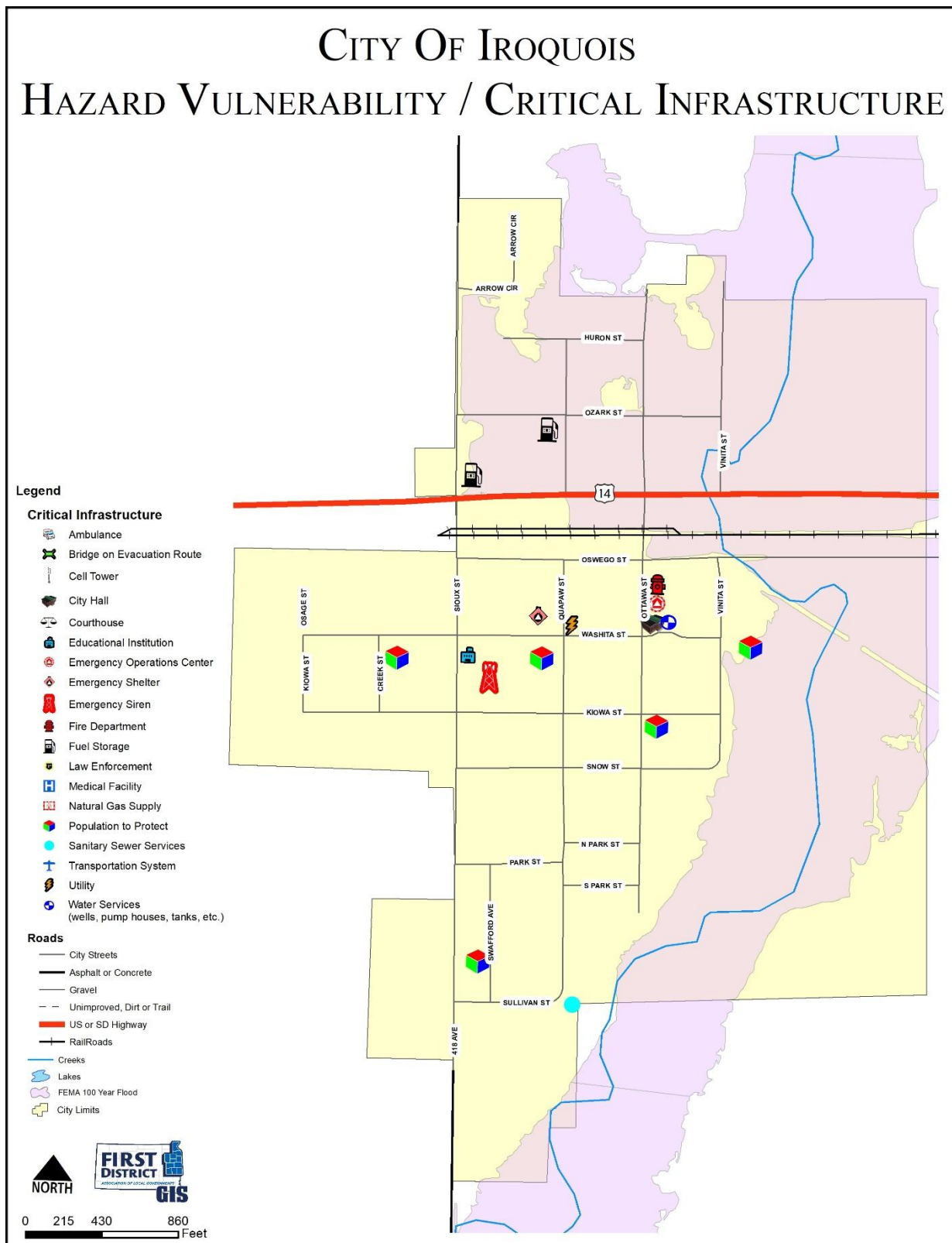


Figure 4.18: City of Lake Preston Hazard Vulnerability Map

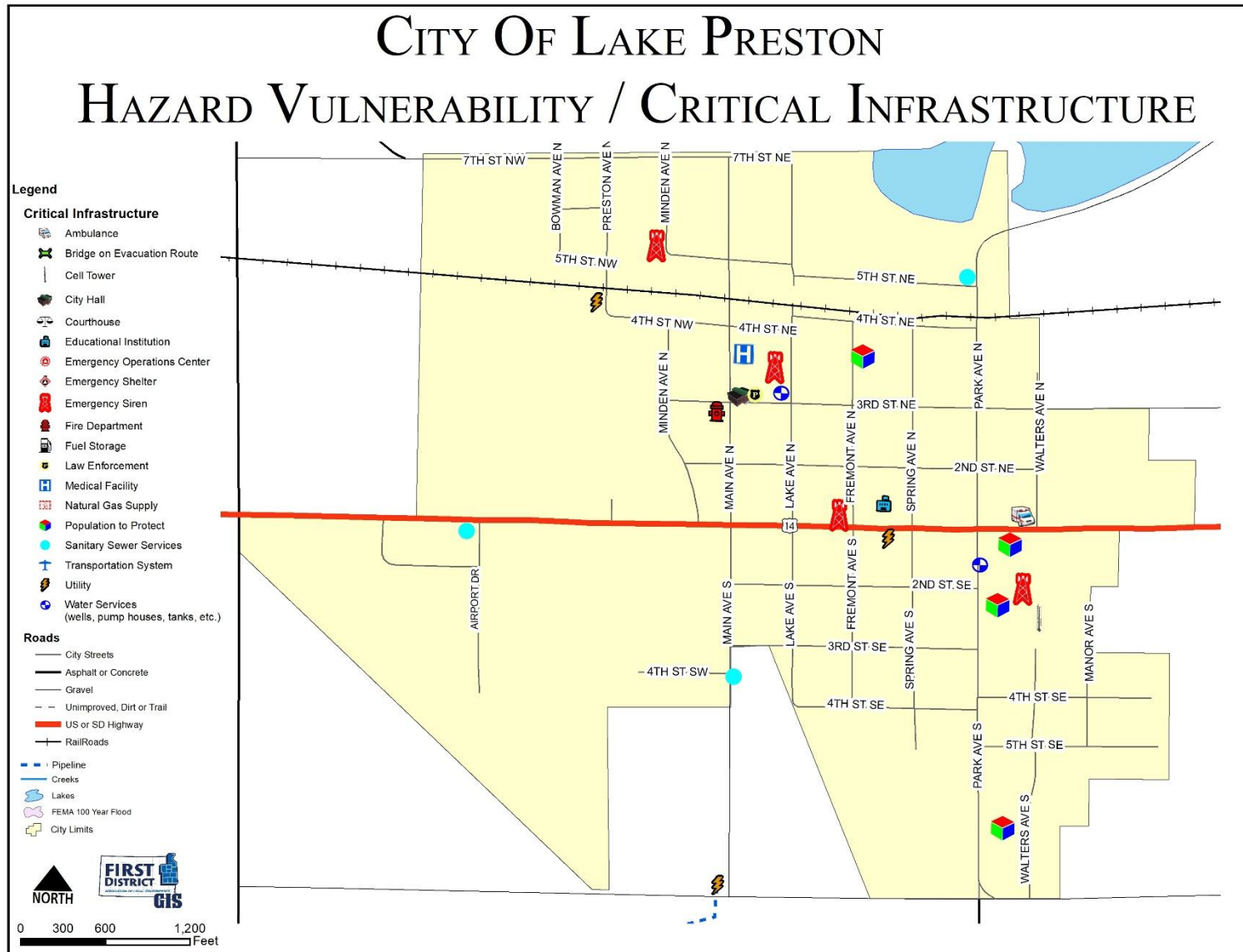
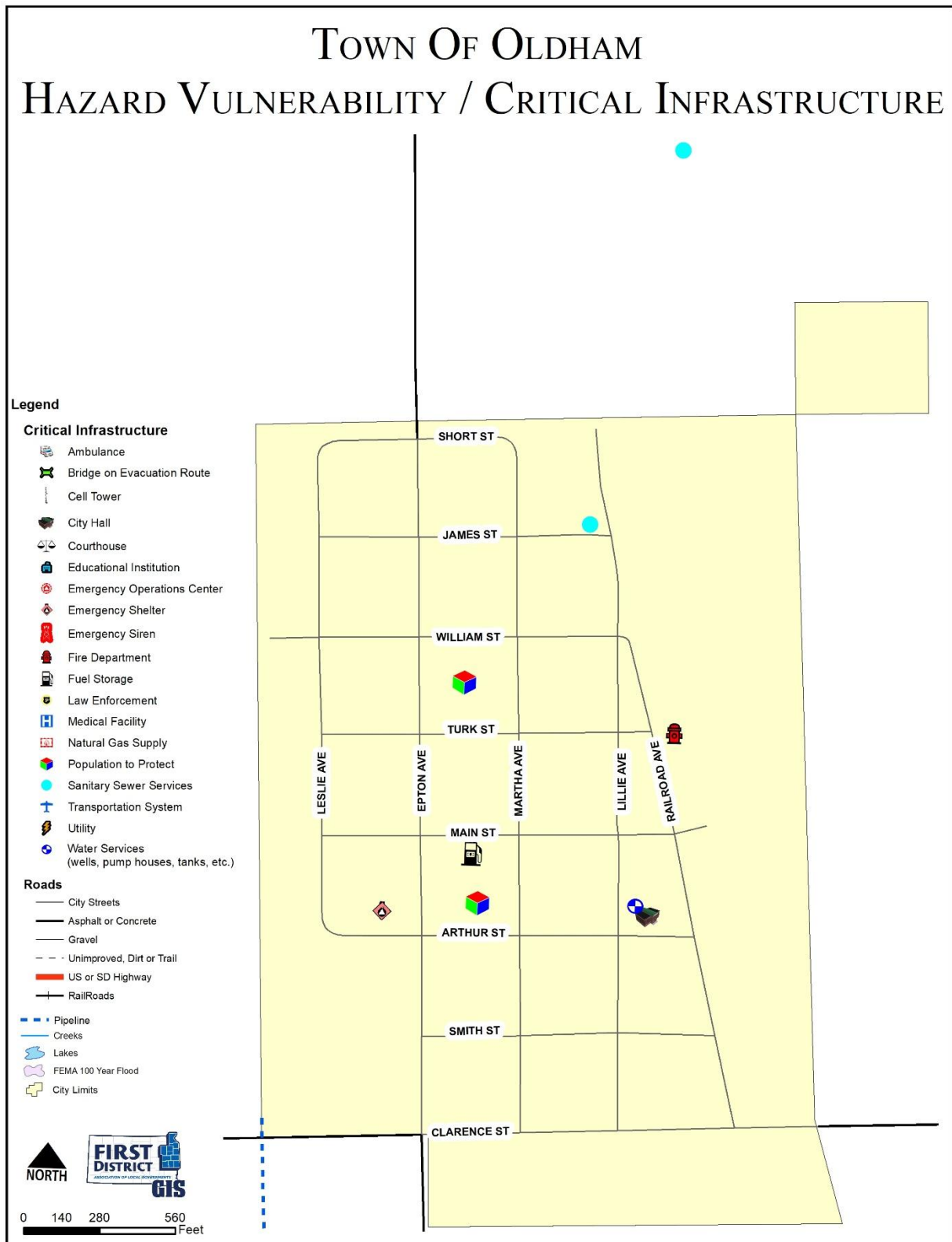


Figure 4.19: Town of Oldham Hazard Vulnerability Map





CHAPTER 5 | MITIGATION STRATEGY

MITIGATION OVERVIEW

Requirement 201.6(b)(1) ...Local Mitigation Plan Review Tool – A3.

Requirement 201.6(c)(3)(i). Local Mitigation Plan Review Tool – C3.

Requirement 201.6(c)(3)(ii). Local Mitigation Plan Review Tool – C4 (inc. C4-a&b).

Requirement 201.6(c)(3)(iii) & (iv). Local Mitigation Plan Review Tool – C5.

Requirement 201.6(d)(3). Local Mitigation Plan Review Tool – E2-a&b.

The SD SHMP addresses several mitigation categories, including warning and forecasting, community planning, and infrastructure reinforcement. The County and participating entities' critical needs are mitigating high wind and flood hazards, acquiring backup generators for critical infrastructure, construction of tornado safe rooms and/or storm shelters, and enhancing public awareness.

Following the completion of the risk assessment (which encompassed identifying hazards, evaluating their probability, and assessing vulnerability), the PDM Planning Team reached a mutual consensus. The team agreed that the mitigation strategies should primarily focus on addressing the following hazards: winter storms, severe summer storms, flooding, and drought/wildfires in both urban and rural areas.

The PDM Planning Team began by reviewing the goals, objectives, and priorities of the 2019 Plan. They found the goals and objectives of the previous plan were still relevant, with only minor changes being needed. The goals and objectives were then revised and incorporated into the updated plan. Similarly, the priorities and focuses of the mitigation strategies from the previous plan were also deemed appropriate and integrated into the updated plan.

To complete the goal identification process, the PDM Planning Team assessed the county's and participating jurisdictions' vulnerability to each identified hazard and the severity of the threat posed by each. The discussion largely centered around past event damage and strategies to reduce or eliminate future damage. Though reviewing each jurisdiction's Comprehensive Land Use Plan (if available), the participants were also able to consider how future development might impact each jurisdictions' vulnerability to the hazards they face.

While pinpointing goals, numerous activities or projects were identified with broadly defined benefits for several jurisdictions within the County. Although many actions were acknowledged by the PDM Planning Team to have wide-reaching benefits, due to the scope or varying levels of importance to individual jurisdictions, specific costs, timeframes, or priorities were not assigned. Along with this, while many infrastructure projects and policies throughout all communities would help mitigate hazards, they were not always located in the most vulnerable areas.

Each community reviewed the activities/policies and corresponding problem statements to determine their applicability to their respective jurisdictions. The results of this community review are displayed in Tables 5.1 – 5.12. Unless otherwise noted, the lead contact for all mitigation projects in those tables will be the Finance Officer for each respective municipality and the County Auditor for Kingsbury County. The funding source for projects in Tables 5.1 – 5.12 will be from the general fund of the applicable jurisdiction unless specifically noted.

Projects/policies marked with a “√” were identified in previous plans and determined to be not completed since the previous plan. Projects/policies marked with a “☑” are new for the respective community. Projects/policies marked with a “☒” were determined no longer viable. Each project/policy in Tables 5.1 – 5.12 should be considered as a “medium” priority rating in relation to the projects listed in 5.13. Unless otherwise noted, any project listed within Tables 5.1 – 5.12 should be expected to commence within three (3) to five (5) years. Projects with “*” are already occurring and expected to remain ongoing during the life of the plan.

Specific projects for each community are listed in Table 5.13. Projects listed in Table 5.13 may duplicate those listed in 5.1 – 5.12. Table 5.13 represents more specific requests where it may have been determined a different funding source may be sought, or a more specific location or purpose for a strategy may have been determined. Those projects intended to mitigate problems at a specific location are represented in Figures 5.1 to 5.10.

Principal Goals

- 1. *Reduce the loss of life, property, infrastructure, critical facilities, cultural resources and impacts from severe weather, flooding and other natural disasters.***
- 2. *Improve public safety during severe weather, flooding and other natural disasters.***
- 3. *Improve the County’s Emergency Preparedness and Disaster Response and Recovery capabilities.***

Mitigation Activities for Flooding Hazards

Goal #1: Protect specific areas of Kingsbury County from flooding due to heavy rain, rapid snow melt, and ice jams.

Goal #2: Educate and inform Kingsbury County residents regarding flooding safety in relation to heavy rain, rapid snow melt, and ice jams.

Goal #3: Reduce the extent to which utility interruptions affect areas during flooding events caused by heavy rain, rapid snow melt, and ice jams.

- *Actions/Projects to reduce flood risk through policy implementation. (See Table 5.1)*
- *Actions/Projects to change the characteristics or impacts of flood hazards. (See Table 5.2)*
- *Actions to reduce loss potential of infrastructure to flood hazards. (See Table 5.3)*

Mitigation Activities for Severe Weather Hazards (summer and winter)

Goal #1: Increase public awareness and education on severe summer weather events (includes: thunderstorms, high wind, hail, lightning, and tornadoes) and severe winter weather events (includes: blizzards, freezing rain, and high wind).

Goal #2: Improve public safety during severe summer weather events (as above) and severe winter weather events (as above).

Goal #3: Reduce the extent to which utility interruptions affect areas during severe summer weather events (as above) and severe winter weather events (as above).

Goal #4: Reduce crippling effects of winter weather events (as above).

- *Actions/Projects to reduce severe weather risk through policy implementation.
(See Table 5.4)*
- *Actions/Projects to change the characteristics or impacts of severe weather hazards.
(See Table 5.5)*
- *Actions/Projects to reduce loss potential of infrastructure to severe weather hazards.
(See Table 5.6)*

Table 5.1: Actions/Projects to Reduce Flood Risk through Policy Implementation

Problem Statements	Actions	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Kingsbury County
Public is unaware of scope of flood risk and existing emergency plans.	Public education. Disseminate information regarding how to deal with flooding. This would include transportation issues, home protection strategies, safety issues, and how to move forward after a flooding situation.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Encouraging homeowners in flood-prone areas to purchase flood insurance.	✓			✓			✓	✓	✓	✓
Jurisdiction is unaware of potential hydrologic impacts of drainage or development projects.	Conduct necessary studies addressing drainage (stormwater flow/runoff, etc.).	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Residents are not eligible for flood insurance.	Begin participation in the National Flood Insurance Program.	✓	✓	✓		✓	✓				
Failure to comply with NFIP programs makes the community ineligible for flood insurance and certain funding.	Ensure continued National Flood Insurance Program compliance by enforcing floodplain management ordinance.				✓*			✓*	✓*	✓*	✓*
Jurisdiction is unaware of opportunities to participate in programs to assist in achieving mitigation goals.	Work to improve the level of communication and coordination with the State NFIP coordinator.	✓*	✓*		✓*		✓*	✓*	✓*	✓*	✓*
Jurisdiction has no legal mechanism to regulate land use.	Adoption and enforcement of land use regulation.		✓	✓		✓	✓	✓			
Jurisdiction needs to continue to regulate minimum land use and development standards.	Continue enforcement of zoning and subdivision ordinances.	✓*			✓*				✓*	✓*	✓*
Jurisdiction has little legal mechanism to regulate drainage.	Developing a county/city drainage ordinance.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Problem Statements	Actions	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Kingsbury County
Jurisdiction needs to continue to regulate minimum construction standards.	Continue enforcement of building codes.										
Jurisdiction lacks technical analysis or identification of specific mitigation projects.	Identify and prioritize capital/structural mitigation projects that are cost effective and technically feasible.	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
Jurisdiction lacks physical data on natural drainage and topography.	Purchase LiDAR to generate terrain models, maps, and surveys.										☒ Has from 2012

Table 5.2: Actions/Projects to Change the Characteristics or Impacts of Flood Hazards

Problem Statements	Actions	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Kingsbury County
Portions of storm sewer system is not designed to 100-year flood event.	Installing or upgrading storm sewer piping/or overland flow.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drainage patterns have changed; culverts are inadequate for conveyance of water.	Installing or enlarging drainage culverts.	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
	Install drainage tile.										✓
	Install or enlarge detention/retention ponds.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Certain streets have substandard or no curb and gutter.	Install curbing and guttering in city streets to improve stormwater flow.	✓*	✓ 5-10 years	✓ 5-10 years	✓*	✓ 5-10 years	✓ 5-10 years	✓ 5-10 years	✓*	✓ 5-10 years	

Problem Statements	Actions	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Kingsbury County
Capacity of rivers, streams, and retention areas is decreased due to accumulation of debris.	Clean out debris in drainage areas, tributaries, etc. to improve water flow.	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
	Install valves or plugs in sanitary and stormwater sewer system.	✓			✓			✓	✓	✓	✓
	Install riprap around sanitary sewer ponds.	✓			✓			✓	✓	✓	✓
Potential for development in flood prone areas.	Preservation and expansion of open space along the river and enhancement of existing berm areas.	✓			✓			✓	✓	✓	✓
	Work with property owners to implement deed restrictions for open lots/vacant properties in the flood hazard areas to prevent development.	✓			✓			✓	✓	✓	✓

Table 5.3: Actions/Projects to Reduce Loss Potential of Infrastructure to Flood Hazards

Problem Statements	Actions	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Kingsbury County
Many roads and bridges were built prior to identification of flood hazard areas.	Replace and raise bridges.				✓ 5-10 years		✓ 5-10 years	✓ 5-10 years	✓ 5-10 years		✓ 5-10 years
	Elevating roads in flood-prone areas.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓*
Some utility structures are located in areas vulnerable to flooding.	Flood-proof or replace utility structures in flood-prone areas.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Structures constructed in the floodplain prior to identification of flood hazard areas at risk of flooding or impeding water/ice.	Making structural retrofits to infrastructure.	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
	Work with property owners to mitigate repetitive loss residences through elevation, acquisition, or relocation.	✓			✓				✓		✓

Table 5.4: Actions/Projects to Reduce Severe Weather Risk through Policy Implementation

Problem Statements	Actions	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Kingsbury County
Public is unfamiliar with certain disaster preparation measures.	Public education. Disseminate information regarding how to deal with severe weather (summer/winter).										
	Some of the issues that may be addressed would include: safety issues on downed power lines, electrical and fire dangers, necessity for generators and how to use them, protecting property, survival strategies during storms, and purchasing of back-up power for various household and farming operations. (W/S)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lack of data regarding vulnerability to severe summer & winter storms.	Gather data to create a more precise loss estimate for winter storms. (W)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Gather data to create a more precise loss estimate for summer storms. (S)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Projects denoted with “(S)” are specific to **Summer Storms**, “(W)” for **Winter Storms**.

Table 5.5: Actions/Projects to Change the Characteristics or Impacts of Severe Weather Hazards

Problem Statements	Actions	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Kingsbury County
Certain areas and populations are not served by storm shelters	Identify area of need for tornado safe rooms or community shelters. (S)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Identify areas of need for storm shelters at manufactured home and RV parks. (S)	✓	✓		✓		✓	✓	✓		✓
Critical facilities are vulnerable to power failure.	Install backup generators for infrastructure, shelters, and emergency operations. (W/S)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Certain areas are susceptible to snow drifting.	Survey areas in need of snow shelterbelts and plant trees accordingly. (W)										✓*
	Install or plant living snow fences. (W)										✓*

Problem Statements	Actions	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Kingsbury County
Certain areas of town cannot hear storm sirens and other emergency warning systems.	Construct new or improve existing warning systems. (S)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Storm sirens and other emergency warning systems are outdated.	Replace or upgrade existing warning systems. (S)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lack of emergency preparedness supplies and equipment.	Ensure emergency shelters area stocked with adequate supplies. (W/S)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Table 5.6: Actions/Projects to Reduce Loss Potential of Infrastructure to Severe Weather Hazards

Problem Statements	Actions	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Kingsbury County
Utility lines and structures are subject to failure in high wind, heavy rain, ice events	Upgrading of utility lines. (W/S)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Burial of utility lines when needed. (W/S)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Require upgrading of overhead lines when age or disasters provide an opportunity. (W/S)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Removal of trees near power lines. (W/S)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Attachment of guy wires to dead-end poles. (W/S)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Testing integrity of poles. (W/S)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Usage of anti-galloping devices. (W/S)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Making structural retrofits to facilities. (W/S)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Mitigation Activities for Fire and Drought Hazards

Goal #1: Improve fire prevention education and fire response.

Goal #2: Reduce the negative effects droughts have on Kingsbury County.

Goal #3: Reduce the negative effects wildfires have on Kingsbury County.

- *Actions/Projects to reduce fire and drought risks through policy implementation.*
(See Table 5.7)
- *Actions/Projects to change the characteristics or impacts of fire and drought hazards.*
(See Table 5.8)
- *Actions to reduce loss potential of infrastructure to fire and drought hazards.*
(See Table 5.9)

Mitigation Activities for Hazards Identified but Do Not Occur

The hazards of landslides, subsidence, earthquakes, and dam failures have no history of occurring in any jurisdiction within Kingsbury County. These hazards were not identified for planning purposes but were listed in exercises merely for comparative purposes. It was determined by the PDM Planning Team that since these hazards have never occurred, and there is no reason to expect them to occur in the future within Kingsbury County's jurisdictions, no mitigation activities are necessary.

General Mitigation Activities

Technological (See Table 5.10):

Planning (See Table 5.11):

Administration/Coordination (See Table 5.12)

Table 5.7: Actions/Projects to Reduce Fire and Drought Risk through Policy Implementation

Problem Statements	Actions	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Kingsbury County
Community becomes vulnerable to fire hazard while staff is being trained.	Find funding sources to pay for persons to fill positions while individuals are at training courses.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Potential for development in areas vulnerable to wildfire or urban fire.	Adoption and enforcement of property regulations in areas vulnerable to wildfire.	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
	Establish/require minimum fire suppression standards for subdivisions.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Community has no plan/policy for water rationing in emergency.	Develop water rationing measures that will be implemented during a drought situation.	✓*	✓*	✓	✓	✓	✓	✓*	✓	✓	✓
Public is unaware of fire safety and benefits of conserving water.	Educate residents on fire safety and the benefits of conserving water at all times, not just during a drought.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Table 5.8: Actions/Projects to Reduce Loss Potential of Infrastructure to Fire and Drought Hazards

Problem Statements	Actions	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Kingsbury County
Firefighting equipment becomes out of date quickly.	Ensure that fire departments are adequately equipped to respond to wildfires.	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
Fire hydrants become unusable.	Locate dry fire hydrants and improve existing infrastructure for hydrant hook-ups.	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
	Construct additional water supply.	✓			✓				✓		✓
Fire protection capabilities are limited.	Construct new fire station.	✓									

Table 5.9: Actions/Projects to Change the Characteristics or Impacts of Fire and Drought Hazards

Problem Statements	Actions	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Kingsbury County
Reservoirs are vulnerable to silting and decrease in efficient provision of water services in emergency situations.	Dredge reservoirs to improve water quality. Reservoirs silt in and dredging, water can flow to more places, more quickly, and more easily.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Dead or dry plant material creates fire hazard/location changes seasonally and annually.	Burn areas, as necessary, to ensure a fire break rather than ignition fuel.										✓*
Local economy is very dependent on corn/soybean production.	Educate farmers on the benefits of a diversified crop protection plan in the event of a drought.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Work with local farmers to investigate the use of more drought resistant crops.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Table 5.10: Technological Activities

Problem Statements	Actions	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Kingsbury County
Current data and software can become obsolete or out of date.	Continue utilizing a working computer-aided mapping system for the County. This includes using overlays of GIS data, HazMat, flood zones, and roads.	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
	Enhance existing computer-aided dispatch.	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
	Use HAZUS software to estimate losses in flooding situations. Information may also be able to be used for other hazard areas.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Work with South Dakota State University to explore additional methods of estimating losses in natural hazards.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Table 5.11: Planning Activities

Problem Statements	Actions	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Kingsbury County
Maintenance of a mitigation plan is beyond the economic capability of this community.	Find funding to review and update the regional and local disaster mitigation plans on a five-year cycle.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Disaster mitigation projects have not always been incorporated into other plans.	Incorporate disaster mitigation actions into appropriate local and regional plans – master plans, land use, transportation, open space, and capital programming.	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
	Integrate disaster mitigation concerns into subdivision, site plan review, and other zoning reviews. In particular, require the consideration of downstream flooding impacts caused by new projects.	✓*	✓*	✓*		✓*		✓*	✓*		✓*
	Integrate disaster mitigation concerns into transportation projects (e.g., drainage improvements, underground utilities, etc.).	✓*	✓*	✓*		✓*		✓*	✓*		✓*
This community's mitigation projects are not coordinated with other communities' projects.	Develop a means for sharing information on a regional basis about successful disaster mitigation planning and programs.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Table 5.12: Administration/Coordination Activities

Problem Statements	Actions	Arlington	Badger	Bancroft	De Smet	Erwin	Hetland	Iroquois	Lake Preston	Oldham	Kingsbury County
This community is not staffed, nor does it have funding mechanisms to apply for and administer funding sources for mitigation projects.	Identify and pursue funding that builds local capacity and supports grant-writing for mitigation actions identified in the PDM.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Need to create manner of mass dissemination of emergency preparedness and response information.	Establish social media pages, and identify individual to maintain said pages and establish authority to determine what information is posted.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Populations to protect and socially disadvantaged populations are not identified.	Create and update list of vulnerable populations within jurisdiction; and provide notification to those populations of plan updates.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Need to improve coordination of activities with other governmental jurisdictions and utility providers.	Increase communication/coordination between federal, state, regional, county, municipal, private, and non-profit agencies in the area of pre-disaster mitigation.	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
	Maintain and enhance working relationships with the utility providers.	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*

After holding meetings with the PDM Team and local jurisdictions, as well as hosting multiple opportunities for public input, the mitigation goals from the 2019 plan were confirmed as the best aid the County for reducing and lessening the effects of natural hazards. Projects previously identified in the 2019 PDM were carefully analyzed and discussed to determine which of the projects had enough merit to be included in the updated PDM and to determine if the projects meet the hazard mitigation needs of the county. The projects were evaluated based on a cost/benefit ratio and priority.

Although this PDM focuses on disaster mitigation rather than disaster preparedness, most communities conversed over disaster preparedness projects as well. It was difficult for individual communities to recognize the difference between providing storm shelters and making sure the storm shelters function properly (for example). Actions considered in this category included the acquisition of emergency generators, and erecting or replacing warning sirens in areas that are currently underserved.

Most of the mitigation actions proposed by the jurisdictions were identified by city council/town board members, public works personnel, or PDM Planning Team members from the jurisdiction. Natural hazards and vulnerability were discussed. Projects were suggested for inclusion on the mitigation list. Project cost estimates were created based upon similar projects in the region. Local jurisdiction Boards evaluated each project based on importance, need, urgency, benefits, cost, funding availability, and timeline. Projects were then either included on the list or removed. Then assigned a priority metric and other parameters.

Some actions were also proposed by townships and utility providers due to the direct impact of disasters on infrastructure and services they provide. Once each jurisdiction had its list of proposed actions complete, it was submitted to the Emergency Management Director. At the second PDM Planning Team meeting, the actions were reviewed. At the third PDM Planning Team meeting a final opportunity was given for the jurisdictions to add any additional actions or refine information relating to previously identified projects.

Although additional data will be needed in some cases, a timeframe for completion, oversight, funding sources, and any other relevant issues were addressed. These implementation strategies are geared toward the specific goal and area. Often, these projects will not encounter any resistance from environmental agencies, legal authorities, and political entities. Table 5.13 is a presentation of the mitigation actions proposed by the PDM Planning Team. In addition to identifying the proposed actions, the table includes additional information about each action. Elected officials and staff of each municipality and the county were responsible for providing most of this information for actions in their community, but the other planning participants helped in this process.

The following information is provided for each action:

- A statement regarding the specific problem the proposed action will mitigate.
- The local priority rating:
 - “High”-greater importance, unanimous Board agreement, meets an essential need, shorter implementation time and funding availability.
 - “Medium”-less urgent need, limited benefits, maintenance activities and limited funding availability.
 - “Low”-least important, minimal benefits, longer term project and lack of funding availability.

- The time frame to accomplish the action:
 - “Short” means actions that are intended to be initiated within two years.
 - “Medium” is for actions that should be started within five years.
 - “Long” is for actions that are not anticipated to be started for at least five years.
- The party(s) primarily responsible for implementing the action.
- The estimated cost/benefit – projected costs for many of the actions were obtained from knowledgeable sources based on current information. Estimations are subject to change due to details of specific projects. Benefits for most projects were not readily quantifiable.
- Potential sources of funding (discussed below).
- The primary hazard being addressed.
- The goal corresponding to the action.

As mentioned above, jurisdictions and entities integrally involved in the planning for disasters due to their wide breadth implications include townships and most utility providers. Utility providers were represented on the PDM Planning Team. Each utility provider was asked individually to submit their own mitigation actions. The main mitigation activity proposed by utility providers is the burying or upgrading of overhead lines in rural areas of the county to make them more resistant to hazards.

In January of 2024, each individual township in Kingsbury County was mailed maps upon which they were asked to identify potential mitigation activities and vulnerable roads or infrastructure and to return the maps to First District for inclusion in the Plan. In addition, a meeting at which all township supervisors were invited was held on March 19th, 2024. At this meeting, those townships that had not responded to the mailed maps were asked to identify potential mitigation projects and vulnerable roads or infrastructure. Primarily these activities included replacing culverts with larger culverts, elevating or rip-rapping roads, and reconstructing roads. Not all townships submitted the maps with potential activities; however, the Appendix E includes maps of vulnerable sites and potential mitigation actions in the County as proposed by those townships that participated.

Particular attention needs to be paid to sources of funding for the actions. Given the existing financial reality of very tight county and municipal budgets, some of the proposed actions cannot realistically be implemented without substantial grant assistance. With such assistance, it is likely that many of the high priority projects can be undertaken without placing an onerous burden on local budgets. Resources for some of the actions available from FEMA through the South Dakota Office of Emergency Management include the Hazard Mitigation Grant Program, Building Resilient Infrastructure Communities grant program, and Flood Mitigation Assistance grant programs. Other possible sources of funding include:

Grant and loan programs/sources

- Community Development Block Grant program
- Economic Development Administration
- FEMA Assistance to Firefighters Grant program
- South Dakota Dept of Environment and Natural Resources
- South Dakota Dept of Transportation
- US Department of Agriculture Rural Development Office

Local resources

- General obligation bonds
- Revenue bonds
- Tax Increment Financing (TIF) districts

Table 5.13: Proposed Mitigation Activities

KINGSBURY COUNTY PROBLEM STATEMENTS	KINGSBURY COUNTY ACTIONS	PRIORITY RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
Many structures were constructed in the floodplain prior to its identification.	Encourage retrofitting/replacement of existing private structures within the floodplain. (All mapped jurisdictions)	Medium	Medium	Each respective floodplain administrator	Depends on location and construction type/Unknown	Private, HMGP, BRIC, FMA	Flooding	Protect Specific Areas of Hamlin County from Floods
Improve training and response by county firefighters	Conduct additional training for county firefighters to complete Firefighter 1 and/or 2 certifications	High	Medium	Respective Fire Chiefs	Unknown/Unknown	County, FD, FEMA-AFG, SD Fire Marshall	Fire	Maintain firefighting capabilities
Educate County residents regarding risks, vulnerability, and mitigation activities for hazardous events	Periodic newspaper articles Severe Weather Awareness, Winter Weather Awareness and Fire Prevention Weeks	Medium	Ongoing	Emergency Management Director	>\$1,000/Unknown	County General Fund	All	Improve public safety during hazardous conditions
Identify areas of high risk and develop strategies to mitigate those risks.	Develop inventories of at-risk buildings and infrastructure and prioritize mitigation projects	Medium	Ongoing	Emergency Management Director	Unknown/Unknown	County General Fund	All	Improve public safety during hazardous conditions

KINGSBURY COUNTY PROBLEM STATEMENTS	KINGSBURY COUNTY ACTIONS	PRIORITY RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
Need to maintain firefighting equipment and training	Ensure that fire department has required firefighting capabilities and equipment respond to fires	Medium	Medium	Fire Chief	Update equipment/ training as needed/reduce damages, injuries and save lives	FMAG, FP&S, DOI	Urban/ Wild Fire	Maintain firefighting capabilities
Certain roadways regularly flood in high water events.	Conduct engineering / hydrologic study on waterways which regularly flood County and Township Roads.	Medium	Long	Kingsbury County Emergency Management Director	\$40,000/reduce flood damages throughout the County & keep roads accessible	HMGP, FMA, County and Township General Funds, Private	Flooding	Protect Specific Areas of Hamlin County from Floods
	Increase culvert size, raise roads, implement other recommendations of engineering / hydrologic study.	Medium	Long	Kingsbury County Highway Superintendent	Depends on location and construction type/Unknown	HMGP, County, Townships	Flooding	Protect Specific Areas of Hamlin County from Floods

KINGSBURY COUNTY PROBLEM STATEMENTS	KINGSBURY COUNTY ACTIONS	PRIORITY RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
Lakes lack an outdoor warning system.	Install storm sirens at Lake Henry, Lake Thompson, and Lake Albert (Coordinate Lake Albert with Hamlin County.	High	Low	Kingsbury/Hamlin County Emergency Management Director	\$80,000 each/prevent injuries and save lives	County, USDA	Severe Weather Hazards (W/S); Extreme Heat/ Cold	Improve public safety during severe weather.
Recreational areas within the County do not have access to a tornado safe room.	Construction of tornado safe room or storm shelter near Lake Henry campgrounds/park homes.	Medium	Long	Kingsbury County Emergency Management Director	\$500,000/prevent injuries and save lives	HMGP, BRIC, County General Fund	Severe Weather Hazards (W/S);	Improve public safety during severe weather.
Water sources become depleted during drought. (All Jurisdictions)	Support the establishment of Regional Water Supply (back-up) – Project Mainstem (All Jurisdictions)	Low	Long	Respective Finance Officer/ County Emergency Management Director	\$0/Project in exploratory-establishment phase	Private Funds	Drought/Urban fire/ wildfire, Extreme Heat/ Cold	Water sources become depleted during drought.
Decrease risk of fire during drought conditions	Establish policy of listing “Discussion/Potential Adoption of Burn Ban” on meeting agendas during abnormally dry conditions	High	Short	Emergency Management Director	Already within job duties of EM/Law Enforcement.	County General Fund	Drought/Wildfire	Reduce negative effects droughts have and incidence of wildfires in Hamlin County
Water sources become depleted during drought. (All Municipalities)	Establish policies to decrease water consumption during specified periods of drought/low water storage. (All Municipalities)	Low	Long	Respective Finance Officer (All Municipalities)	\$2,500 per year for enforcement (Each Municipality)	Municipal General Funds	Drought/Urban fire/ wildfire	Water sources become depleted during drought.

KINGSBURY COUNTY PROBLEM STATEMENTS	KINGSBURY COUNTY ACTIONS	PRIORITY RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
Certain roadways regularly flood in high water events.	Elevate/reinforce Twin Lakes Road/212 th Street between 438 th Ave and 435 th Ave	High	Low	Kingsbury County Emergency Management Director	\$2,000,000 /allow daily and emergency access to otherwise stranded lots in high water	County, USDA	Severe Weather Hazards (W/S); Extreme Heat/ Cold	Improve public safety during severe weather.
Overhead power lines are vulnerable to loss of service or damage due to high winds and/or ice.	Bury or upgrade overhead power lines to make them more resistant to damage from ice	High	Medium	Utility Provider	Dependent on type of line and construction method/ reduce damage and prevent loss of power service	OEM/HMGP, USDA, Utility Funds	Severe Weather Hazards (summer and winter)	Reduce the extent to which utility interruptions affect areas during severe weather situations.
Overhead power lines are vulnerable to loss of service or damage due to high winds and/or ice.	Bury power lines in heavy tree areas or rebuild/relocate overhead lines away from heavy tree areas	Medium	Medium	Utility Provider	Dependent on type of line and construction method/ reduce damage and prevent loss of power service	OEM/HMGP, USDA, Utility Funds	Severe Weather Hazards (summer and winter)	Reduce the extent to which utility interruptions affect areas during severe weather situations.
Overhead lines and support structures are vulnerable to flooding.	Bury or rebuild/relocate overhead power lines away from flood-prone areas	Medium	Medium	Utility Provider	Dependent on type of line and construction method/ reduce flood-related damage and prevent loss of power service	OEM/HMGP, USDA, Utility Funds	Flooding	Reduce the extent to which utility interruptions affect areas during flooding events caused by heavy rain, and rapid snow melt.

ARLINGTON PROBLEM STATEMENTS	ARLINGTON ACTIONS	PRIORITY RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
Existing storm siren system does not serve the entirety of town and some have become obsolete.	Place additional storm siren in areas of town that existing sirens do not reach and upgrade existing sirens as needed.	Low	Medium	Maintenance Supervisor	\$100,000/prevent injuries and save lives	HMGP, BRIC, USDA/CDBG, City	Tornado/ Severe Weather Hazards (Summer)	Improve public safety during severe weather.
Town does not have a designated storm shelter for public use.	Construction a tornado storm shelter.	High	Medium	Maintenance Supervisor	\$500,000/prevent injuries and save lives	HMGP, BRIC, USDA/CDBG, City	Tornado	Improve public safety during severe weather.
Old trees are vulnerable to breakage during high wind events damaging overhead power lines and buildings.	Implement tree replacement program. Offer economic assistance for citizens to remove old trees & replant with new / trim old trees.	Low	Medium	Finance Officer	\$50,000 each/prevent loss of services & injuries	OEM/HMGP, City, USDA, Ottertail Electric	Severe Weather Hazards	Reduce the extent to which utility interruptions affect areas during severe weather situations.
ARLINGTON PROBLEM STATEMENTS	ARLINGTON ACTIONS	PRIORITY RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
Current Fire Hall and Ambulance Center cannot accommodate emergency services and underserves staff/ volunteers.	Construct new Fire Hall/ Ambulance Center.	High	Long	Finance Officer	\$2,500,000/equip the community with more fire-fighting capabilities & save lives	FMAG, FP&S, DOI/City	Urban/ Wild Fire	Maintain firefighting capabilities.

ARLINGTON PROBLEM STATEMENTS	ARLINGTON ACTIONS	PRIORITY RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
Stormwater drainage through town is known to cause local flooding issues.	Implement stormwater improvements along 3 rd Street, such as sizing up stormwater sewer.	Medium	Medium	Maintenance Supervisor	\$350,000/reduce flood damages in town	HMGP, BRIC, City General Funds	Severe Weather Hazards (summer and winter)	Protect Specific Area of Kingsbury County from Floods.
Public school does not have adequate backup up power in case of an emergency.	Purchase and install of emergency backup generator for the school.	High	Medium	Finance Officer	\$100,000/provide a location for persons needing shelter	HMGP, BRIC, Town General Fund	Severe Weather Hazards (W/S); Extreme Heat/ Cold	Improve public safety during severe weather.
Community Emergency Shelter lacks supplies to care for residents in the event of a disaster.	Purchase emergency response supplies such as food, water, blankets, and cots.	High	Short	Finance Officer	\$10,000/prevent injuries and save lives	HMGP, BRIC, USDA/CDBG, City	Tornado/ Severe Weather Storms	Improve public safety during severe weather.
TOWN OF BADGER PROBLEM STATEMENTS	CITY OF BADGER ACTIONS	PRIORITY RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
Town does not have a Tornado Safe Emergency Shelter/Residents lack knowledge on weather safety procedures.	Develop & implement emergency plan for tornadoes.	High	Short	Town Board President	\$500 /prevent injuries and save lives	HMGP, BRIC, USDA/CDBG, City	Tornado/ Severe Weather Storms	Improve public safety during severe weather.
	Construction of tornado shelter in a center location in town.	Low	Long	Town Board President	\$500,000/prevent injuries and save lives	HMGP, BRIC, USDA/CDBG, City	Tornado/ Severe Weather Storms	Improve public safety during severe weather.

TOWN OF BADGER PROBLEM STATEMENTS	TOWN OF BADGER ACTIONS	PRIORITY RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
Road culvert under main highway is in disrepair.	Replace culvert to facilitate better drainage.	Medium	Long	Town Board President	\$30,000/ reduce flooding damages throughout town	HMGP	Flooding	Protect Specific Areas of Kingsbury County from floods.
Town does not have a designated storm shelter for public use.	Construction a tornado storm shelter.	Low	Long	Finance Officer	\$500,000/prevent injuries and save lives	HMGP, BRIC, USDA/CDBG, City	Tornado	Improve public safety during severe weather.
TOWN OF BANCROFT PROBLEM STATEMENTS	CITY OF BANCROFT ACTIONS	PRIORITY RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
Town does not have a designated storm shelter for public use.	Construction a tornado storm shelter.	Low	Long	Finance Officer	\$500,000/prevent injuries and save lives	HMGP, BRIC, USDA/CDBG, City	Tornado	Improve public safety during severe weather.
Town does not have a storm siren warning system to alert town residents of severe weather.	Installation of storm sirens.	Medium	Medium	Finance Officer	\$50,000/prevent injuries and save lives	HMGP, BRIC, USDA/CDBG, City	Tornado/ Severe Weather Hazards (Summer)	Improve public safety during severe weather.
Powerlines are vulnerable to loss of service due to high winds and/or ice.	Work with utility company to bury overhead power lines.	Medium	Medium	Finance Officer/ Northwestern Power	Unknown/prevent loss of power service	OEM/HMGP, City, USDA, Northwestern Power	Severe Weather Hazards	Reduce the extent to which utility interruptions affect areas during severe weather situations.

CITY OF DESMET PROBLEM STATEMENTS	CITY OF DESMET ACTIONS	RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
Fire Hall does not have adequate backup up power in case of an emergency.	Purchase and install of emergency backup generator for Fire Hall.	High	Short	Finance Officer	\$100,000/ensure emergency services are operational	HMGP, BRIC, Town General Fund	Severe Weather Hazards (W/S); Extreme Heat/ Cold	Improve public safety during severe weather.
Event Center (emergency storm shelter) does not have adequate backup up power in case of an emergency.	Purchase and install of emergency backup generator for Event Center.	High	Medium	Finance Officer	\$100,000/provide a location for persons needing shelter	HMGP, BRIC, Town General Fund	Severe Weather Hazards (W/S); Extreme Heat/ Cold	Improve public safety during severe weather.
Portions of city do not have access to storm shelter or tornado safe room.	Construct a tornado Emergency Shelter near campground.	Medium	Medium	Finance Officer	\$500,000/provide a location for persons to shelter	HMGP, BRIC, USDA/CDBG, City	Severe Weather Hazards	Improve public safety during severe weather.
Existing storm sirens cannot be heard by all residents within the City.	Replace and upgrade existing storm sirens.	Medium	Short	Fire Department/ Finance Officer	\$50,000/prevent injuries and save lives	City, OEM/HMGP	Severe Weather Hazards	Improve public safety during severe weather.
CITY OF DESMET PROBLEM STATEMENTS	CITY OF DESMET ACTIONS	RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
Firefighting equipment (specifically trucks) are insufficient to adequately provide fire protection.	Purchase water pump truck.	High	Medium	Fire Department	\$300,000/equip the community with more fire-fighting capabilities & save lives.	FMAG, FP&S, DOI/City	Urban/ Wild Fire	Maintain firefighting capabilities.

CITY OF DESMET PROBLEM STATEMENTS	CITY OF DESMET ACTIONS	RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
Powerlines are vulnerable to damage due to high winds and/or ice.	Bury overhead powerlines, specifically lines coming into city.	Medium	Long	Finance Officer/ Utility Provider	Unknown/prevent loss of power service	OEM/HMGP, City, USDA, Sioux Valley Electric	Severe Weather Hazards	Reduce the extent to which utility interruptions affect areas during severe weather situations.
TOWN OF ERWIN PROBLEM STATEMENTS	TOWN OF ERWIN ACTIONS	RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
City/Community Hall lacks ability to utilize backup generator.	Hire electrician to wire City/Community Hall to connect backup generator.	High	Short	Finance Officer	\$10,000/provide temporary power during an emergency	HMGP, BRIC, Town General Fund	Severe Weather Hazards	Reduce the extent to which utility interruptions affect areas during severe weather situations.
Lift Station lacks ability to utilize backup generator.	Upgrade Lift Station to connect backup generator.	High	Short	Finance Officer	\$30,000/provide temporary power during an emergency	HMGP, BRIC, Town General Fund	Severe Weather Hazards	Reduce the extent to which utility interruptions affect areas during severe weather situations.
Powerlines are vulnerable to damage due to high winds and/or ice.	Bury overhead powerlines, specifically lines coming into city.	Medium	Long	Finance Officer/ Ottetail	Unknown/prevent loss of power service	OEM/HMGP, City, USDA, Ottetail	Severe Weather Hazards	Reduce the extent to which utility interruptions affect areas during severe weather situations.
Community lacks ability to clear emergency evacuation routes during heavy snow or high wind events.	Purchase tractor to assist with snow removal/debris cleanup.	Medium	Long	Finance Officer	\$50,000/ prevent injuries and save lives	City General Fund/HMGP	All Hazards	Improve public safety during all hazards.

TOWN OF ERWIN PROBLEM STATEMENTS	TOWN OF ERWIN ACTIONS	RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
Town does not have a storm shelter or tornado safe room.	Construct a tornado Emergency Shelter near Park/RV Park.	High	Medium	Finance Officer	\$500,000/provide a location for persons to shelter	HMGP, BRIC, USDA/CDBG, City	Severe Weather Hazards	Improve public safety during severe weather.
TOWN OF HETLAND PROBLEM STATEMENTS	TOWN OF HETLAND ACTIONS	RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
The primary route in/out of town crosses an old bridge that is in need of major repairs.	Replace bridge on 449 th Ave.	High	Medium	Kingsbury County Highway Superintendent	\$500,000/prevent injuries and save lives	BRICE/ OEM/HMGP, Town, USDA, DOT	Severe Weather Hazards/ Flooding	Improve public safety during severe weather.
The town does not have a Tornado Safe Emergency Shelter.	Construct new tornado shelter in center of town or retrofit the American Legion/ Museum building to serve as a storm shelter.	Low	Long	Finance Officer	\$500,000 (dependent on project)/prevent injuries and save lives	BRICE/ OEM/HMGP, Town, USDA	Tornado	Improve public safety during severe weather.
The town does not have a Tornado Safe Emergency Shelter.	Develop and implement emergency action plan for tornadoes.	High	Short	Finance Officer	\$1,000/prevent injuries and save lives	Town	Tornado	Improve public safety during severe weather.
Culverts throughout town cannot handle increased water levels during high precipitation events causing backup & flooding.	Replace culverts at the intersections of Railroad St N & Main St and Oleson St & Main St	High	Medium	Finance Officer	\$100,000/reduce flood damages in town	HMGP, BRIC, City General Funds, DOT	Severe Weather Hazards (summer and winter)	Protect Specific Area of Kingsbury County from Floods.

CITY OF IROQUOIS PROBLEM STATEMENTS	CITY OF IROQUOIS ACTIONS	RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
Town does not have adequate backup power for critical infrastructure.	Purchase portable backup generator.	High	Short	Finance Officer	\$50,000/provide a location for persons needing shelter	HMGP, BRIC, Town General Fund	Severe Weather Hazards (W/S); Extreme Heat/ Cold	Reduce the extent to which utility interruptions affect areas during severe weather situations.
Public may be unaware of emergency facilities & storm procedures.	Update emergency action plan for tornadoes.	High	Short	Finance Officer	\$1,000/prevent injuries and save lives	Town	Tornado	Improve public safety during severe weather.
Portions of city are not served by a Tornado Safe Emergency Shelter.	Construction of tornado safe room at the ballfields.	Low	Long	Finance Officer	\$500,000 (dependent on project)/prevent injuries and save lives	BRICE/ OEM/HMGP, Town, USDA	Tornado	Improve public safety during severe weather.
Culverts along Hwy 14 are deteriorating and cause potential traffic hazards.	Replace and upgrade culverts.	Medium	Medium	Finance Officer	\$100,000/reduce flood damages in town	County, City, HMGP, DOT	Flooding	Improve public safety during severe weather.
Powerlines are vulnerable to damage due to high winds and/or ice.	Bury overhead powerlines, specifically lines coming into city.	Medium	Long	Finance Officer/ Ottertail	Unknown/prevent loss of power service	OEM/HMGP, City, USDA, Ottertail	Severe Weather Hazards	Reduce the extent to which utility interruptions affect areas during severe weather situations.

CITY OF LAKE PRESTON PROBLEM STATEMENTS	CITY OF LAKE PRESTON ACTIONS	RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
Powerlines are vulnerable to damage due to high winds and/or ice.	Bury overhead powerlines, specifically lines coming into city.	Medium	Long	Finance Officer/ Ottetail	Unknown/prevent loss of power service	OEM/HMGP, City, USDA, Ottetail	Severe Weather Hazards	Reduce the extent to which utility interruptions affect areas during severe weather situations.
Existing storm sirens cannot be heard by all residents within the City.	Add additional storm siren to area with new development.	Medium	Short	Fire Department/ Finance Officer	\$50,000/prevent injuries and save lives	City, OEM/HMGP	Severe Weather Hazards	Improve public safety during severe weather.
Firefighting equipment (specifically personal protective gear) are insufficient to adequately provide fire protection.	Purchase fire suits and other personal protective equipment.	Medium	Medium	Fire Department	\$100,000 (dependent on number)/equip the community with more fire-fighting capabilities & save lives.	FMAG, FP&S, DOI/City	Urban/ Wild Fire	Maintain firefighting capabilities.
Stormwater drainage through town is known to cause local flooding issues during heavy rains.	Implement stormwater improvements along main roads, such as sizing up stormwater sewer.	Medium	Long	Maintenance Supervisor	\$350,000/reduce flood damages in town	HMGP, BRIC, City General Funds, DOT	Severe Weather Hazards (summer and winter)	Protect Specific Area of Kingsbury County from Floods.
Town does not have adequate backup power for emergency shelter.	Purchase portable generator for city hall/emergency shelter	High	Medium	Finance Officer	\$50,000/ensure emergency shelter/services continue in utility outage	HMGP, BRIC, USDA, Town General Fund	Severe Weather Hazards (W/S); Extreme Heat/ Cold	Reduce the extent to which utility interruptions affect areas during severe weather situations.

CITY OF LAKE PRESTON PROBLEM STATEMENTS	CITY OF LAKE PRESTON ACTIONS	RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
Town does not have adequate backup power for critical infrastructure.	Purchase fixed generator for northeast lift station	Low	Long	Finance Officer	\$150,000/ensure main lift station functions during power outage	HMGP, BRIC, Town General Fund	Severe Weather Hazards (W/S); Extreme Heat/ Cold	Reduce the extent to which utility interruptions affect areas during severe weather situations.
TOWN OF OLDHAM PRESTON PROBLEM STATEMENTS	TOWN OF OLDHAM ACTIONS	RATING	TIMEFRAME	CONTACT	COST/BENEFIT	FUNDING SOURCE	HAZARD	GOAL
Powerlines are vulnerable to damage due to high winds and/or ice.	Bury overhead powerlines, specifically lines coming into city.	Medium	Long	Finance Officer/ Ottetail	Unknown/prevent loss of power service	OEM/HMGP, City, USDA, Ottetail	Severe Weather Hazards	Reduce the extent to which utility interruptions affect areas during severe weather situations.
Existing storm sirens are unreliable during emergency weather events.	Replace and upgrade storm siren system.	High	Medium	Fire Department/ Finance Officer	\$50,000/prevent injuries and save lives	City, OEM/HMGP	Severe Weather Hazards	Improve public safety during severe weather.
Town does not have adequate backup power for critical infrastructure.	Purchase portable backup generator.	High	Short	Finance Officer	\$50,000/provide a location for persons needing shelter	HMGP, BRIC, Town General Fund	Severe Weather Hazards (W/S); Extreme Heat/ Cold	Reduce the extent to which utility interruptions affect areas during severe weather situations.

Figure 5.1: Kingsbury County Potential Mitigation

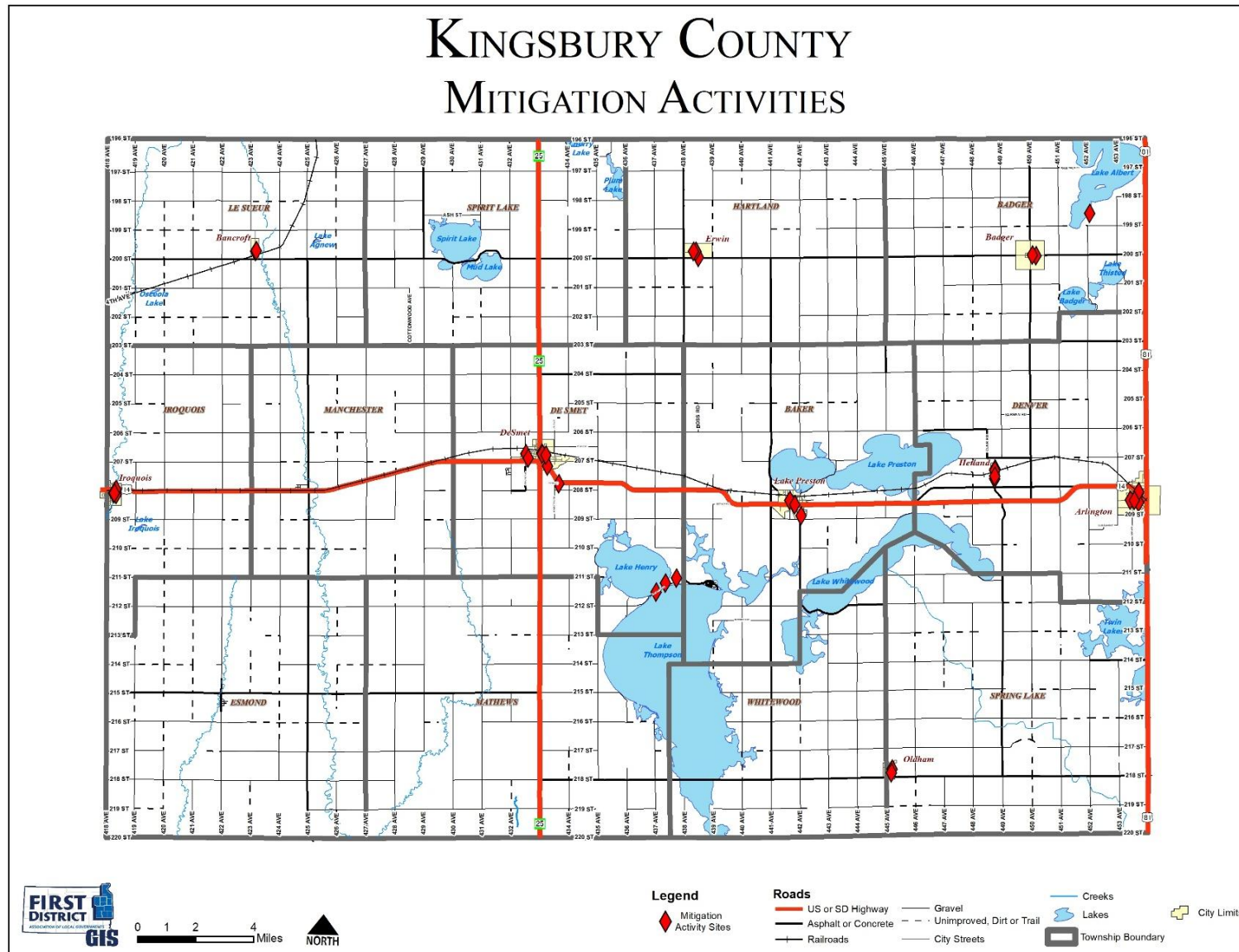


Figure 5.2: City of Arlington Potential Mitigation

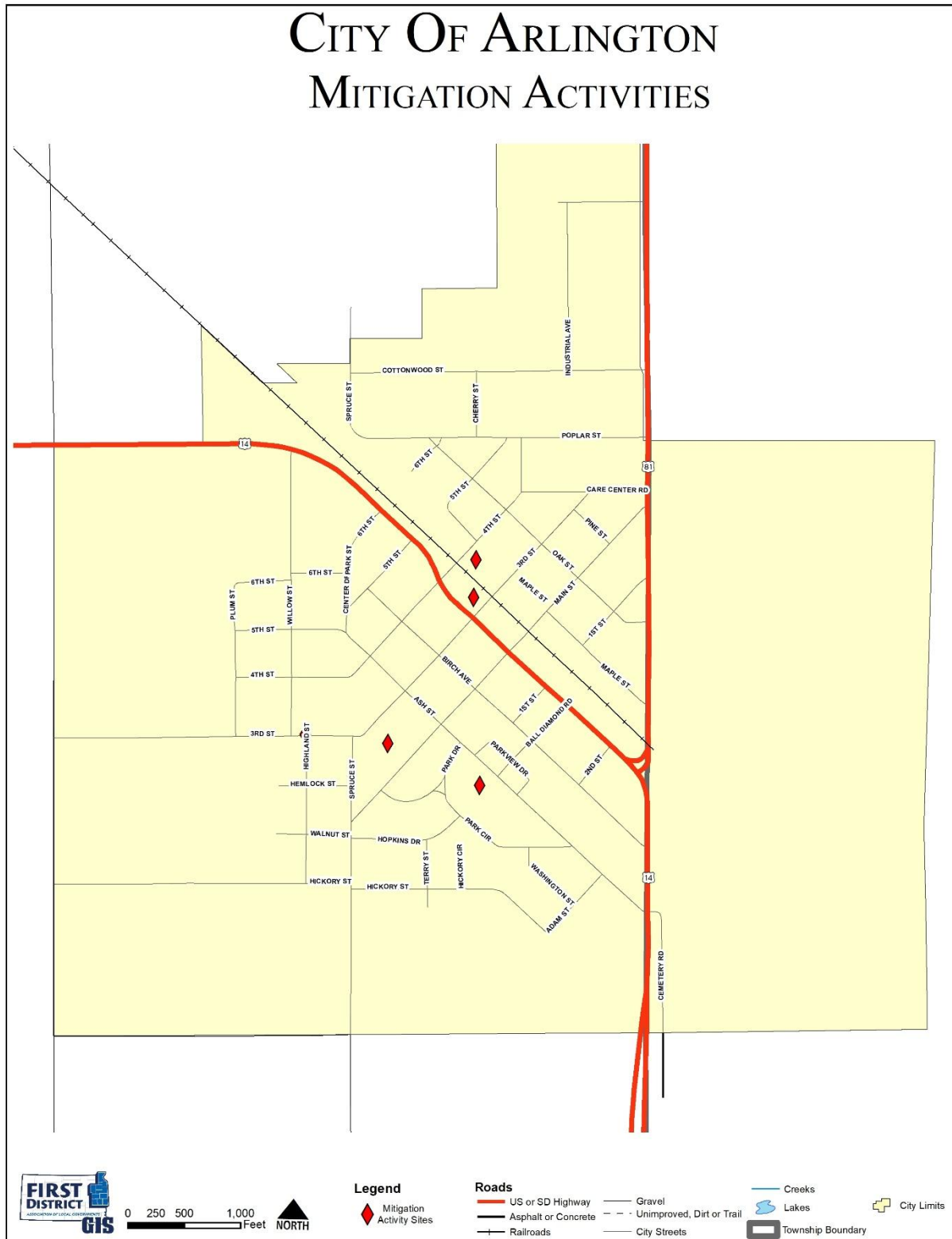


Figure 5.3: Town of Badger Potential Mitigation Project Map

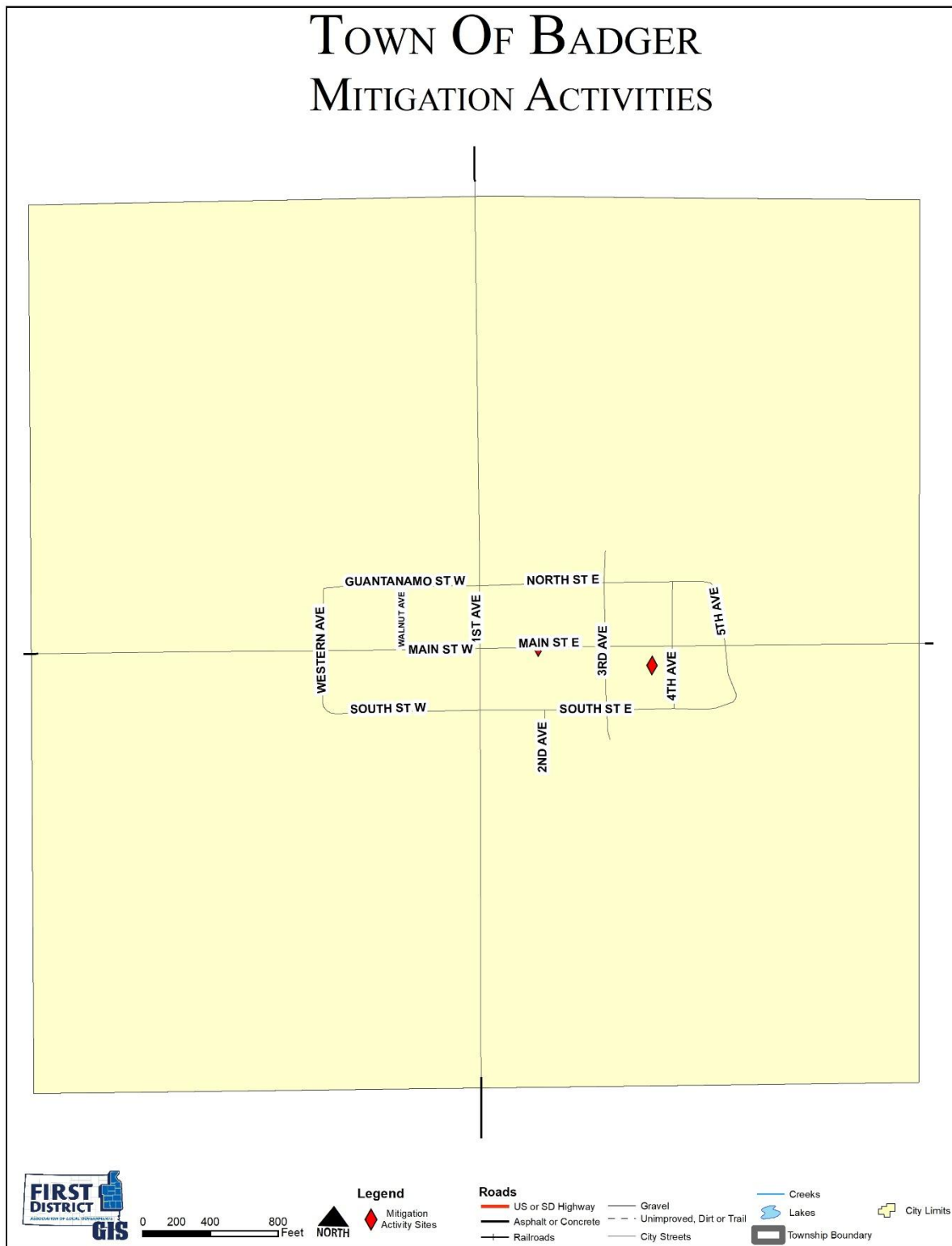


Figure 5.4: Town of Bancroft Potential Mitigation Project

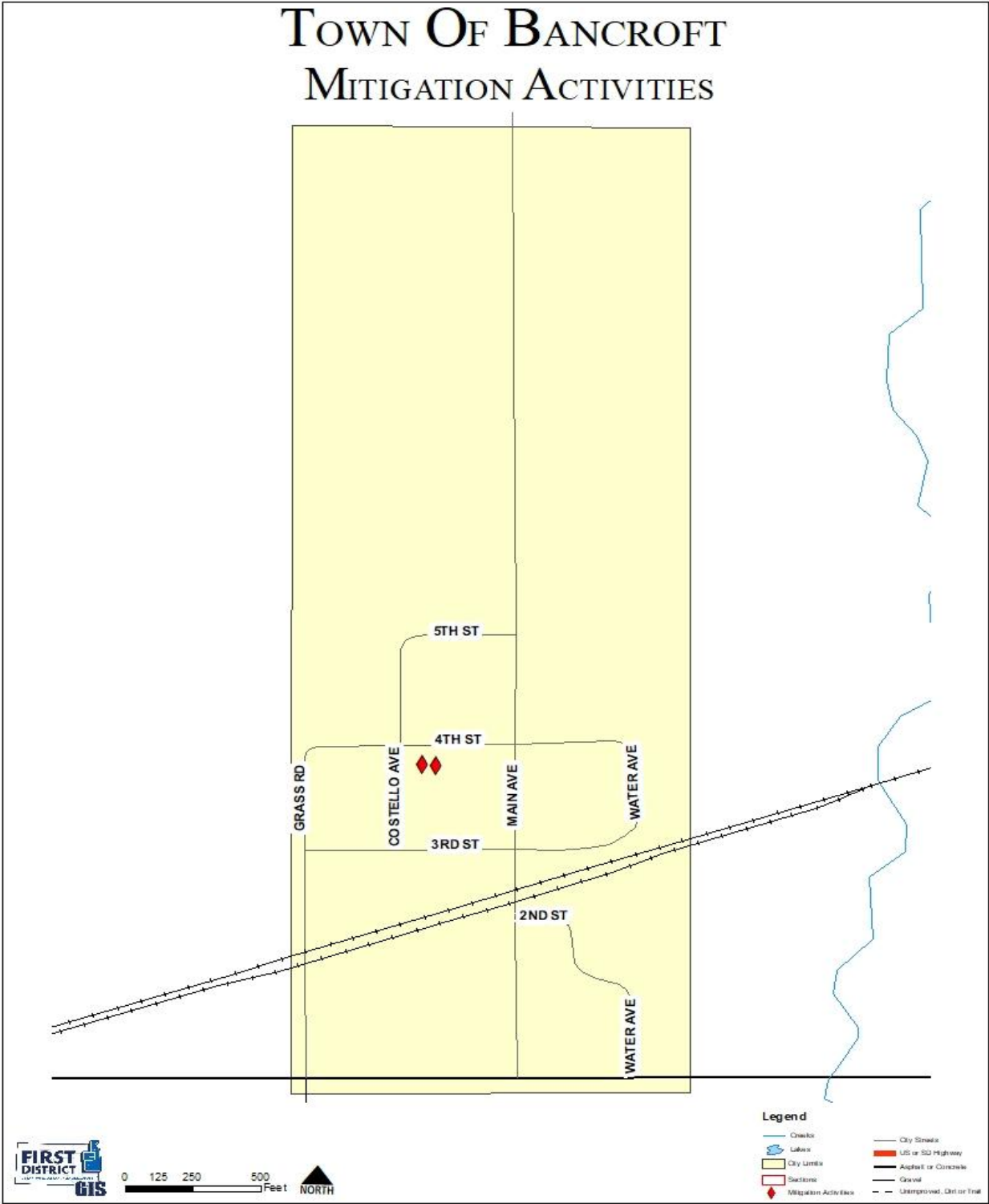


Figure 5.5: City of De Smet Potential Mitigation Project

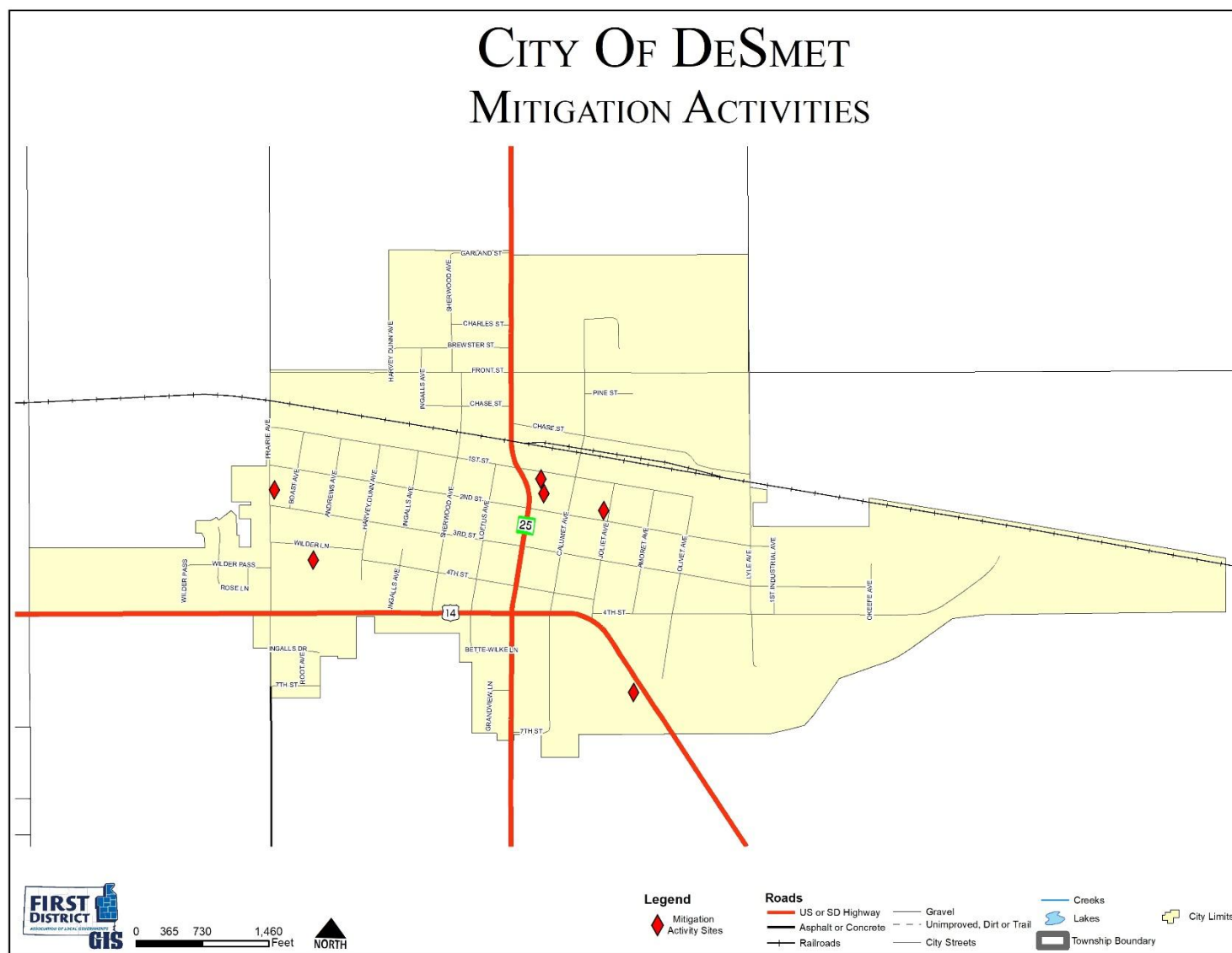


Figure 5.6: Town of Erwin Potential Mitigation Project Map

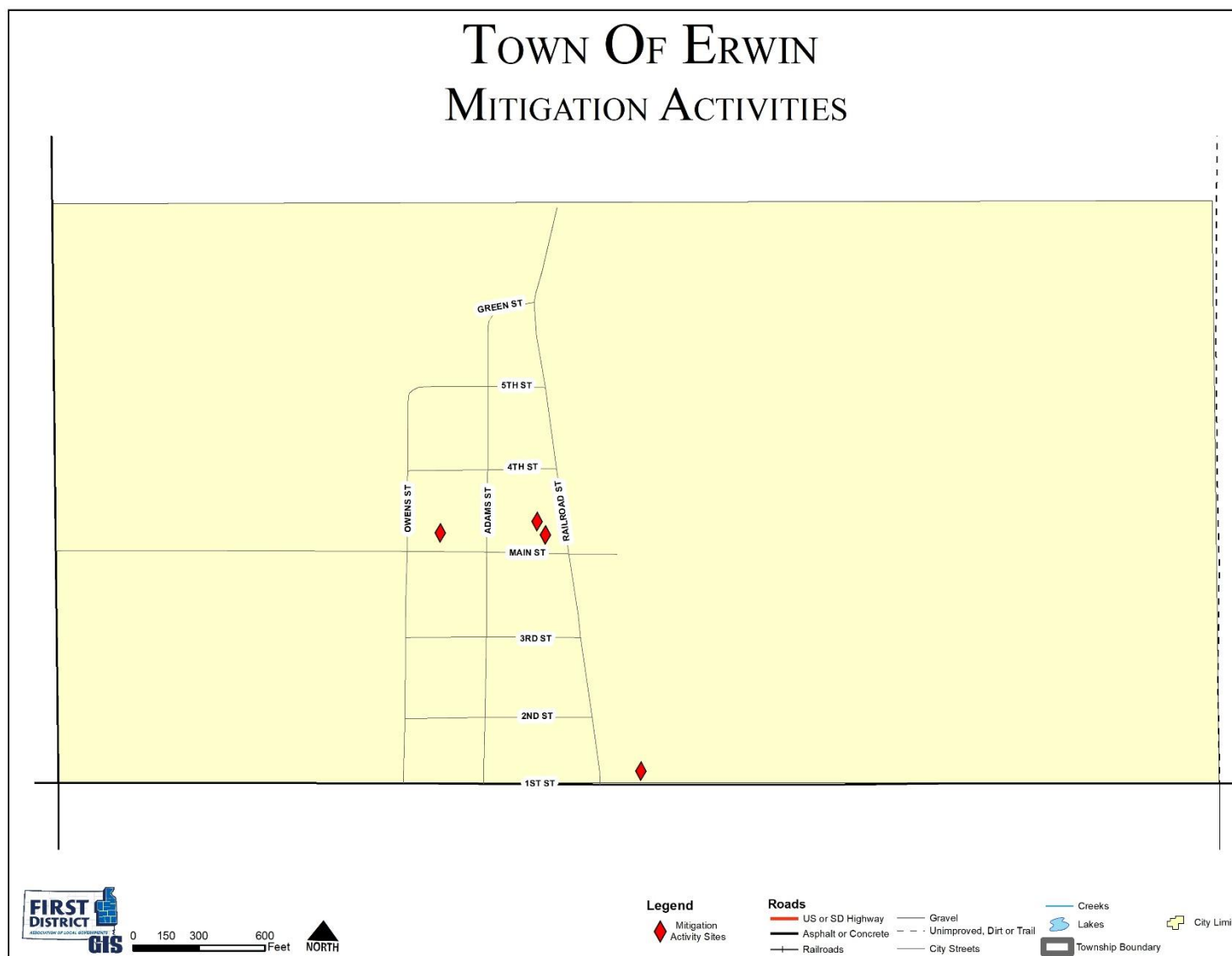


Figure 5.7: Town of Hetland Potential Mitigation Project Map

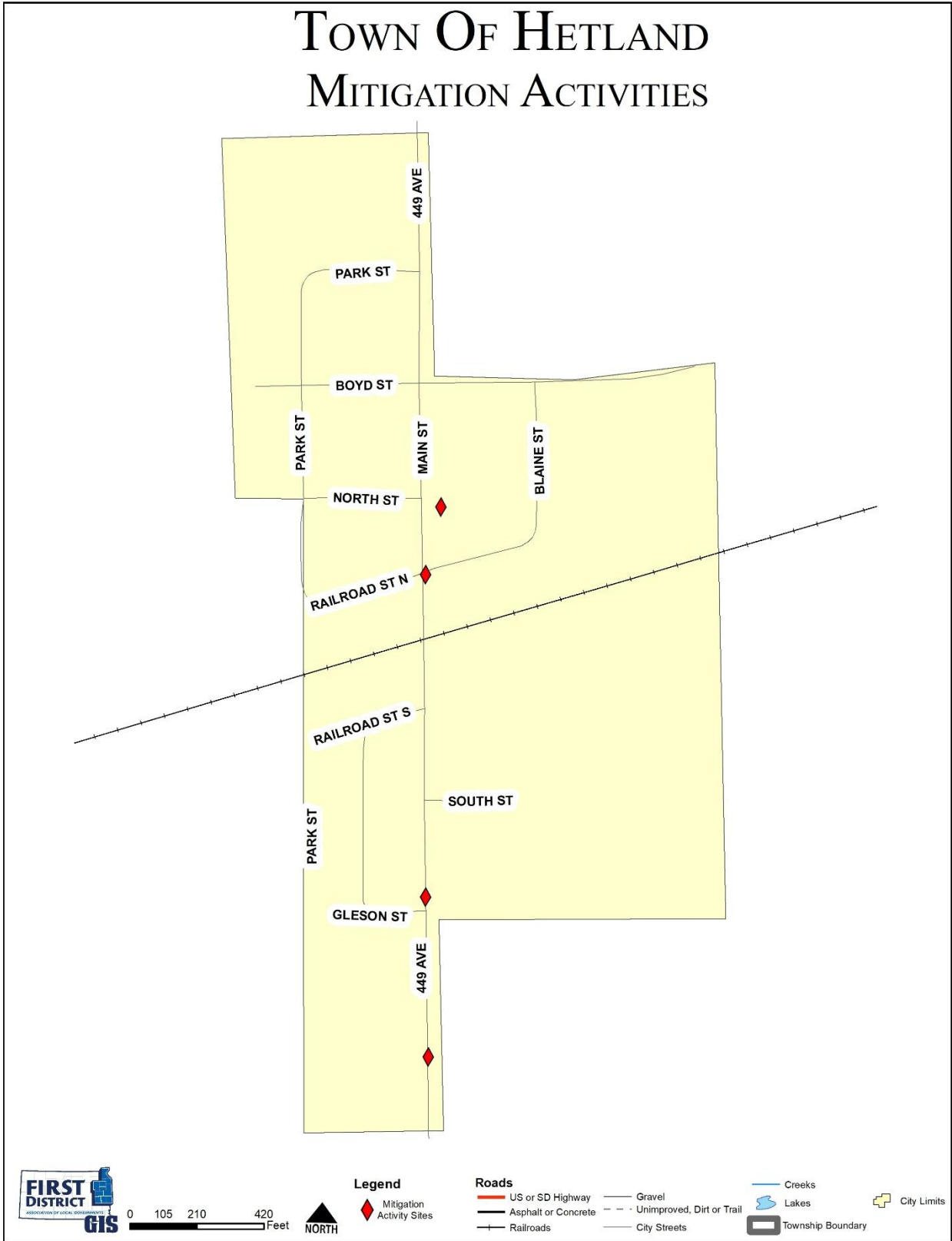


Figure 5.8: City of Iroquois Potential Mitigation Project Map

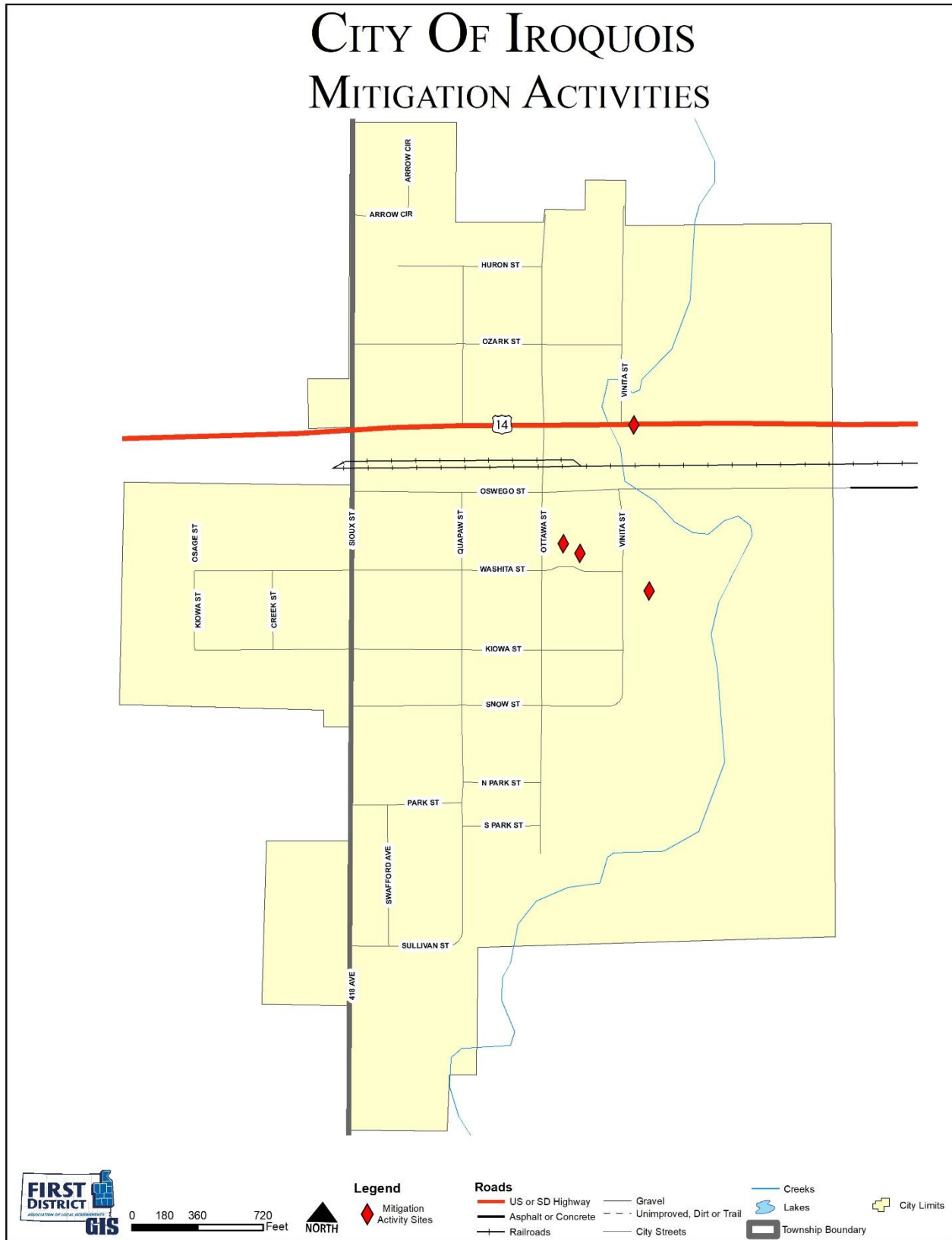
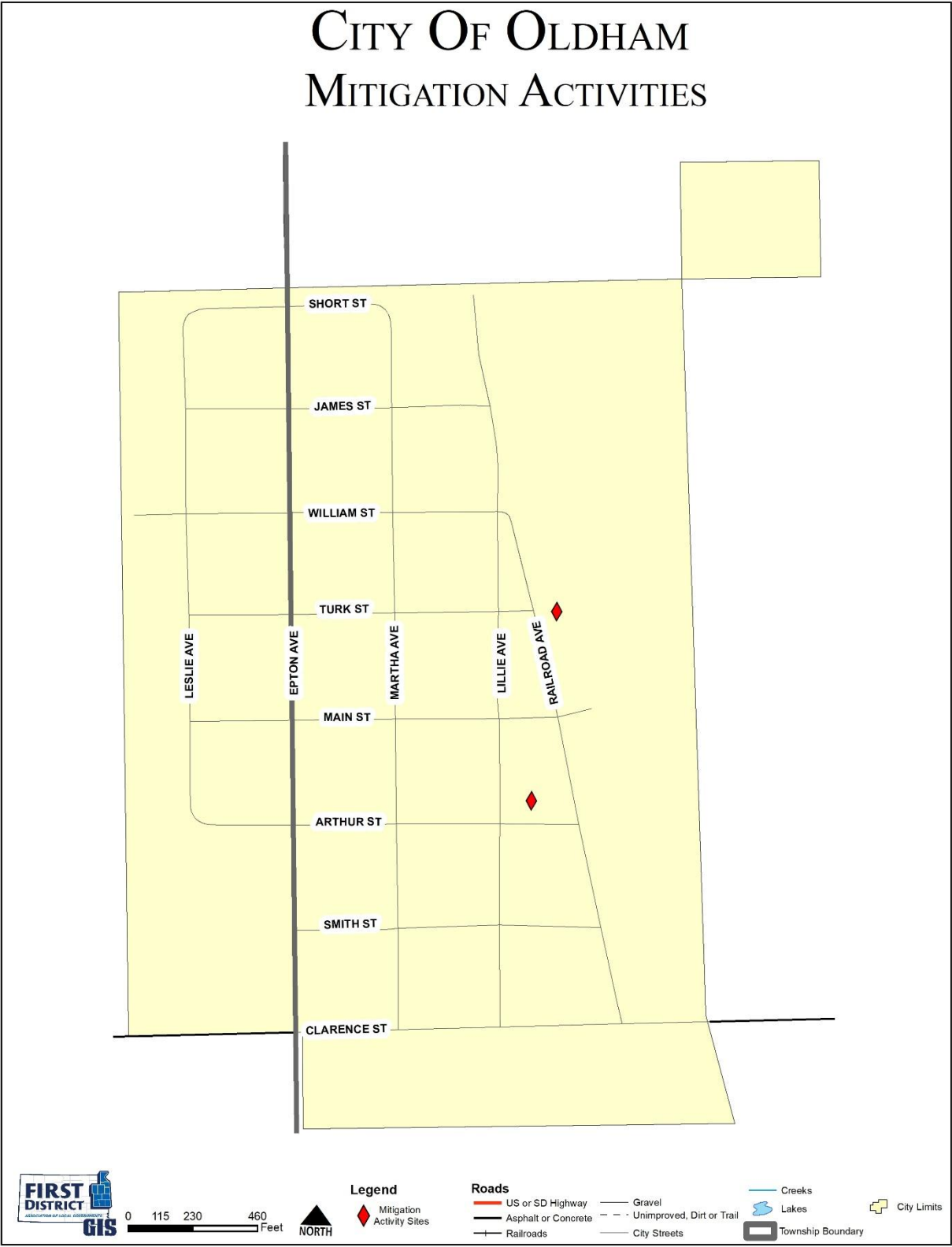


Figure 5.9: City of Lake Preston Potential Mitigation Project Map



Figure 5.9: City of Oldham Potential Mitigation Project Map



IMPLEMENTATION OF MITIGATION ACTIONS

Requirement 201.6(c)(4)(ii). Local Mitigation Plan Review Tool – D3 (a-c).

Requirement 201.6(d)(3). Local Mitigation Plan Review Tool – E2 (c)

Upon adoption of the updated Kingsbury County PDM, each jurisdiction will become responsible for implementing its own mitigation actions. The planning required for implementation is the sole responsibility of the local jurisdictions and private businesses that have participated in the PDM update. All of the municipalities have indicated that they do not have the financial capability to move forward with projects identified in the PDM at this time, however, all will consider applying for funds through the State and Federal Agencies once such funds become available. If and when the municipalities are able to secure funding for the mitigation projects, they will move forward with the projects identified. A benefit cost analysis will be conducted on an individual basis after the decision is made to move forward with a project.

The 2007 PDM was the first approved mitigation plan that the County has ever had on file. At that time, the PDM was drafted the requirements for an approved mitigation plan were much different than the current Local Mitigation Plan Review Tool. Since disaster mitigation was a relatively new concept at that time, mitigation plans were approved with less scrutiny. The same depth of planning was not utilized in the 2007 PDM as was used for the 2014 PDM update. The 2007 PDM had the “bare minimum” to meet the FEMA requirements for a mitigation plan, resulting in a lack of relevant information that could be utilized and easily integrated into the County’s and Municipalities’ existing planning mechanisms.

Due to these factors, the 2007 PDM was not used or incorporated into other planning documents or mechanisms. From a practical standpoint the 2014 PDM update required communities to reflect on past disasters, consider future disasters, and think about how or if future disasters would be handled differently, or better. It is anticipated with the amount of time, energy, and professional guidance involved during the drafting process of the updated 2019 PDM, that the County has created a document that has validity and a clear purpose which will be more likely to fit in the existing planning mechanisms that exist county-wide.

Lastly, by involving all the local jurisdictions and bringing the PDM to the attention of neighboring communities, the planning process has brought more awareness of hazard mitigation to the people residing in the County, which will encourage further involvement in the future. The 2014 PDM plan was referenced during the 2019 PDM update process. Similarly, the 2019 PDM plan was referenced during the drafting process for the current 2024 Kingsbury County PDM plan.

Since 2019 (adoption of last PDM Plan), the cities of DeSmet and Arlington have adopted Comprehensive updates to their zoning ordinances. Both jurisdictions reviewed rules regarding bulk, height, and density of development to determine whether consistent, not only with the established planning principles of the community but also to ensure those regulations practicably employed the goals of the pre-disaster mitigation plan with reference to protection from fire, drought (impacts on water supply), limitation of density in flood prone areas and review of regulations for areas determined to be in a 100-year floodplain.

While reviewing those ordinances and changes at publicly noticed meetings, both entities chose to prioritize the adoption of updated special flood hazard areas as soon as possible. DeSmet adopted the newly effective Special Flood Hazard Areas in the newly prepared Flood Insurance Rate Map as part of the Flood Insurance Study as part of the update to the Zoning Ordinance. The City of Iroquois and Kingsbury County adopted updates as soon as possible to remain consistent with the goals of this Plan. The City of Arlington was notified of the need to adopt the maps, when the Brookings County Flood Insurance Map became eligible for update in October of 2024. Arlington will adopt the map and ordinance as soon as possible.

Each of the communities determined that the public would not support free-board or additional requirements above the minimum requirements to remain compliant.

Updates have been made to the Hazardous Materials Plan and Emergency Operations Plan since 2019. During the revision of those plans the emergency manager reviewed the PDM Plan to ensure harmony. No other plans, policies, regulations have been significantly amended since the 2019 Plan. Thus, changes have not been made to other planning mechanisms to incorporate the 2019 Plan.



CHAPTER 6 | PLAN MAINTENANCE

MONITORING, EVALUATING, AND UPDATING THE PLAN

Requirement 201.6(c)(4)(iii). Local Mitigation Plan Review Tool – D1.

Requirement 201.6(c)(4)(i). Local Mitigation Plan Review Tool – D2-a-c.

The County and all of the participating local jurisdictions thereof will incorporate the findings and projects of the PDM in all planning areas as appropriate. Periodic monitoring and reporting of the PDM is required to ensure that the goals and objectives for the County PDM are kept current and that local mitigation efforts are being carried out. Communities will establish an annual review of projects and infrastructure listed in the plan. As funding becomes available, projects are completed, or the inevitable new project needs to be added, communities will report to the Kingsbury County Emergency Management Director.

Communities will utilize Worksheet 10: Plan Update Evaluation Form from the Local Mitigation Planning Handbook (see Appendix I) by October 31 each year and following any disaster to assess strengths, weaknesses, and evaluate potential updates to the existing plan. The Finance Officer or a designated representative from the City Council/Town Board will submit the findings of this review to the Emergency Manager. The Emergency Manager will then compile an annual report summarizing the results for each community and for Kingsbury County, which will be presented to the County Commissioners in November.

During the process of implementing mitigation strategies, the county or communities within the county may experience lack of funding, budget cuts, staff turnover, and/or a general failure of projects. These scenarios are not in themselves a reason to discontinue and fail to update the PDM. A good plan needs to provide for periodic monitoring and evaluation of its successes and failures and allow for appropriate changes to be made.

CONTINUED PUBLIC PARTICIPATION & INVOLVEMENT

Requirement 201.6(c)(4)(iii). Local Mitigation Plan Review Tool – D1-a.

Requirement 201.6(c)(4)(i). Local Mitigation Plan Review Tool – D2-a-c.

During interim periods between the five-year re-write, efforts will be continued to encourage and facilitate public involvement and input. The PDM will be available for public view and comment at the Kingsbury County Emergency Management Office located in the Kingsbury County Sheriff's Office and the First District Association of Local Governments office. The PDM will also be available for review on the web at the First District Association of Local Governments homepage www.1stdistrict.org. Comments will always be received whether orally over the phone, physically by mail, or electronically by e-mail.

All ongoing workshops and trainings will be open to the public and appropriately advertised. Ongoing press releases and interviews will help disseminate information to the general public and encourage participation.

As implementation of the mitigation strategies continues in each local jurisdiction, the primary means of public involvement will be the jurisdiction's own public comment and hearing process. State law as it applies to municipalities and counties requires this as a minimum for many of the proposed implementation measures. Effort will be made to encourage cities, towns and counties to go beyond the minimum required to receive public input and engage stakeholders.

ANNUAL REPORTING PROCEDURES

Requirement 201.6(c)(4)(iii). Local Mitigation Plan Review Tool – D1.

Requirement 201.6(c)(4)(i). Local Mitigation Plan Review Tool – D2-a-c.

The PDM shall be reviewed annually, as required by the County Emergency Management Director, or as the situation dictates such as following a disaster declaration. The Kingsbury County Emergency Management Director will utilize Worksheet 10: Plan Update Evaluation Form (see Appendix I) from the Local Mitigation Planning Handbook to review the PDM annually in November and ensure the following:

1. The County Elected body will receive an annual report and/or presentation on the implementation status of the PDM;
2. The report will include an evaluation of the effectiveness and appropriateness of the mitigation actions proposed in the PDM, including comments received from specific communities; and
3. The report will recommend, as appropriate, any required changes or amendments to the PDM.

FIVE-YEAR PDM REVIEW

Requirement 201.6(c)(4)(i). Local Mitigation Plan Review Tool – D2-a-c.

Requirement 201.6(c)(4)(ii). Local Mitigation Plan Review Tool – D3-c.

Every five years the PDM will be reviewed, and a complete update will be initiated. All information in the PDM will be evaluated for completeness and accuracy based on new information or data sources. New property development activities will be added to the PDM and evaluated for impacts. New or improved sources of hazard related data will also be included.

In future years, if the County relies on grant dollars to hire a contractor to write the PDM update, the County will initiate the process of applying for and securing such funding in the third year of the PDM to ensure the funding is in place by the fourth year of the PDM. The fifth year will then be used to write the PDM update, which in turn will prevent any lapse in time where the county does not have a current approved PDM on file.

The goals, objectives, and mitigation strategies will be readdressed and amended as necessary based on new information, additional experience and the implementation progress of the PDM. The approach to this PDM update effort will be essentially the same as the one used for the original PDM development.

The Emergency Management Director will meet with the PDM Planning Team for review and approval prior to final submission of the updated PDM.

PLAN AMENDMENTS

PDM amendments will be considered by the Kingsbury County Emergency Management Director, during the PDM's annual review to take place the end of each county fiscal year. All affected local jurisdictions (cities, towns, and counties) will be required to hold a public hearing and adopt the recommended amendment by resolution prior to considerations by the PDM Planning Team.

INCORPORATION INTO EXISTING PLANNING MECHANISMS

Requirement 201.6(B)(3). Local Mitigation Plan Review Tool – A4.

Requirement 201.6(c)(4)(i). Local Mitigation Plan Review Tool – D2-a-c.

Requirement 201.6(c)(4)(ii). Local Mitigation Plan Review Tool – D3.

All towns with existing comprehensive land use plans will review mitigation projects annually when reviewing their comprehensive land use plan, as is recommended in each of their plans. In addition, all municipalities, including the towns without comprehensive land use plans, will consider the mitigation requirements, goals, actions, and projects when it considers and reviews the budget and other existing planning documents. Preparation of the budget is an opportune time to review the plan since municipalities are required by state law to prepare budgets for the upcoming year and typically consider any expenditure for the upcoming year at that time.

The local jurisdictions will post a permanent memo to their files as a reminder for them to incorporate their annual review of the mitigation actions identified into the budget preparation process. This does not require the projects be included in the budget, it merely serves as a reminder to the city officials that they have identified mitigation projects in the PDM that should be considered if the budget allows for it.

POTENTIAL FUNDING SOURCES

Although all mitigation techniques will likely save money by avoiding losses, many projects are costly to implement. None of the local jurisdictions have the funds available to move forward with mitigation projects at this time; thus, the Potential Funding Sources section was included so that the local jurisdictions can work towards securing funding for the projects. Inevitably, due to their small tax bases and small populations, most local jurisdictions do not have the ability to generate enough revenue to support anything beyond the basic needs of the community. Thus, mitigation projects will not be completed without a large amount of funding support from State or Federal programs.

The County jurisdictions will continue to seek outside funding assistance for mitigation projects in both the pre- and post-disaster environment. Primary Federal and State grant programs have been identified and briefly discussed, along with local and non-governmental funding sources, as a resource for the local jurisdictions.

Federal

The following federal grant programs have been identified as funding sources which specifically target hazard mitigation projects:

Title: Rural Fire Assistance Grants

Agency: U.S. Fish & Wildlife Service (DOI)

Each year, the U.S. Fish & Wildlife Service (FWS) provides Rural Fire Assistance (RFA) grants to neighboring community fire departments to enhance local wildfire protection, purchase equipment, and train volunteer firefighters. Service fire staff also assist directly with community projects.

These efforts reduce the risk to human life and better permit FWS firefighters to interact and work with community fire organizations when fighting wildfires. The Department of the Interior (DOI) receives an appropriated budget each year for the RFA grant program. The maximum award per grant is \$20,000. The DOI assistance program targets rural and volunteer fire departments that routinely help fight fire on or near DOI lands.

Title: Fire Management Assistance Grant Program

Agency: Federal Emergency Management Agency

The Fire Management Assistance Grant (FMAG) program provides grants to states, tribal governments, and local governments for the mitigation, management, and control of any fire burning on publicly (non-federal) or privately owned forest or grassland that threatens such destruction as would constitute a major disaster.

The Fire Management Assistance declaration process is initiated when a state submits a request for assistance to the FEMA Regional Director at the time a “threat of major disaster” exists. The entire process is accomplished on an expedited basis and decisions are rendered within a matter of hours.

However, before a grant can be awarded, a state must demonstrate that total eligible costs for the declared fire meet or exceed the individual fire cost threshold. This applies to single fires or cumulative fire cost threshold. The grants are made in the form of cost sharing with the federal share being 75% of total eligible costs. Eligible firefighting costs may include expenses for: field camps, repair and replacement tools, mobilization and demobilization activities, equipment use, and materials/supplies.

Title: Fire Prevention and Safety (FP&S) Grants

Agency: Federal Emergency Management Agency

The Fire Prevention and Safety grants support projects that enhance the safety of the public and firefighters from fire and other related hazards. The primary goal is to target high-risk populations and reduce injury and prevent death. Eligibility includes fire departments, national, regional, state, and local organizations, tribal organizations, and/or community organizations recognized for their experience and expertise in fire prevention and safety programs and activities. Private non-profit and public organizations are also eligible.

Title: Wildland Urban Interface Community & Rural Fire Assistance

Agency: Bureau of Land Management (DOI)

This program is designed to implement the National Fire Plan and assist communities at risk from catastrophic wildland fires by providing grants, technical assistance, and training for community programs that develop local capability, such as:

Assessment and planning, mitigation activities, and community and homeowner education and action; hazardous fuels reduction activities, including the training, monitoring or maintenance associated with such hazardous fuels reduction activities, on federal land, or on adjacent nonfederal land for activities that mitigate the threat of catastrophic fire to communities and natural resources in high risk areas; and, enhancement of knowledge and fire protection capability of rural fire districts through assistance in education and training, protective clothing and equipment purchase, and mitigation methods on a cost-share basis.

The Rural Fire Assistance (RFA) program funds are appropriated by Congress annually. The maximum award is \$20,000. This funding focuses specifically on enhancing fire protection capabilities of rural and volunteer fire departments through training, equipment purchases, and fire prevention work on a cost-shared basis.

Title: Western Wildland Urban Interface Grants

Agency: USDA Forest Service

The National Fire Plan (NFP) is a long-term strategy for reducing the effects of catastrophic wildfires throughout the nation. The Division of Forestry's NFP Program is implemented within the Division's Fire and Aviation Program through the existing USDA Forest Service, State & Private Forestry, and State Fire Assistance Program.

Congress has provided increased funding assistance to states through the U.S. Forest Service State and Private Forestry programs since 2001. The focus of much of this additional funding was mitigating risk in WUI areas. In the West, the State Fire Assistance funding is available and awarded through a competitive process with emphasis on hazard fuel reduction, information and education, and community and homeowner action. This portion of the National Fire Plan was developed to assist interface communities manage the unique hazards they find around them. Long-term solutions to interface challenges require informing and educating people who live in these areas about what they and their local organizations can do to mitigate these hazards.

The 10-Year Comprehensive Strategy focuses on assisting people and communities in the WUI to moderate the threat of catastrophic fire through the four broad goals of improving prevention and suppression, reducing hazardous fuels, restoring fire-adapted ecosystems, and promoting community assistance. The Western States Wildland Urban Interface Grant may be used to apply for financial assistance towards hazardous fuels and educational projects within the four goals of: improved prevention, reduction of hazardous fuels, restoration of fire-adapted ecosystems and promotion of community assistance.

Title: Community Planning Assistance for Wildfire

Agency: Private Community Wildfire Planning Center

Established in 2015 by Headwaters Economics and Wildfire Planning International, Community Planning Assistance for Wildfire (CPAW) works with communities to reduce wildfire risks through improved land use planning. CPAW is a grant-funded program providing communities with professional assistance from foresters, planners, economists and wildfire risk modelers to integrate wildfire mitigation into the development planning process. All services and recommendations are site-specific and come at no cost to the community.

Title: U.S. Bureau of Land Management, Community Assistance Program

Agency: Bureau of Land Management

BLM provides funds to communities through assistance agreements to complete mitigation projects, education and planning within the WUI.

Title: Hazard Mitigation Grant Program Post Fire Grant Program

Agency: Federal Emergency Management Agency

The Hazard Mitigation Grant Program (HMGP) has Post Fire assistance available to help communities implement hazard mitigation measures after wildfire disasters. States, federally recognized tribes and territories affected by fires resulting in a Fire Management Assistance Grant (FMAG) declaration on or after October 5, 2018, are eligible to apply.

The application period for this grant is only open for six months after the state or territory's first FMAG declaration of the fiscal year is made. Prioritized HMGP Post Fire activities include wildfire mitigation, infrastructure retrofit, soil and slope stabilization, and flood prevention.

Title: Urban and Community Forestry (UCF) Program

Agency: USDA Forest Service

A cooperative program of the U.S. Forest Service that focuses on the stewardship of urban natural resources. With 80 percent of the nation's population in urban areas, there are strong environmental, social, and economic cases to be made for the conservation of green spaces to guide growth and revitalize city centers and older suburbs. UCF responds to the needs of urban areas by maintaining, restoring, and improving urban forest ecosystems on more than 70 million acres. Through these efforts the program encourages and promotes the creation of healthier, more livable urban environments across the nation. These grant programs are focused on issues and landscapes of national importance and prioritized through state and regional assessments.

Title: Flood Mitigation Assistance Grant Program

Agency: Federal Emergency Management Agency

The Flood Mitigation Assistance (FMA) program provides funding to assist states and communities in implementing measures to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the National Flood Insurance Program (NFIP). FMA was created as part of the National Flood Insurance Reform Act of 1994 (42 USC 4101) with the goal of reducing or eliminating claims under the NFIP.

FMA is available to states, local communities, and federally recognized tribes and territories on an annual basis.. This funding is available for mitigation planning and implementation of mitigation measures that reduce or eliminate risk of repetitive flood damage to NFIP insured buildings only. The federal cost share for an FMA project is 75%. At least 25% of the total eligible costs must be provided by a non-federal source. Of this, no more than half can be provided as in-kind contributions from third parties.

States administer the FMA program and are responsible for selecting projects for funding from the applications submitted by all communities within the state. FMA funds are very limited, which makes the application selection quite competitive. The state then forwards selected applications to FEMA for an eligibility determination. Although individuals cannot apply directly for FMA funds, their local government may submit an application on their behalf.

Title: Community Development Block Grants

Agency: U.S. Department of Housing and Urban Development

The Community Development Block Grant (CDBG) program provides grants to local governments for community and economic development projects that primarily benefit low and moderate-income households with decent housing, suitable living environments, and expanded economic opportunities. Eligible activities include community facilities and improvements, roads and infrastructure, housing rehabilitation and preservation, development activities, public services, economic development, planning, and administration.

Public improvements may include flood and drainage improvements. In limited instances and during times of “urgent need” (e.g., post disaster), CDBG funding may be used to acquire a property located in a floodplain that was severely damaged by a recent flood, demolish a structure severely damaged by an earthquake, or repair a public facility severely damaged by a hazard event. CDBG funds can be used to match FEMA grants.

Title: Hazard Mitigation Grant Program

Agency: Federal Emergency Management Agency

The Hazard Mitigation Grant Program (HMGP) was created in November 1988 through Section of 404 the Stafford Act. The HMGP is a post-disaster mitigation program that offers assistance to states and local communities in implementing long-term mitigation measures following a Presidential disaster declaration.

HMGP may fund up to 75% of the eligible costs for hazard mitigation projects that will protect property in an area covered by a federal disaster declaration or that will reduce likely damage from future disasters. The state or local cost-share match does not need to be cash; in-kind services or materials may also be used. With the passage of the Hazard Mitigation and Relocation Assistance Act of 1993, federal funding under the HMGP is now based on 15% of the federal funds spent on the Public and Individual Assistance programs (minus administrative expenses) for each disaster.

The HMGP can be used to fund projects to protect either public or private property, so long as the projects in question fit within the state and local governments overall mitigation strategy for the disaster area and comply with program guidelines. Examples of projects include the acquisition, demolition, or relocation of structures from hazard-prone areas, the retrofitting or elevation of existing structures to reduce future damage; and the development of state or local standards to protect the jurisdiction from future damages.

Eligibility for funding under the HMGP is limited to state and local governments, certain private nonprofit organizations or institutions that perform essential public services, Indian tribes, and authorized tribal organizations. Individuals or homeowners cannot apply directly for funding through HMGP, so these organizations must apply on their behalf. In turn, applicants must work through their state because the state is responsible for setting priorities for funding and administering the program.

Title: Building Resilient Infrastructure and Communities Grant Program

Agency: Federal Emergency Management Agency

The Building Resilient Infrastructure and Communities (BRIC) grant program supports states, local communities, tribes, and territories as they undertake hazard mitigation projects to reduce risks from disasters and natural hazards. BRIC replaced the Pre-Disaster Mitigation (PDM) program. The new program is authorized by Section 203 of the Stafford Act.

The BRIC program aims to categorically shift the federal focus away from reactive disaster spending and toward proactive investment in community resilience. Focus is placed on mitigation activities that emphasize infrastructure projects benefiting disadvantaged communities, nature-based solutions, climate resilience and adaptation, and adopting hazard resistant building codes.

As a competitive annual grant program, applicants can apply on a yearly basis. Individuals, businesses, and non-profit organizations are not eligible to apply for BRIC funds; however local governments can apply on their behalf.

HMGP can fund up to 75% of the eligible costs for hazard mitigation activities. The local cost-share match does not need to be cash; in-kind services or materials may also be used. FEMA will provide 100% federal funding for management costs. FEMA may fund up to 90% of eligible mitigation activity costs for small, impoverished communities or disadvantaged rural communities.

Title: Public Assistance (Infrastructure) Program, Section 406

Agency: Federal Emergency Management Agency

FEMA's Public Assistance Program, through Section 406 of the Stafford Act, provides supplemental funding to local governments following a Presidential Disaster Declaration for mitigation measures in conjunction with the repair of damaged public facilities and infrastructure. The mitigation measures must be related to eligible disaster-related damages and must directly reduce the potential for future, similar disaster damages to the eligible facility. These opportunities usually present themselves during the repair/replacement efforts.

Proposed projects must be approved by FEMA prior to funding. They will be evaluated for cost effectiveness, technical feasibility, and compliance with statutory, regulatory, and executive order requirements. In addition, the evaluation must ensure that the mitigation measures do not negatively impact a facility's operation or risk from another hazard.

Public facilities are operated by state, local, and tribal governments and include infrastructure such as:

- * Roads, bridges & culverts
- * Draining & irrigation channels
- * Schools, city halls & other buildings
- * Water, power & sanitary systems
- * Airports & parks

Private non-profit organizations are groups that own or operate facilities that provide services otherwise performed by a government agency and include, but are not limited to the following:

- * Universities and other schools
- * Hospitals & clinics
- * Volunteer fire & ambulance
- * Power cooperatives & other utilities
- * Custodial care & retirement facilities
- * Museums & community centers

Title: Rural Development Loan and Grant Assistance

Agency: U.S. Department of Agriculture

The USDA provides grants (and loans) to cities, counties, states, tribes, and other public entities to improve community facilities for essential services to rural residents. Projects can include housing, businesses, utilities, and fire and rescue services (funds have been provided to purchase fire-fighting equipment for rural areas). No match is required.

Title: EPA – Hazard Mitigation for Natural Disasters: A Starter Guide for Water and Wastewater Utilities

Agency: US Environmental Protection Agency

The EPA released guidance on how to mitigate natural disasters specifically for water and wastewater utilities.

Title: Various Homeland Security Grants

Agency: U.S. Department of Homeland Security

The DHS enhances the ability of states, local, and tribal jurisdictions, as well as other regional authorities, in the preparation, prevention, and response to terrorist attacks and other disasters, by distributing grant funds. Localities can use grants for planning, equipment, training, and exercise needs. The grants include but are not limited to areas of Critical Infrastructure Protection Equipment and Training for First Responders.

Title: Environmental Quality Incentives Program

Agency: National Resources Conservation Service

The Environmental Quality Incentives Program (EQIP), administered through the NRCS, is a cost-share program that provides financial and technical assistance to agricultural producers to plan and implement conservation practices that improve soil, water, plant, animal, air, and other related natural resources on agricultural land and non-industrial private forestland.

Owners of land in agricultural or forest production or persons who are engaged in livestock, agricultural, or forest production on eligible land and that have a natural resource concern on that land may apply to participate in EQIP. Eligible land includes cropland, rangeland, pastureland, non-industrial private forestland, and other farm or ranch lands.

Title: NOAA Office of Education Grants

Agency: National Oceanic and Atmospheric Administration

The Office of Education supports formal, informal, and non-formal education projects and programs through competitively awarded grants and cooperative agreements to a variety of educational institutions and organizations in the United States.

Title: EPA – Smart Growth in Small Towns and Rural Communities

Agency: US Environmental Protection Agency

EPA has consolidated resources just for small towns and rural communities to help them achieve their goals for growth and development while maintaining their distinctive rural character.

Title: STAR Community Rating System

Private Agency: Urban Sustainability Directors Network

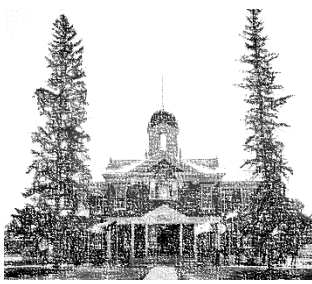
Consider measuring your mitigation success by participating in the STAR Community Rating System. Local leaders can use the STAR Community Rating System to assess how sustainable they are, set goals for moving ahead and measure progress along the way.

Local

Local governments depend upon local property taxes as their primary source of revenue. These taxes are typically used to finance services that must be available and delivered on a routine basis to the general public. If local budgets allow, these funds are used to match Federal or State grant programs when required for large-scale projects.

Non-Governmental

Another potential source of revenue for implementing local mitigation projects are monetary contributions from non-governmental organizations, such as private sector companies, churches, charities, community relief funds, the Red Cross, hospitals, Land Trusts, and other non-profit organizations.



APPENDIX

Appendix A – Resolution of Adoption by Jurisdiction

Appendix B – PDM Planning Team Agendas, Sign-in Sheets, and Minutes

Appendix C – Community Meeting Agendas and Sign-in Sheets

Appendix D – Hazard Identification/Vulnerability Worksheets

Appendix E – Township Vulnerable and Potential Mitigation Project Site Maps

Appendix F – Online Survey Information

Appendix G – Comprehensive Land Use Maps

Appendix H – Review of 2019 PDM Mitigation Project Implementation

Appendix I – Worksheet 10: Plan Update Evaluation Form

Appendix J – References

Appendix A
Resolution of Adoption by Jurisdiction

Kingsbury County

City of Arlington

Town of Badger

Town of Bancroft

City of De Smet

Town of Erwin

Town of Hetland

City of Iroquois

City of Lake Preston

Town of Oldham

Appendix B
PDM Planning Team Meeting Materials

PDM Participation Invitation Letter

To Whom It May Concern:

In January 2020 Kingsbury County (County) received notification from the Federal Emergency Management Agency (FEMA) that its 2019 Pre-disaster Mitigation Plan (Plan) had been approved. This plan identifies potential natural disasters, their impact and possible projects to mitigate the impact of said disasters. The County is required by FEMA to update this plan every five years. The County applied for federal funding to assist with the cost of an update and was informed in October 2023 of the grant award. The County has entered into a contract with the First District Association of Local Governments to facilitate the development of the Plan.

The goal of the plan will be to reduce the personal and economic costs of hazard events in the rural and urban areas of Kingsbury County. The County believes this effort is an investment that will enhance and strengthen the economic structure and long-term stability of the rural and municipal areas of the County.

Through this planning process, projects are identified that will make the next disaster event as uneventful as possible. The goal is to enlist the support of community stake holders to sponsor or support a project. The planning process does not happen overnight. We expect this process to last approximately six to nine months. While it might take perhaps years for certain projects to be completed, the Plan is the document that will bring all pre-disaster mitigation efforts to a central location.

Your community/school/utility/entity etc. has been identified as a potential partner in this process. I would be pleased if your organization would select an individual to serve on the Pre-disaster Mitigation Planning Team. The Mitigation Planning Team will meet three times over the next six to nine months. I should note that your representative may not have to attend all the scheduled meetings throughout the process.

An organization/familiarization meeting of the Mitigation Planning Team is set for **12:00 P.M. on Tuesday, January 30, 2024**. The meeting will be held in Emergency Management Meeting Room in the basement of the Sheriff's Office at 206 2nd St SE De Smet, SD 57231.

Thank you for your serious consideration of the County's request.

Sincerely,

Cindy Bau
Director
Kingsbury County Emergency Management
(605) 854-3711

PDM Team Kickoff Meeting Notice

Notice

Kingsbury County will begin the process of updating the Kingsbury County Pre-disaster Mitigation Plan. This plan identifies potential natural disasters, their impact and possible projects to mitigate the impact of said disasters. The County is required by the Federal Emergency Management Agency to update this plan every five years. The Kingsbury County mitigation planning team will meet at 12:00 PM on January 30th, 2024 in the Emergency Management Meeting Room in the basement of the Sheriff's Office at 206 2nd St. SE, DeSmet, SD. The public is welcome to attend. Questions or comments may be directed to Kingsbury County Emergency Management Director, Cindy Bau @ 605-854-3711.

**Kingsbury County
Pre-disaster Mitigation Plan Kickoff Meeting
12:00 p.m. January 30th, 2024
Emergency Management Meeting Room – Basement of Sheriff's Office
206 2nd St E, De Smet, SD 57231**

Agenda

- Introduction of PDM Team Members

- What is Mitigation Planning?

- Why is Kingsbury County updating the Pre-Disaster Mitigation Plan?

- Review plan components

- Review timeline/scope

KINGSBURY COUNTY

PRE-DISASTER MITIGATION PLANNING TEAM MEETING

KICK-OFF MEETING

JANUARY 30, 2024

Name	Organization	Email*
Todd Kays	1 st District	
Echo Steffensen	Kingsbury County	
Rachel Anderson	Kingsbury Electric	
GARY WOLKOW	DESMET CITY	g.wolkow@gmail.com
Tracey Larson	Desmet City	desmetcity@mchsi.com
Curt Lunkguist	Arlington City	CurtLunkguist@yahoo.com
Steven Strande	Kingsbury Co Sher.iff	sheriff@KingsburyCountySd.org
Kent Terwilliger	Miner County E.M.	
Adam Frerichs	SD Emergency Mgmt.	adam.frerichs@state.sd.us
Abi Van Regenmortel	Desmet School District	abi.vanregenmortel@k2.sd.us
Michele Nielson	Sioux Valley Energy	michele.nielson@siouxvalleyenergy.com
Cody Doren	Arlington fire/ems; LEPC Board	codydoren@yahoo.com
Mandy Doren	Arlington FD/Amb. + LEPC	adoren2016@gmail.com
Cindy Bau	Kingsbury Emy/LEPC/911	cm@KingsburyCountySd.org.

* It is intended to send "draft" documents via email if possible.

**Kingsbury County
Pre-disaster Mitigation Plan Kickoff Meeting
12:00 p.m. January 30th, 2024
Emergency Management Meeting Room – Basement of Sheriff's Office
206 2nd St E, De Smet, SD 57231**

Minutes

14 individuals were in attendance:

Last	First	Organization
Anderson	Rachel	Kingsbury Electric
Bau	Cindy	Kingsbury County EM/LEPC/911
Doren	Cody	Arlington Fire/EMS/LEPC
Doren	Mandy	Arlington Fire/EMS/LEPC
Frerichs	Adam	SD Emergency Management
Kays	Todd	First District
Larson	Tracey	De Smet City
Lundquist	Curt	Arlington City
Nielson	Michele	Sioux Valley Energy
Steffensen	Echo	Kingsbury County
Strande	Steven	Kingsbury County Sheriff
Terwilliger	Kent	Miner County EM
Wolkow	Gary	De Smet City
VanRegenmorter	Abi	De Smet School District

Kingsbury County Emergency Manager, Cindy Bau, welcomed those in attendance and had the Team Members introduce themselves and what entity they represent. Bau then introduced Luke Muller and Todd Kays of First District Association of Local Governments.

Muller provided an overview of what is mitigation planning and why the county is required to update their Pre-Disaster Mitigation (PDM) Plan. Muller and Kays also provided a review of the components to be included within the plan (risk assessment, vulnerability, proposed mitigation actions).

A general review of the existing Pre-Disaster Mitigation Plan started by defining work responsibilities, having the First District doing background and research, and the PDM Team providing oversight and guidance throughout the process. The timeline and scope of project were reviewed.

Meeting adjourned at 1:00 p.m. Date and time for the next meeting to be scheduled later in fall of 2024.

Minutes recorded by Luke Muller.

**Kingsbury County
PDM Planning Team Meeting 2
1:00 p.m., December 18, 2024
Emergency Management Meeting Room – Basement of Sheriff's Office
206 2nd St E, De Smet, SD 57231**

Agenda

- Introduction
- Review of Previous Meetings and Plan Development History
- Review of PDM Preliminary Draft
 - PDM Jurisdiction Risk Assessment Review
 - Hazard Identification
 - Hazard Profile
 - Vulnerability Assessment
 - Mitigation Strategy
 - Review of Goals and Objectives
 - Mitigation Strategies
 - Project Identification
- Questions
- Next Steps in PDM Draft Process

KINGSBURY COUNTY PRE-DISASTER MITIGATION PLANNING TEAM

2ND TEAM MEETING

DECEMBER 18, 2024

[illegible]

**Kingsbury County
PDM Planning Team Meeting 2
1:00 p.m., December 18, 2024
Emergency Management Meeting Room – Basement of Sheriff's Office
206 2nd St E, De Smet, SD 57231**

Minutes

Seven people were in attendance:

Last	First	Organization
Steffensen	Echo	Kingsbury Co. Auditor
Bau	Cindy	Kingsbury County Emergency Management
Muller	Luke	First District
Strande	Shelley	Kingsbury Co. Sheriff Office
Bertsch	Marea	City of Lake Preston
Hansen	Karen	City of DeSmet
Damm	Stephanie	City of Arlington

Luke Muller of the First District provided a review of research and background activities conducted since the last Team meeting.

Muller also provided an overview of the risk assessment conducted with the communities in Kingsbury County. The risk assessment review with those entities dealt with identification of potential hazards, generating a hazard profile, and vulnerability assessment. After reviewing the risk assessments, Muller provided an overview of historical hazard events in Kingsbury County since 2013.

The Team also reviewed goals and objectives of the previous 2019 PDM Plan. It was determined the 2019 goals and objectives were still appropriate for the update PDM plan. Discussed potential mitigation projects throughout the county.

Muller provided a summary and review of the draft Kingsbury County Pre-Disaster Mitigation Plan. Muller discussed recommended changes from state hazard mitigation office, and highlighted those edits. Other discussion and questions occurred during the summary process.

Consensus of the Team was to spend more time on individual review of the document and to provide First District staff with any corrections/updates.

Meeting adjourned at 1:20 p.m. Final Meeting will be held on January 16, 2025 at noon.

Minutes recorded by Luke Muller

**Kingsbury County
PDM Planning Team Meeting 3
NOON, January 16, 2025
Emergency Management Meeting Room – Basement of Sheriff's Office
206 2nd St E, De Smet, SD 57231**

Agenda

- Final Review of PDM Plan
- Recommendation of Approval and Submission to FEMA

**Kingsbury County
PDM Planning Team Meeting 3
NOON, January 16, 2025
Emergency Management Meeting Room – Basement of Sheriff's Office
206 2nd St E, De Smet, SD 57231**

Eight people were in attendance:

Last	First	Organization
Anderson	Rachel	Kingsbury Electric
Bau	Cindy	Kingsbury County Emergency Management
Muller	Luke	First District
Steffensen	Echo	Kingsbury County Auditor
Lundquist	Curt	Arlington Mayor
Larson	Tracey	DeSmet Finance Officer
Klug	Brenda	Lake Preston Finance Officer
Strande	Shelley	Kingsbury County Sheriff's Office

Luke Muller of the First District noted edits as recommended by the State of South Dakota Hazard Mitigation Officer, and Sioux Valley Electric were incorporated since Meeting #2. Klug requested on behalf of Lake Preston to add generator projects for their main lift station and City Hall/Emergency Shelter to the plan.

Motion by Anderson, second by Lundquist to forward the draft to FEMA subject to the addition of the above referenced generator projects and any grammatical or non-substantive changes. Motion passed unanimously.

Muller reviewed the community adoption process.

Meeting adjourned at 12:35 p.m.

Minutes recorded by Luke Muller

Appendix C

Community Meeting Agendas and Sign-in Sheets

Appendix C includes Agendas and “Sign-in Sheets” from the meetings held at the community level for the Kingsbury County Pre-Disaster Mitigation Plan. Meetings were held at the regular monthly meetings for the following Towns:

Town	Date
Arlington	February 6, 2024
Badger	March 11, 2024
Bancroft	April 16, 2024
De Smet	February 15, 2024
Erwin	March 4, 2024
Hetland	March 19, 2024
Iroquois	April 15, 2024
Lake Preston	April 8, 2024
Oldham	April 8, 2024

At all of the previously described meetings, each individual in attendance was asked to identify the probability of each specific hazard’s occurrence. Following discussion on each individual hazard, Board members categorized these hazards as high probability to occur, low probability to occur, or unlikely to occur. The result was recorded on a master sheet for each town.

Next, each individual in attendance was asked to identify the town’s vulnerability to each specific hazard. Following discussion on each individual hazard, Board members classified the town’s vulnerability to each hazard as high vulnerability, low vulnerability, or noted that the hazard was not a hazard in the jurisdiction. The result was recorded on a master sheet for each town. Following the hazard identification and vulnerability exercises the governing body was asked to rate the level to which they agree with the goals of the Pre-Disaster Mitigation Plan. The result was recorded on a master sheet for each town. Finally, the Boards were asked to identify critical infrastructure within the community. All master worksheets compiled at those meetings can be found in Appendix D. A master infrastructure list was compiled for each town in Table 4.28.

At the previously described meetings Board members were first asked to identify potential hazard mitigation projects for their towns. Members then discussed among themselves and staff before determining a timeframe for these projects to be completed (short-term, medium-term, long-term). Short-term indicates a time frame of two years or less. Medium-term indicates a time frame of two to five years. Long-term indicates a time frame of more than five years.

Finally, members assigned a priority level (high, medium, low) to each project. High priority projects have greater importance, unanimous Board agreement, more cost effective, provide more benefits for the entire community as a whole, shorter implementation time and funding availability. These projects should take precedence over similarly costing projects. Medium priority projects are important projects with less urgency, limited benefits, maintenance activities or projects by virtue of their cost and/or necessity is not considered a high priority. The community should begin planning for completion of these projects. Low priority projects are projects that due to their cost and/or potential minimal benefits to the community are considered a lesser priority, maybe a longer-term project that lacks funding availability.

The Board members and Finance Officers were asked to work with First District Staff to identify who would oversee the potential projects and what a projected cost would be. All projects identified at those meetings are included in Table 5.13. Townships maps are included in Appendix E.

City of Arlington

CITY OF ARLINGTON, SD Regular Council Meeting Agenda Arlington City Hall (202 E. Elm St.) Tuesday, February 6, 2024 6:00 PM

The City of Arlington is an equal opportunity provider and employer.

6:00 P.M. Call Council Meeting to Order—Roll Call

Any Additions/Changes to the Agenda

Approve Minutes of the January 2nd and 12th meetings

Approve Bills, transfer funds if need be

Todd Kays/First District – updating land use portion of the new zoning book & pre-disaster mitigation plan

Beth Niemeyer (Banner) – Pay request #4

Review Director of Equalization handout/documents

Time for Public Comments—Sign in Sheet

Approve monthly payment for utilities, insurance benefits, fuel, etc. made prior to monthly council approval

Approve Job Descriptions

Bereavement Days Clarification

Electric Report—Heartland Summary Report

ACDC Report—

Building Permit Applications that have been approved for the month: TK Properties – 5000 sq. ft. building at 827 N. Industrial Park; James Bunker – adding a pitched roof on the apartment building at 102 N. Main St.

Parking/Snow Parking tickets

Street Projects for Summer – Crack Sealing/Seal Coating – bids/quotes

Approve new Volunteer Fire Fighter & remove Fire Fighters from the roster

Approve OT & Police Report

Review Revenue/Expense/Cash & Utility Reports

Add'l Items: City Election petitions must be filed by February 23rd @ 5:00 PM

Invite Townships to March Meeting(?)

Advertise for Summer Help (?)

Poultry Party date moved for Legion One Day License

Parking signs for Post Office

Ambulance Fees

Mayor's Report

Any other business that may come before the Council—

Executive Session* (only if needed)

*SDCL 1-25-2 (sections 1-5) allows a majority of the body present to vote to close a meeting when discussion revolves around 1) personnel, 2) legal matters, or 3) contract negotiations. Meetings may also be closed for certain 4) economic development matters (SDCL 9-34-19).

KINGSBURY COUNTY PRE-DISASTER MITIGATION PLANNING MEETING

City of Arlington

DATE: FEBRUARY 6, 2024

[illegible]

MINUTES

CITY HALL, CITY OF ARLINGTON, SOUTH DAKOTA
February 6, 2024

The City Council met in regular session in the Municipal Building. Present on Roll Call were Mayor Curt Lundquist and Council Members: Terry Mutziger, Terry Rowbotham, Garth Johnson, Beth Sundberg, and Rob Achterberg. Absent: Cory Falconer

Motion was made by Mutziger, seconded by Rowbotham to approve the minutes of the January 2nd & 12th meetings. All in favor—Carried.

Beth Niemeyer from Banner explained the pay request #4 from Halme and answered questions that the Council had. Motion was made by Achterberg, seconded by Johnson to approve pay request #4 for \$97,200.45. All in favor – Carried.

Bills on file were submitted for consideration and on motion by Rowbotham seconded by Achterberg, the Finance Officer was instructed to issue payment for same. All in favor—Carried.

Bills approved as follows:

PAYROLL 7317.57, OASI BENEFIT 1978.75, DEBOER CONSTRUCTION INC. 240446.17 BIRCH/HICKORY ST., EAST RIVER ELECTRIC POWER COOP 3922.00 ENERGY, ELECTRIC FUND 3335.35 CITY UTILITIES, HALME, INC. 189718.14 SEWER PROJECT, HEARTLAND ENERGY 25358.62 ENERGY, KINGSBURY COUNTY AUDITOR 5546.67 COUNTY LAW, SD STATE TREASURER 6468.10 SALES TAX, VALLEY FIBERCOM 203.64 INTERNET/PHONE, WESTERN AREA POWER ADM 22610.80 ENERGY, PAYROLL 22733.36, SDRS 3472.60 RETIREMENT, HEALTH POOL OF SD 4912.50 HEALTH INSURANCE, COLONIAL LIFE 106.53 VOLUNTARY INS, OASI BENEFIT 5943.30, AT&T 47.25, CELL PHONE, CITIZENS STATE BANK 20.00 STOP PAYMENT - CHECK #32416, CORNELL GRIFFIN 130.00 METER DEPOSIT REFUND, NORTHWESTERN ENERGY 526.11 SERVICE TO CITY SHOPS, PETTY CASH 25.00 PICKUP TITLE/CERT., PRINCIPAL LIFE INS. CO. 180.34 SHORT TERM DISABILITY, RURAL DEVELOPMENT 4301.00 WATER/WASTEWATER LOAN, SIOUX VALLEY ENERGY 53.00 AIRPORT, VISA - COR TRUST BANK 1194.57 CLOTHING/TRAVEL/SUPPLIES, 81 AUTO CLINIC 29.85 DE-ICER, A-OX WELDING SUPPLY CO. 108.90 CYLINDER RENT, ARLINGTON INSURANCE AGENCY 318.00 BOBCAT AND FLATBED, ARLINGTON SUN 371.27 PUBLISHING, AVID HAWK, LLC 45.00 MONTHLY WEBSITE FEE, BANNER ASSOCIATES, INC 18954.45 ENGINEERING SERVICES, BITS OF YESTERDAY 100.00 OVERPAYMENT, BOBCAT OF BROOKINGS 586.88 STUMP GRINDER PARTS, CENTURY BUSINESS PRODUCTS 46.43 SERV AGRMNT 12/19/23-01/18/24, COOKS WASTEPAPER & RECYCLING 11226.60 NOV & JAN GARBAGE, CORE & MAIN 155.20 LID LIFTER, DECURTINS & SONS 1954.24 ROUGH IN PLUMBING, DECURTINS & SONS CONT. 3529.17 BALANCE - BASEBALL BUILDING, JOE DENISON 750.00 AMBULANCE TRAINING - 2023, ELECTRIC FUND 550.00 METER DEP APPLIED TO BILL, FIRST DIST. ASSN/LOCAL GOV'T 1339.00 YEARLY SUPPORT 10/1-9/30, HALME, INC 97200.45 PAY REQUEST #4, HANDI MART 226.92 FUEL, JERRY HOWELL, SR 200.00, INTERSTATE ALL BATTERY CENTER 41.90 BATTERIES, KINGBROOK RURAL WATER 12480.83 JAN. WATER & LEASE PMT, L. G. EVERIST, INC 175.64 ICING SAND, M & T FIRE & SAFETY 4910.50 ENGINE 1 REPAIR, MAYNARD'S FOOD CENTER 38.33 SHOP & CITY HALL SUPPLIES, MEDIACOM 100.00 METER DEP BALANCE REFUND, ROBIN NELSON 398.62 AMBULANCE OVERPAYMENT, OFFICE PEEPS 133.65 TAX FORMS/PAPER TOWELS, OMNI-PRO SOFTWARE 3449.60 SOFTWARE LICENSE & SUPPORT, PRAIRIE AG PARTNERS 5902.32 FUEL/PARTS/SUPPLIES/REPAIR, RAZTECH LLC 947.00 January IT, REVIER PRESSURE WASHERS INC 50.00 VALVE FLOAT - SHOP, SCHEIN INC 44.92 AMBULANCE SUPPLIES, SD ONE CALL 57.75 LOCATES OCT-DEC, SHARE CORPORATION 286.31 POWER DRIVE NUT SETTER SET, SNAP ON TOOLS 576.90 RACHET & BATTERY, US POST OFFICE 510.00 POSTAGE, STEVEN UST 2700.00 BUILDING INSPECTIONS - 27, WW TIRE BRYANT 256.15 TIRE REPAIR

Motion was made by Achterberg, seconded by Mutziger to transfer \$116,154.90 from the Sewer Fund to the General Fund for payment of the bills to Banner (\$18,954.45) and Halme Construction, Inc. (\$97,200.45) for the Sewer Project. All in favor—Carried.

Todd Kays from First District reviewed with the Council the pre-disaster mitigation plan and discussed the City's Land Use portion of the Zoning Ordinance Book. He will take all of the Council's zoning input and put that information together so that we continue to move forward with getting the zoning book completed.

Tammy Anderson, Kingsbury County Director of Equalization, sent information to the Council regarding assessments. Everything in the county is going up 20%. The values went to 92% of the market; for taxation, they will be taken down to 85% of market.

Motion was made by Mutziger, seconded by Rowbotham, to approve pre-payment of the following bills: Citizens State Bank—WH-SS-Medicare--\$12,000.00; East River Electric Power—Energy--\$4700.00; Electric Fund—City Utility Bills--\$8000.00; Valley Fibercom —Phones & Internet--\$350.00; Heartland Consumer Power District—Energy--\$45000.00; Kingsbury County Auditor—County Law Contract--\$5600.00; SD State Treasurer—Sales Tax--\$8000.00; Western Area Power Adm—Energy--\$22000.00; AT&T—Cell Phones--\$50.00; Colonial Life—Payroll Deductions--\$150.00; Northwestern—Natural Gas--\$1200.00; PLIC—Disability--\$250.00; SD Retirement—Retirement--\$3700.00; Sioux Valley Energy – Energy - -\$100.00; The Health Pool—Employee Health & Life Insurance--\$5150.00; Visa—Credit Card Purchases--\$8000.00; Prairie Ag Partners—Fuel--\$8500.00; Rural Development—Water & Wastewater Loans--\$4301.00; Petty Cash--\$50.00; Citizens State Bank—Ballfield Building Loan--\$11000.00. All in favor—Carried.

Job Description approval was tabled until the next meeting so the Council has more time to review.

Motion was made by Johnson, seconded by Achterberg to approve 3 days paid bereavement leave for immediate (as stated in the Personnel Policy) family members. All in favor—Carried.

Electric Report: The Council reviewed the summary report for the 2023 electrical usage.

There was no ACDC report.

The Council reviewed the building permit applications that were approved in January: TK Properties for a 5000 sq. ft. building at Block 8A, Industrial Park in the City of Arlington, 827 N. Industrial Park; and James Bunker to add a pitched roof on the apartment building at City tract 2 in NE 1-110-53, 102 N. Main St.

Parking and Snow parking tickets were discussed and the finance officer was advised that if there was an outstanding ticket from a previous year, that can be added to the current ticket (as well as increase the amount of the current ticket as we have an increasing scaled payment fee depending on how many tickets a person receives).

The Mayor will continue to get the discussion going with the County for chip sealing, but in the meantime, the Council requested the finance officer to advertise for sealed bids/quotes for the Crack Sealing and Seal Coating Projects for this summer, which will be opened at the March 4th meeting.

Motion was made by Achterberg, seconded by Johnson to remove Ryan O'Riley and Nicole Conrad from the Fire Department and add Layne Jensen for insurance purposes. All in favor—Carried.

Motion was made by Achterberg, seconded by Rowbotham to approve the employee overtime, and the police report. All in favor—Carried

The Council reviewed the Revenue/Expense, Cash and Utility Reports.

Additional Items: the Finance Officer reminded the Council members that petitions must be filed by February 23rd. She was asked to contact previous pool and city summer workers and advertise for summer help in March, and was asked to invite Trevor Keating & Jay DeVries to the next meeting.

A request for two 5-minute parking signs (between 8am-5pm) to be put in front of the Post Office was presented to the Council. They do not have a problem with that request, but advised the Finance Officer to contact the adjoining businesses prior to doing so.

The ambulance fees were once again addressed as there was some confusion regarding the information we received. Motion was made by Johnson, seconded by Mutziger to increase our fees by the 3.2% Federal cost of living rate. All in favor—Carried.

Public Comments – Frank Crisler asked if he would need an interconnection/co-generation permit if he added solar panels to his roof with the power going to existing batteries. He was advised he did not, but it would be wise to get a signed document from the Electric Company who is installing them stating that there will not be any backfeeding.

Motion was made by Mutziger, seconded by Rowbotham to enter into executive session at 7:45 P.M. for contract negotiations. All in favor—Carried.

Mayor Lundquist declared out of executive session at 8:11 P.M. No further action taken.

Motion to adjourn was made by Achterberg, seconded by Mutziger. All in favor—Carried.

Stephanie Damm, Finance Officer

Curt Lundquist, Mayor

The City of Arlington is an equal opportunity provider and employer.

Outline
Pre-Disaster Mitigation Plan
Community Meetings
Arlington , SD

Introduction

Personal introduction:

All individuals in attendance introduced themselves

Introduce the plan: Todd Kays FDALG introduced the group to the PDM planning process and the community's role in the process, discussing the following:

Why update the PDM?

Why is your community doing it individually/Why not just county?

What is a PDM?

Hazard review

Hazard Identification

Summer/Thunderstorm

- Hail, Heavy Rain, Lightning, Tornado, Strong Winds

Winter Storm and Extreme Cold

- Freezing Rain, Sleet, Ice, Heavy Snow,

Drought and Extreme Heat

Flood

- Rapid Snow Melt, Ice jam, (heavy rain can go here too)

Fire

- Urban fire, wildfire (grass fire)

The Community reviewed the previous PDM's Risk Assessment worksheet (Hazard Identification – Probability) and moved drought from a high probability event to a low probability event

Hazard Vulnerability

Summer/Thunderstorm

- Hail, Heavy Rain, Lightning, Tornado, Strong Winds

Winter Storm and Extreme Cold

- Freezing Rain, Sleet, Ice, Heavy Snow,

Drought and Extreme Heat

Flood

- Rapid Snow Melt, Ice jam, (heavy rain can go here too)

Fire

- Urban fire, wildfire (grass fire)

The Community reviewed the previous PDM's Risk Assessment worksheet (Hazard Identification – Vulnerability) and moved Strong Winds from medium vulnerability to high vulnerability and moved Drought, Heavy Rain and Heavy Snow Melt from low vulnerability to medium vulnerability

Community Capabilities and Plans review

The Community just finished a review of their comprehensive land use plan and zoning ordinance the community does not have a building code.

Community facilities

Identify/review critical facilities

Are there new facilities/facilities to be removed

Have addresses changed/are they correct

Where are the populations to protect

Transient/campgrounds

Poor Populations/economically disadvantaged areas

Schools/children

Elderly

Protected classes (mentally handicapped)

Kays reviewed the previous plan's critical facilities/populations to protect. The community added/removed the following critical infrastructure/populations to protect: removed Arlington Care Center and added 2 day cares (get address) and Park View apartments (elderly).

Project review

Review past projects

- Are they completed/still necessary/ongoing

Ask about other projects (not all require FEMA funding)

Ask about Policies/activities that already help mitigate Disaster

The Community reviewed listed projects from the previous plan and proposed new projects.

Previous Plan projects completed included:

- None

Previous Plan Project to be retained:

- Construct Tornado Shelter
- Replace existing storm sirens as needed
- Replace/trim vulnerable trees
- Construct new Fire Hall/Ambulance Center
- Implement storm water drainage improvements along 3rd Street

New Projects include:

- Backup generator for school
- Obtain Emergency response supplies: Food, Water, Blankets, Cots

Conclusion

Kays informed the community of upcoming Survey site, Pre-disaster Mitigation Team Meetings and the Plan Adoption process.

Town of Badger

AGENDA

**BADGER TOWN COUNCIL
MONDAY, MARCH 11, 2024**

6:00 P.M.

1. Call to Order
2. Pre-Disaster Mitigation Plan Review: First District Association of Local Governments
3. Approve February 12, 2024 meeting minutes
4. Approve March bills presented
5. Adjourn

KINGSBURY COUNTY PRE-DISASTER MITIGATION PLANNING MEETING

Town of Badger

DATE: Mar 11 2024
6PM American Legion

[illegible]

(Typo below – notes for BADGER)

Bruce PDM Meeting 03/11/2024 Meeting Notes

- Prerequisite for federal funding/grants you have to have in order to qualify
- Hazard mitigation project examples: Storm shelter, sirens, power line burials, tree branch trimming, drainage channels, etc. Projects that help to stave off probably emergency issues
- FEMA requires some sort of plan in place in order to qualify for the 80/20
 - FEMA says we need to prepare this plan to help minimize the chaos during emergency recovery efforts
 - Some events happen on a regular basis, sometimes, or almost never
- How likely are events to occur?
- ALWAYS GET COPY OF AGENDA
- When county updates premitigation plan so does the city
 - Updated every 5 years
- Worksheet #1
 - No Changes
- Worksheet #2
 - Move Freezing Rain/Sleet/Ice from High to Medium
- Critical Infrastructure
 - No Changes
- Map of Hazard Vulnerability/Critical Infrastructure
 - No Changes
- Map of Mitigation Activities
 - No Changes
- Town of Badger Problem Statements
 - Develop and Implement Emergency Plan For Tornadoes
 - Not done
 - Construction of Tornado Shelter
 - Not done
 - Upgrade Wastewater System
 - Yes done
 - Replace Culvert to better facilitate better drainage
 - Not done, County is working on doing this
- Other Notes:
 - All electrical is underground, no powerlines. Privately owned electrical
 - No need for storm sewer
 - No need for tree trimming, residents take care of own/no power poles
 - Will work on discussion of storm shelter ideas/tornado shelter options
 - Siren working fine, no interest in a new one

**AGENDA
BANCROFT TOWN COUNCIL
TUESDAY, APRIL 16, 2024
6:00 P.M.**

1. Call to Order
2. Pre-Disaster Mitigation Plan Review: First District Association of Local Governments
3. Approve March 19, 2024 meeting minutes
4. Approve bills presented
5. Adjourn

KINGSBURY COUNTY PRE-DISASTER MITIGATION PLANNING MEETING

Town of Bancroft

DATE: April 16th, 2024

[illegible]

**Town Board of Bancroft
April 16, 2024**

A meeting of the Town Board of Bancroft was held on April 16, 2024. Members present were Paul Jennings, Mary Jennings, Peggy Jennings, Craig Purinton and Mary Purinton.

Amy Arnold with First District Association of Local Governments met with the board to update the Pre-Disaster Mitigation Plan.

There being no further business the meeting was adjourned.

Mary Purinton, Clerk

Outline
Pre-Disaster Mitigation Plan
Community Meetings

Introduction

Hazard review

Hazard Identification

The town board reviewed the hazard identifications and felt it was good to leave it as is.

Hazard Vulnerability

After reviewing the hazard vulnerability the town board saw it necessary to make quite a few changes.

- Freezing rain/Sleet/Ice, hail, heavy rain, and strong winds from medium to high
- Thunderstorm from low to high

Community Capabilities and Plans review

No changes

Community facilities

Identify/review critical facilities

The town of Bancroft has no critical infrastructure

Project review

Review past projects

- The town doesn't have a dedicated storm shelter for public use or a storm siren warning system.
- The town would like to work with Northwestern Power to bury overhead lines but sited most power loss comes from lines down within rural sections of the county.

Conclusion

City of De Smet

DE SMET COMMON COUNCIL
At the DeSmet Event Center
REGULAR MEETING AGENDA
February 14, 2024
5:00 PM

CALL TO ORDER
PLEDGE OF ALLEGIANCE
ANNOUNCEMENTS:

MINUTES: Approval of January 10, 2024, Regular Meeting minutes.

CLAIMS: City Claims

1. Special liquor license – Lu Ann Klinkel – owner of Klinkels III, March 22, 2024, at the De Smet Event Center from 4:00 pm to 12:00 pm
2. Abatement of property taxes for property legally described as E25' of S99' Lot 12 & S99' Lot 13, Block 17, Brown's Addition, De Smet– for property purchased by a tax-exempt entity, City property taxes \$676.45
3. Public Comments
4. Second Reading of Zoning Ordinance XX amending Zoning Ordinance VII-08
5. Luke Muller – First District Assoc. of Local Governments – Kingsbury County Pre-disaster Mitigation Plan Review
6. Dane Ekdorf, Engineer for ISG – five-year CIP review
7. Shane Waterman – project updates for Chase Street & 2nd Street & Main Street Project meeting date, meeting date for Main Street project, timelines
8. Authorization for IMEG to advertise for bids for the Chase Street water/wastewater/street improvement project and for the 2nd Street water/street improvement project
9. Ryan Petersen, Street Supt. – street repairs for 2024
10. Authorization to advertise for bids for the 2024 street repairs (chip seal & matt)
11. Authorization to advertise for bids for the airport snow removal equipment (SRE)
12. Jason Springer, Water & Wastewater Supt- Rose Vincent Park basketball court & hoops
13. Executive Session – personnel
14. Fire Department new members – Tucker Vincent replacing Shon Asleson, Matthew Hojer replacing Corey Beck, Austin May replacing Jim Pommer (5/1/2024)
15. Submitted update from Tammy Anderson, Kingsbury County Director of Equalization
16. Equalization meeting date – March 20, 2024
17. Project pay requests – IMEG, sewer project east area, Pay request 22006269.01-2 \$1,120.00; IMEG, water project east area, Pay request 22006269.00-2 \$13,920.00; IMEG, Main Street project, Pay request 21005454.03-7 \$7,000.00; and Helms & Associates, airport AWOS project, Pay request 8 \$352.05
18. Hire pool help & a department assistant
19. Surplus property – Pressure washer (Streets), three (3) black folding chairs and weight bench (Event Center) for disposal
20. Jamie Lancaster – De Smet Development Corporation updates
21. Conference – 2024 Airport Conference, April 10th & 11th, Deadwood; SDML District 2 Meeting, April 3rd, Madison; Hwy 14 Tower Reveal party, February 17th
22. December & January Cash Balance Report
23. January Overtime
24. Other: January Law Enforcement report
25. Adjourn

UPCOMING DATES TO REMEMBER: February 23, 2024 – Deadline to file council petitions
March 13, 2024 – Regular City Council Meeting
March , 2024 – Equalization Meeting

**THE DE SMET CITY COUNCIL
MEETING HAS BEEN
POSTPONED
UNTIL
THURSDAY, FEBRUARY 15TH
AT 5PM AT THE
EVENT CENTER
DUE TO THE WEATHER.
THANK YOU FOR YOUR
UNDERSTANDING.**

KINGSBURY COUNTY PRE-DISASTER MITIGATION PLANNING MEETING

City of DeSmet

February 15, 2024

Name	Organization
Britt Jensen	Council
Guy [unclear]	Council
Jay Wagbace	CITY DESMET
Wacey Jensen	City of DeSmet
Todd [unclear]	City of DeSmet
Douglas H. [unclear]	Council
[unclear]	Council
[unclear]	Council

MEETING SIGN IN SHEET

DATE: 2-15-2024

NAME
Kristi Hubbard
Amy Halverson
Sarah Lyngester
Sita Lerderson
Dane Eldan
Luke Miller
Mark Stiefkes
John Spivey
Shane Waterman IMEG
Ryan Peden
[unclear]
Maria Garcia

REGULAR MEETING DE SMET COMMON COUNCIL
February 15, 2024

The De Smet Common Council met in regular session on February 15, 2024, at 5:00 p.m., with the following present: Council members Dustin McCune, George Cavanaugh, Bret Jensen, Dane Coughlin, Lowell Hansen, Mayor Gary Wolkow, Finance Officer Tracey Larson, and City Attorney Todd Wilkinson. Absent: Pam Spader.

Mayor Wolkow called the meeting to order at 5:00 PM.

PLEDGE OF ALLEGIANCE: The meeting was started with the council and those from the public reciting the Pledge of Allegiance.

ANNOUNCEMENTS: None.

MINUTES: Motion was made by Cavanaugh, seconded by McCune, to approve the minutes of the January 10, 2024, 2023, Regular Meeting minutes, all voting aye, motion carried.

CLAIMS: Motion by Cavanaugh, seconded by Jensen, to approve payment of the claims as presented, all voting aye, motion carried. The claims are as follows: PAYROLL \$39,391.82; OASI Benefit 3,013.48; Aflac, ins. premium 187.98; Dearborn National, life insurance 105.60; Delta Dental of South Dakota 356.36; VSP 162.60; The Health Pool of SD, health insurance premium 7,849.10; SDRS, retirement benefit 4,434.96; Division of Criminal Investigation, background check 43.25; Mediacom, utilities 106.20; Division of Criminal Investigation, background check 43.25; De Smet Chamber, supplies 100.00; Visa, utilities, supplies, conference 349.05; American Water Works Assoc., supplies 79.00; Anderson Lumber, supplies, repairs & maintenance 101.95; Avera Occupational Medicine, repairs & maintenance 85.00; Avid Hawk LLC, monthly website fee 35.00; Big Sioux, marketing 540.00; Building Sprinkler, repairs & maintenance 295.00; Butler Machinery Co, repairs & maintenance 832.95; Cayleah Friedrich, meter deposit refund 125.00; Center Point Large Print, supplies 30.71; City of De Smet, utilities 428.61; City of De Smet, supplies 94.85; Connecting Point, supplies, computer software, repairs & maintenance 334.37; Cook's Wastepaper & Recycling, repairs & maintenance 7,154.09; Country Living, supplies 14.97; Cowboy Country Store, fuel 419.83; CR Corner, LLC, diesel & supplies 1,423.55; Dakota Pump, LLC, repairs & maintenance 2,158.17; DANR, supplies 60.00; De Smet Development Corp., contributions 1,000.00; De Smet Trustworthy, supplies, 19.11; Department of Health, water labs 43.00; Display Sales, supplies 2,038.01; Eternal Security Products, LLC, supplies 272.30; Ferguson Waterworks, repairs & maintenance 740.00; First District Association of Local Governments, supplies, repairs & maintenance 4,045.00; Glacial Lakes & Prairies, bbb marketing 660.00; Goldstar Products, Inc., chemicals 1,109.99; Hawkins, Inc., chemicals 4,040.96; Innovative Office Solutions, supplies 615.35; Interstate Battery Center, supplies 85.30; I & S Group, Inc., 5-year CIP 1,500.00; KDM, repairs & maintenance 8,046.33; Kevin Toews, key fob refund 10.00; Kingsbury Electric Cooperative, repairs & maintenance 331.96; Kingsbury Electric Cooperative, repairs & maintenance 220.00; Kingsbury County Auditor, law enforcement

6,933.33; Kingsbury Electric Cooperative, utilities 1,170.53; Kingsbury Journal, publishing 745.13; Kingsbury Journal, library supplies 65.00; Kingsbury County Sheriff, repairs & maintenance 10.00; Kristy Hubbard, mileage 73.70; Maynard's, supplies 70.92; Micro Marketing LLC, supplies 337.21; Midwest Living, supplies 20.00; Napa, supplies 454.37; Northwestern, utilities 1,874.66; O'Keefe Implement, Inc., supplies, repairs & maintenance 279.96; Office Peeps, Inc., library supplies 54.65; Office Peeps, supplies 297.87; Ottertail Power Company, utilities 6,028.40; Overdrive Inc., fee 600.00; Palmlund Automotive, repairs & maintenance 308.18; Pheasantland Industries, supplies 43.20; Proline, Inc. - Watertown, supplies & equipment 6,631.22; Ryan Petersen, diesel 65.00; Ryan Schoenfelder, event center deposit refund 50.00; SD Department of Revenue, sanitation sales tax 488.69; Share Corp., supplies & chemicals 14,717.36; Shon & Barb Asleson, meter deposit refund 75.00; True North Steel, repairs & maintenance 1,989.16; Valley Fibercom, utilities 503.58; Zell Manufacturing, supplies 500.00; Mediacom, utilities 106.20; American Trust Insurance, insurance 750.00; Helms & Associates, AWOS project 352.05; IMEG, sewer project east area 1,120.00; IMEG, water project east area 13,920.00; IMEG, Main Street project 7,000.00.

SPECIAL LIQUOR LICENSE: An application for a special liquor license was submitted by Lu Ann Klinkel, owner of Klinkel's III for an event to be held on March 22, 2024, at the De Smet Event Center from 4:00 pm to 12:00 am. Motion was made by McCune, seconded by Coughlin, to approve the special liquor license application submitted by Lu Ann Klinkel, owner of Klinkel's III for an event to be held on March 22, 2024, at the De Smet Event Center from 4:00 pm to 12:00 am, all voting aye, motion carried.

PROPERTY TAX ABATEMENT: An application for abatement of city property taxes in the amount of \$676.45 due to a tax-exempt entity purchasing private property was presented to the council. Motion was made by Cavanaugh, seconded by Coughlin, to approve the application for abatement of city property taxes in the amount of \$676.45 on property legally described as E25' of S99' of Lot 12 & S99' of Lot 13, Block 17, Brown's Addition, De Smet City, Kingsbury County, all voting aye, motion carried.

PUBLIC COMMENTS: Rita Anderson met with the council to update the council on the fundraiser for concrete of the Event Center parking lot progress. Anderson also invited everyone to attend the reveal party for the tower at the 1481 trail project. Mark Siefkes met with the council to comment about LED lights.

SECOND READING OF ZONING ORDINANCE NO XX: Motion was made by Hansen, seconded by Jensen, to approve the second reading to approve Zoning Ordinance XX amending Zoning Ordinance No. VII-08, all voting aye, motion carried.

ORDINANCE NO. XX

AN ORDINANCE AMENDING ORDINANCE VII-08, AN ORDINANCE ESTABLISHING ZONING REGULATIONS FOR THE CITY OF DE SMET, SOUTH DAKOTA, AND PROVIDING FOR THE ADMINISTRATION, ENFORCEMENT, AND AMENDMENT THEREOF, IN ACCORDANCE WITH

THE PROVISIONS OF CHAPTERS 11-4 AND 11-6, 1967 SDCL, AND AMENDMENTS THEREOF, AND FOR THE REPEAL OF ALL ORDINANCES IN CONFLICT HERewith, AS AMENDED.

WHEREAS, Chapters 11-4 and 11-6, 1967 SDCL, empower the City of De Smet, hereinafter referred to as the City, to enact a zoning ordinance for all land within the corporate limits of the City and to provide for its administration, enforcement, and amendment, and

WHEREAS, the De Smet - City Council, hereinafter referred to as the City Council, deems it necessary for the purpose of promoting the health, safety, morals, and general welfare of the City to enact such an ordinance, and

WHEREAS, the City Council has appointed a Planning Commission to recommend the boundaries of the various original districts and appropriate regulations to be enforced therein, and

WHEREAS, the Planning Commission has divided the City into districts and has prepared regulations pertaining to such districts in accordance with a comprehensive plan and in such a manner as to lessen congestion in the streets, to secure safety from fire, panic, and other dangers; to promote the health and the general welfare; to provide adequate light and air; to prevent overcrowding of land; to avoid undue concentration of population; to facilitate the adequate provision of transportation, water, sewerage, schools, parks, and other public requirements; and

WHEREAS, the Planning Commission has given reasonable consideration among other things, to the character of the districts and their peculiar suitability for particular uses, with a view to conserving the value of buildings, and encouraging the most appropriate uses of land throughout the municipality, and

WHEREAS, the Planning Commission has made a preliminary report and held public hearings thereon, and submitted its final report to the City Council, and

WHEREAS, the City Council has given due public notice of hearings relating to zoning districts, regulations, and restrictions; and has held such public hearing, and

WHEREAS, all requirements of Chapters 11-4 and 11-6, 1967 SDCL, and amendments thereto, with regard to the preparation of the report of the Planning Commission and subsequent action of the City Council have been met;

NOW, THEREFORE, BE IT ORDAINED BY THE PEOPLE OF THE CITY OF DE SMET:

MAYOR DATE

ATTEST DATE
FINANCE OFFICER

Outline
Pre-Disaster Mitigation Plan
Community Meetings
DeSmet, SD

Introduction

Personal introduction:

All individuals in attendance introduced themselves

Introduce the plan: Luke Muller FDALG introduced the group to the PDM planning process and the community's role in the process, discussing the following:

Why update the PDM?

Why is your community doing it individually/Why not just county?

What is a PDM?

Hazard review

Hazard Identification

Summer/Thunderstorm

- Hail, Heavy Rain, Lightning, Tornado, Strong Winds

Winter Storm and Extreme Cold

- Freezing Rain, Sleet, Ice, Heavy Snow,

Drought and Extreme Heat

Flood

- Rapid Snow Melt, Ice jam, (heavy rain can go here too)

Fire

- Urban fire, wildfire (grass fire)

The Community reviewed the previous PDM's Risk Assessment worksheet (Hazard Identification – Probability). They found no changes necessary other than to specify the wildfire is primarily a fire department concern, and that certain hazards MAY occur but are not a threat to any assets or are more of a threat due to ancillary hazards already addressed in the plan.

Hazard Vulnerability

Summer/Thunderstorm

- Hail, Heavy Rain, Lightning, Tornado, Strong Winds

Winter Storm and Extreme Cold

- Freezing Rain, Sleet, Ice, Heavy Snow,

Drought and Extreme Heat

Flood

- Rapid Snow Melt, Ice jam, (heavy rain can go here too)

Fire

- Urban fire, wildfire (grass fire)

The Community reviewed the previous PDM's Risk Assessment worksheet (Hazard Identification – Vulnerability). They found no changes necessary other than to specify the wildfire is primarily a fire department concern, and that certain hazards MAY occur but are not a threat to any assets or are more of a threat due to ancillary hazards already addressed in the plan.

Community Capabilities and Plans review

The Community adopted an update to its zoning ordinance at the same meeting, including the updated floodplain protection ordinances/map. The community does not have a building code.

Community facilities

Identify/review critical facilities

Are there new facilities/facilities to be removed

Have addresses changed/are they correct

Where are the populations to protect

Transient/campgrounds

Poor Populations/economically disadvantaged areas

Schools/children

Elderly

Protected classes (mentally handicapped)

Muller reviewed the previous plan's critical facilities/populations to protect. The economic development office for the city maintains a list of day cares and campgrounds. That office will send a list of those facilities. (It was later received.)

Project review

Review past projects

- Are they completed/still necessary/ongoing

Ask about other projects (not all require FEMA funding)

Ask about Policies/activities that already help mitigate Disaster

The Community reviewed listed projects from the previous plan and proposed new projects.

Previous Plan projects completed included:

- Zoning Ordinance

Previous Plan Project to be retained:

- Construct Tornado Shelter
- Replace existing storm sirens as needed
- Install back-up generators at fire hall and event center
- Purchase pump truck

No New Projects to include

The community has installed a back-up generator for one lift station and secured funding/budgeted for back up generator on south lift station; fixed drainage by the wellness center (SW part of town); repaired a storm siren, completed a looping (water) project for fire protection; completed and reviewed tornado shelter plan for ball fields and wellness center; and replaced a fire truck. The Community implements water restrictions and no open burning restrictions in dry/drought periods.

Conclusion

Muller informed the community of upcoming Survey site, Pre-disaster Mitigation Team Meetings and the Plan Adoption process.

City of Erwin

Elkton City Council Agenda March 6, 2024

6:00 PM

Roll Call

Pledge of Allegiance

***Approval of Agenda**

Approval of Minutes

1. *February 5, 2024 – Regular Meeting Minutes

Citizen Comments

Pre-Disaster Mitigation Plan (1st District)

Petitions & Communications

1. Temp Liquor permit – EYSA for Ducling Duo March 22nd

City Employee Reports

1. Public Works Supervisor
2. Bar Manager
3. Finance Officer
4. Fire Department
5. Ambulance
 - a. Garage location
6. Library
7. Park & Rec

Financial Reports

1. *2024 Budget Overview

Committee Reports

Ordinances & Resolution

- 1.

Unfinished Business

1. City Infrastructure projects
2. Community Center Roof
3. Traffic lines painting at school

New Business

1. Water tower maintenance contract
2. Sewer line televising
3. Clean up day

***Approval Claim Payments (Bills)**

Information Only (FYI)

1. Sheriff's Report –

Executive Session – if needed

Adjourn

KINGSBURY COUNTY PRE-DISASTER MITIGATION PLANNING MEETING

TOWN OF ERWIN

DATE: March 4th, 2024

[illegible]

Erwin City Council Minutes March 6, 2024

The Erwin City Council meeting was called to order by Mayor Charles Remund at 6:00 PM. Council members present were Jordan Beck, David Bierman, Tal Farnham, Bill Kuehl and Rick Weible. Council member Scott Stuefen was not in attendance.

Motion by Weible second by Beck to approve the agenda as presented. All in favor – motion carried.

Motion by Weible, second by Kuehl to approve the February 5th regular meeting minutes. All in favor - motion carried.

During citizen comments, Erwin School Superintendent, Brian Jandahl was on hand to speak with the council about the parking and safety issue during pick up time for the elementary at the north end of the school. The parking area at the north end of the school has been designated as a pickup and drop off area only, staff have been instructed to park elsewhere. This seems to be working out well. After school lets out the city crew will work with the school to remove some of the yellow no parking area and repaint parking lines to accommodate more vehicles on the west side. Discussion was held on the possibility of painting lines on the road to stop individuals from crossing the center line to park in the opposite direction that they were driving. Inquiries will need to be made to see if this is feasible based on room and laws.

Council member Tal Farnham informed the council that the Boys and Girls Club is looking to come to Erwin in the near future. They are planning to approach the school about the possibility of using the school building for the time being until they are able to build a permanent home. A location for this building is a concern, the city will see if there are any lots that could be of use to the club.

Kelli Henricks a GIS Specialist with First District Association of Local Governments was on hand with a packet for the council to go thru and update for the Kingsbury County Pre-Disaster Mitigation plan. This plan is required to be updated every 5 years. The council made a few changes to the plan.

A temporary liquor permit was requested by the Erwin Youth Sports Association for the fundraiser event on March 22nd. Motion by Farnham, second by Weible to approve the temporary permit. All in favor – motion carried.

Public Works Director, Steve Jensen was on hand to give his report. Jensen and Nelson attended a training session in Badger on February 27th. Sewer water leaks were fixed. The gravel is being dragged and smoothed on the boulevards and alleys. Installation of the new batteries for the water meters continues with only about 100 left to be installed.

Jennifer McBrien, Bar Manager was on hand to give her report. The ice machine continues to not keep up on busy days and weekends. This unit only makes 150 pounds per day, which is not enough. At one point GES offered to upgrade the unit, McBrien will reach out and find out their options through GES. Buck Euchre tournament was well attended last weekend. Karaoke will be held on March 16th. The bar is still looking for new bartenders to fill in part time.

Susan Schuurman, Finance Officer was on hand and gave her report. The council will meet for the Board of Equalization on March 18th at 6 PM to hear any grievances submitted by March 14th. Motion by Weible, second by Beck to move the April meeting to Thursday, April 4th at 6 PM. All in favor – motion carried.

The fire department will hold a fish fry on March 29th.

The ambulance plans to submit some grant application for equipment needed for the new ambulance. They are also planning a breakfast fundraiser in May. Plans for the new ambulance garage are still in the works.

City Librarian, Sherry Bauman was not in attendance, but left her report. Story hour and Daycare deliveries continue. Work on the Annual Public Library survey to the SD State Library is being done to have the document submitted by the end of March. Bauman continues to plan for the summer reading program. The next library board meeting is March 13th at 5 PM.

No applications for the Park and Rec position have been received.

The council reviewed the budget overview for February.

In unfinished business, regarding the infrastructure projects, Schuurman asked if there were any updates on the updated application that is due to the state on March 8th. Jensen will reach out to SPN in the morning. Council member Beck will speak with Erwin Lumber to make sure the community center shingles are replaced this summer.

The water tower is due to be inspected and cleaned this summer. The council was given two options by Maguire Iron. First is a contract for one year service at the price of \$2,650.00, the second is an option to sign a contract locking in the \$2,650.00 rate for the next 10 years, the full cost being due the first year. The council decided to go with the one year contract. Motion by Farnham, second by Weible to approve a 1 year contract for the water tower maintenance. All in favor – motion carried.

In regard to the infrastructure project there is a need to televise some of the sewer lines. This includes a section on the north end of Beaver Street to determine the condition of the line underneath the railroad tracks. Also, the sewer line on 4th Street, to determine how far east of Badger Street the line goes and if it ties into the manhole in the park. This project will cost approximately \$1,000.00. Motion by Bierman, second by Farnham to approve the televising. All in favor – motion carried.

The council discussed a date for the spring clean up. They chose April 26th or May 3rd if the dates were still available with the contractor.

Motion by Beck, second by Bierman to approve payment of the March bills. All in favor – motion carried.

With no further business before the council. Motion by Farnham, second by Weible to adjourn the meeting at 7:08 PM. All in favor – motion carried.

March 2024 payments

Aflac 27.04 insurance; A-OX welding 40.19 shop supplies; Aramark 869.72 bar, c-ctr mats, supplies; AT&T 170.07 cell service; Austreim Excavating 87.50 south road maintenance; Avid Hawk 45.00 website monthly fee; BankStar 9.62 petty cash; BankStar 128.10 insurance; Beal Distributing 5149.60 beer purchases; Britzman, Steven 160.00 lawyer fees; Br. Co. Sheriff's Dept 2862.44 contract law enforcement; Br. Deuel Rural Water System 4750.60 water purchased; Capital One 21.22 finance office supplies; Century Business Products 71.76 library copier lease, copies; Chesterman 401.90 pop purchased; CHS 1281.35 propane, supplies; City of Erwin 347.40 utility fees; Colonial Life 306.94 insurance; Cook's Wastepaper 4128.72 contract garbage; Core & Main 49,500.00 new meter batteries; Dakota Beverage Co 3808.00 beer purchases; Dakota Pump & Control 1040.82 install temp sewer pump; Dakota Toms 185.60 bar supplies; *Dept of Revenue 16.70 title & registration fees; Dept of Revenue 2304.14 sales tax remittance; DMI 154.50 JCB maintenance; EFTPS 5094.77 federal tax payments; Green Energy Solution 219.30 ice machine maintenance; Harry's Frozen Food 1109.25 pizzas for bar; Henry's 4075.18 bar supplies; Innovative Office Solutions 186.38 building permit cards; ITC 792.70 phone & internet service; Jensen, Steve 70.00 phone reimbursement; Johnson Bros 2563.49 liquor purchases; LEAF 41.00 finance office copier lease; Lowes 48.82

shop supplies; Lyle Signs 67.31 street signs; McBrien, Jennifer 30.00 phone reimbursement; Nelson, Terry 30.00 phone reimbursement; Nova Entertainment 450.00 bar entertainment; One Office Solution 16.94 copier maintenance, copies; Ottertail 2014.30 electricity; Pepsi 48.00 pop purchased; Postmaster 227.00 postage; *Practice Sports 900.00 pickleball posts, nets; Republic Beverage Company 446.50 liquor purchases; Rubber Flooring 22,493.16 pickleball flooring; Runnings 5.58 shop supplies; Schuurman, Susan 51.42 phone, mileage reimbursement; SD Retirement 2336.68 retirement payment; Sioux Valley Energy 56.00 lagoon electricity; Skyview 235.50 fuel purchases; Southern Glazer's 559.60 liquor purchases; Vadim Municipal Software 16.16 ebilling fee; Visa 4233.97 bar, library, finance, park supplies; Visa – Street 321.33 shop supplies; Visa – Bar 134.56 bar supplies; Wellmark BC/BS 3339.91 health insurance; Wex 206.07 fuel purchases.

***denotes already pd. *Payroll:** Mayor/Council 860.06; Finance 4771.49; C-ctr 167.58; Street 3532.44; Library 1486.79; Bar 8961.62; Water 3983.32; Sewer 3532.42.

Erwin PDM Meeting 03/06/2024 Meeting Notes

- Prerequisite for federal funding/grants you have to have in order to qualify
- Hazard mitigation project examples: Storm shelter, sirens, power line burials, tree branch trimming, drainage channels, etc. Projects that help to stave off probably emergency issues
- FEMA requires some sort of plan in place in order to qualify for the 80/20
 - FEMA says we need to prepare this plan to help minimize the chaos during emergency recovery efforts
 - Some events happen on a regular basis, sometimes, or almost never
- How likely are events to occur?
- ALWAYS GET COPY OF AGENDA
- When county updates premitigation plan so does the city
 - Updated every 5 years
- Worksheet #1
 - Move drought from low to high
 - Move flood from low to high
 - Can categories be added?
 - Want to add high winds as they have been experiencing high winds the past few years that does damage on occasion (ripping off siding, shingles, blowing down trees, etc)
 - Can Solar Flares category be added? With the increase in demand for telecommunications or technology solar flares have been increasing (due to ozone thinning) that it is causing havoc on grid power or telecommunication outages.
- Worksheet #2
 - Move Drought from NA to medium
 - Move Flood from NA to high (city is so flat that if they flood everyone is impacted)
 - Move Hail from medium to high
 - Move Heavy rain from medium to high
 - Move Heavy snow from medium to high
 - Move Thunderstorm from medium to high
 - Can categories be added?
 - Strong winds (see worksheet 1 note)
 - Solar flares (see worksheet 1 note)
- Critical Infrastructure List
 - No changes.
- Map of Critical Infrastructure
 - No changes.
- Map of Mitigation Activity Sites
 - No changes.
- City of Erwin Problems
 - Bury Overhead powerlines
 - Not done
 - Tree replacement Program

- Haven't implemented. Have removed trees, but haven't started a program to replace them.
 - Ottertail has been removing trees that damage or impact power lines
- Install storm siren
 - Not done
- Develop and Implement Emergency Plan for Tornadoes
 - Not done
- Construction of Tornado Shelter
 - Not done. Community center acts as a storm shelter to get out of thunderstorms but not safe enough for tornadoes council felt
- Comprehensive Drainage Study
 - Yes has had part of the town done with the street projects
- Establish living snow fence
 - Not done
- Other Items Discussed:
 - Burying powerlines would be nice, but Ottertail owns them and has been slowly doing it. They are also doing tree trimming and removals as needed.
 - Better water storm drains with various street constructions
 - Sanitary and water in great condition in parts of town.
 - They are currently on 3rd phase of replacing water and sewer and will have a 4th phase.
 - Currently half the town is done with brand new water/sewer and the goal is to finish the entire town.
 - West side of town has drain tile to help with drainage issues
 - Partner with the school for storm shelter as another location to help get more people to safety
 - Fliers to help make people aware of where to go during storm events
 - Bank during tornadoes as a safety shelter?
 - School would be #1 storm shelter location to go but possibly the bank as a tornado shelter?
 - CO2 pipeline- communities prevention/chain of command for what should be done during CO2 pipeline burst
 - What plan of action? Who to contact? What to do with local residents?
 - 5-10 mile dispersement so now part of the community is impacted.
 - Want to get a Hazard plan of Action for CO2 Pipeline burst for everyone impacted, proper training for City staff & residents, proper equipment.
 - Ethanol industry might impact this/need to have a safety plan in place and will work with local communities?
 - Bob Hill will need to coordinate with

Town of Hetland

**HETLAND TOWN BOARD AGENDA
HETLAND, S.D. 57212
March 19, 2024**

- 1. Call to order**
- 2. February 2024 Minutes**
- 3. Treasurers Report**
- 4. Expenses/Warrants**
- 5. Pre Disaster Mitigation Review – Amy Arnold First District**
- 6. Next Meeting Date**
- 7. Adjourn**

KINGSBURY COUNTY PRE-DISASTER MITIGATION PLANNING MEETING

TOWN OF HETLAND

DATE: March 19th 2024

[illegible]

HETLAND TOWN BOARD MINUTES HETLAND, S.D. 57212

The Hetland Town Board met on March 19, 2024, at 4:30 p.m. at the city office with board members Steffensen, Rybak, and city finance officer Carolyn Heitmann present. A representative from the First District Association of Local Government also attended our meeting.

The minutes from the February meeting were read and approved as read. A motion was made by Steffensen and seconded by Rybak to approve the minutes.

The treasurer's report was presented and approved. A motion was made by Rybak and seconded by Steffensen.

The correspondence the town received was presented at the meeting.

The following warrants were presented and paid. A motion was made by Rybak and seconded by Steffensen to pay the bills.

Carolyn Heitmann		75.00
R.F.D Newspaper		50.49
Kingbrook Rural Water		38.00
Ottertail		181.67
TOTAL		339.42

Amy Arnold from First District Association of Local Government was at our meeting to go over the Prediaster Midigation Plan for the next 5 years.

The next meeting will be held on April 18, 2024, at 3:30 p.m.

No further business. A motion was made by Rybak and seconded by Steffensen to adjourn the meeting.

Meeting adjourned.

Carolyn Heitmann

City finance officer

Published once at the approximate cost of _____

Hetland PDM Meeting 04/01/2024 Meeting Notes

- Prerequisite for federal funding/grants you have to have in order to qualify
- Hazard mitigation project examples: Storm shelter, sirens, power line burials, tree branch trimming, drainage channels, etc. Projects that help to stave off probably emergency issues
- FEMA requires some sort of plan in place in order to qualify for the 80/20
 - FEMA says we need to prepare this plan to help minimize the chaos during emergency recovery efforts
 - Some events happen on a regular basis, sometimes, or almost never
- How likely are events to occur?
- ALWAYS GET COPY OF AGENDA
- When county updates premitigation plan so does the city
 - Updated every 5 years
- Worksheet #1
 - Leave as is. Council was in agreement everything looked fine in the current categories
- Worksheet #2
 - Leave as is. Council was in agreement everything looked fine in the current categories
- Critical Infrastructure from 2019-24
 - Lots of updates to addresses. Julie sent a list with information to update. See list below
 - Hetland City Hall (this is actually our maintenance garage or what we call the "pumphouse") 318 Main Street
 - Hetland Fire Dept (where we had our meeting) 311 Main Street
 - American Legion Hall (legion disbanded, FD now owns bldg) 309 Main Street
 - Storm Siren (located next to Kingsbury County Maint Shed) 302 Main Street
 - City Sewer Lagoons (south of town) 458th Ave and 217th St
 - Sewer Lift Station (west end of town) 2nd St W & Main Ave
 - City Park (west end of town, 2nd St W & Park Ave) 111 Park Avenue
 - Red Shed (maintenance shed for tractor, equipment storage) 216 2nd St
 - Old sewer bldg (storage) 2nd St W
- Town of Hetland Hazard Vulnerability/Critical Infrastructure Map
 - Add items listed above
- Town of Hetland Mitigation Activities Map
 - No changes to be made.
- Table of Problem Statements
 - Construction of Tornado Shelter
 - Not built.
 - Complete required drainage improvements from engineering study.
 - Not done yet.
 - Other comments:
 - Use basement of church for tornado shelter currently
 - Sioux Valley owns all the power lines and maintains them.
 - This summer they will be burying all lines.

- They also maintain tree trimming along power line routes
- Brand new siren, still in good shape about 15 years old
- Would like generators if had the money to buy them
- Sanitary sewer is only a few years old, same with lagoon
- Rural water installed all new water lines
- No flood issues so no need for levees or issues of ice jams

City of Iroquois

AGENDA

City of Iroquois

April 15, 2024

7:00 pm

Iroquois City Hall

Call to order with Pledge of Allegiance

Public Comment

Adopt Agenda

Approve Minutes of Previous Meetings

Department Reports

Planning & Zoning

2 Building Permits – Doug & Marilyn Rainforth & Pat Owens

First Reading of the Flood Damage Prevention Ordinance

Highway & Streets

Bulk Fuel

Fuel Tank

Water

Accounts receivable reviewed

Consumer water report

Sewer

Equipment

General Maintenance

Buildings

Park

Cemetery

Mower Bids

Dump grounds

Mayor's Correspondence

Kingsbury Transit

Finance

Approve Financial Report

Approve Claims

Other:

1. Jim Lynch from the Fire Department at 7:10
2. Kelli Hendricks from First District @ 7:00 – Pre-disaster mitigation plan review
3. Dennis Rebelein from Banner – sewer project funding

Meeting Minutes

City Of Iroquois

April 15, 2024

Present: J Hulbert, Z Jacobs, D Moffitt, M Peskey, J Biever, R Blue, D Bessey, S Arbeiter.

Visitors: Kelli Hendricks, First District; Dennis Rebelein, Banner; Jim Lynch, Fire Dept.; Doug Rainforth; Matt Huls.

Mayor Hulbert called the meeting to order at 6:59 pm with the pledge of allegiance.

Public Comment: none

Motion to adopt the agenda by Blue, 2nd Peskey & carried.

Motion by Blue, 2nd Jacobs & carried to approve the March council & Equalization Board minutes.

Planning & Zoning: One building permit was presented. Motion by Moffitt, 2nd Blue & carried to approve a building permit for Rainforths 32x40 unattached building at \$28.00. Another building permit was supposed to have been turned in but was not, henceforth unable to be approved.

First Reading of the Flood Damage Prevention Ordinance. After some discussion a Motion was made by Biever, 2nd Peskey to approve the first reading of the flood damage prevention ordinance with the agreement by the council to do more homework on the subject before the next meeting. All voted yes. The entire document is available at the city hall for review.

Streets: We received 4 bids for bulk fuel: Stern at \$3.08/Gal, Prairie Ag at \$3.19/Gal, Cavour Store at \$3.89/Gal, & Adam Gross (The Chop Stop) at \$3.09/Gal. A motion by Blue, 2nd Bessey & carried to approve filling the tank from the Chop Stop for \$3.09/Gal. Curb stops have been fixed that were an emergency need. Huls brought up the need to get something to help locate curb stops and to think about fixing some road shoulders. A motion by Blue, 2nd Biever & carried to buy red rock for \$35/Ton from.

Water: Accounts receivables reviewed. The 2023 Annual Drinking Water Report was received from the Department of Environment & Natural Resources. The report is available at city hall for all to review. A motion by Moffitt, 2nd Biever & carried get a GPS Bluetooth receiver for the water/sewer departments which will increase the accuracy of our mapping.

Sewer: Two manholes have been jetted and two benches fixed. There is a need for a new valve in cell 3 at the lagoon and Dakota Pump will install it when they get it.

Equipment: General maintenance being done. The tractor grapple doesn't work well for what we need to do with it. Discussed possible replacing.

Buildings: Update on Museum wall; no call back yet from our contact to fix this wall.

Park: Arnie's Outback worked on the grass on the football field more this last week. There is some scrap metal that needs to be removed from the park. The sand volleyball pit has been raked to get ready for summer. There is a need to water the new trees just planted once we start watering the football field again.

Cemetery: We received several estimates for mowers. A motion by Biever, 2nd Blue & carried to approve the purchase of a Bad Boy Maverick 48" mower for \$7,176.00 (commercial) as the city will be doing mowing at the cemetery this year.

Dump grounds: There is now better road access to the dump.

Mayor's Correspondence was reviewed. Kingsbury county transit has reached out to see if we have a need in our community. Marlys will get more information on what exactly they can do and where they can go.

Motion by Blue, 2nd Jacobs & carried to approve the financial report.

Motion by Blue, 2nd Bessey & carried to pay claims.

April Claims: EFTPS, payroll taxes \$1,224.59; Matthew Huls, payroll \$2,731.13; Linda Geyer, payroll \$48.48; Stefanie Arbeiter, payroll \$1,007.87; Rollin Walter, payroll \$702.81; Rural Development, sewer loan \$1,887.00; SD Dept. of Labor, reemployment insurance \$26.99; Plainsman, publishing \$58.10; Health Pool of SD, insurance \$723.53; True North Steel, machinery & equipment \$6,745.00; Benders Sewer & Drain, services & fees \$2,852.00; Metering & Technology, supplies & materials \$1,095.70; Dakota Pump, supplies & materials \$1,579.81; JD Concrete, supplies & materials \$981.28; The Chop Stop, fuel \$477.32; Runnings Supply Inc, supplies \$102.95; Compass Business Solutions, water bill statement paper \$465.05; Kingbrook Rural Water, water \$3,744.25; Northwest Pipe Fittings Inc; water supplies \$1,041.67; Mid-American Research Chemical, supplies \$4,663.46; VISA / AB&T, supplies / services \$1,122.64; SD Public Health Lab, testing \$176.00; Cook's Wastepaper & Recycling, trash & recycling \$1,684.57; Valley Fibercom, telephone / internet \$153.90; Northwestern Energy, utilities \$1,577.06; Iroquois Fire & Rescue, Services & Fees \$10,000.00.

Other:

1. Jim Lynch at 7:10 pm from the Iroquois Fire Dept. describing fire department needs. Motion by Moffitt, 2nd Peskey & carried to approve \$10,000.00 for their training and equipment needs.

Jim Left at 8:10pm.

2. Kelli Hendricks from First District was present to lead a pre-disaster mitigation plan review at 7:00 pm. The council discussed many loss-control items and reviewed any need for changes with Kelli. Kelli left at 7:25pm.

3. Dennis Rebelein from Banner was here to discuss the next steps in the sewer funding project. Finance office will need to assess & compile information needed so that we can move forward as soon as possible with phase one of the project.

4. Reminded Moffitt and Bessey of feedlot inspection to be done before May meeting.

5. There being no further business, motion by Biever, 2nd Jacobs & carried to adjourn the meeting at 9:40pm.

Signed: Jim Hulbert, Mayor

Attest: Stefanie Arbeiter, Finance Officer

Iroquois PDM Meeting 04/15/2024 Meeting Notes

- Prerequisite for federal funding/grants you have to have in order to qualify
- Hazard mitigation project examples: Storm shelter, sirens, power line burials, tree branch trimming, drainage channels, etc. Projects that help to stave off probably emergency issues
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 - Everything looked ok except move Drought from low to high
- Worksheet #2
 - Move Hail from Low to High
 - Move Heavy Rain from Medium to High
 - Move Heavy Snow from Medium to High
 - Move Strong Winds from Medium to High
 - Move Thunderstorm from Low to High
- Critical Infrastructure List from 2019-2024
 - Change the name US West Building to Century Link
 - Change the name Pesky Apartments to just Apartments (they keep changing hands/names and weren't sure what they were being called at this time)
 - Should Valley Fiber Con building be added since Century Link is on the list?
 - Add Prairie Haven Mennonite Church since other church is on this list/is used as a safe space to get out of weather
 - 100 Sullivan St. E
 - Should the gas station Chop Stop be added? This would be the only location (other than City St Dept building next to City Hall) that would have bulk fuel tanks the city can access in case of emergency
 - Hwy 14 & 418th Ave intersection it is located on
- Map of City of Iroquois Hazard Vulnerability/Critical Infrastructure
 - Add Church and other buildings that are deemed to be put on map
 - Fuel Storage/Gas Station
 - 1000 gal Fuel storage for City at City Building
- Project List from 2019-2024 PDM Plan
 - Purchase of Portable Back up Generator for Critical Infrastructure
 - Not portable it's a stationary generator is all the have that is in good condition
 - Back up generator at wet wells

- FD has a small one
 - Various city council people have small generators that can be used if needed during emergencies
- Develop and implement emergency plan for tornadoes
 - They have a community known mitigation plan in place, however severely outdated as it was last updated in 2012. Will work on updating it in the upcoming few years
 - They started a tornado shelter plan after last PDM meeting in 2019 but idea slowly fizzled out and was forgotten about
- Construction of a Tornado Shelter
 - Not done yet
- Replace culverts
 - Yes, random ones threw out the community have been replaced but more need to be done yet
- Purchase Fire Suits and Equipment
 - Yes, FD has separate budget as it is a separate entity from the City
 - They are continuously updating a little at a time as their budget allows
- City of Iroquois Mitigation Map Activities
 - Nothing new to add to it
- Misc Comments/Project Notes or Wishlist Items
 - Would really like a tornado shelter for ball field
 - New Tornado sirens in 3 locations
 - One north of town, one in the center of town, and one south of town for farmers to hear
 - Flood mitigation plan
 - Bury power lines
 - Working on a plan for sewer updates
 - Relined sewers in 2011/2013
 - Relined Manholes
 - 2019 Sewer inspection
 - Banner compiled a plan of what needs to be done
 - Water has been done but need to update all the curb stops
 - Abandoned all storm sewer due to age/kept collapsing in and was doing more harm than good.
 - New culvers, new berms helped alleviate some of the issues but still has problems of flooding
 - Park has had lots of flooding issues
 - Built up park, new berm designed by Bros Engineering in 2021/2022
 - Cemetery plan as it floods from time to time or what to do in case a storm knocks down trees/uproots caskets
 - New Park
 - Would love to move the current park out of the flood plain so they don't have to worry about it constantly flooding

- Would love to pave all the roads/new curb and gutter to redirect water and help mitigate some of the flooding issues they have in town
- Would love to get a city owned portable generator
 - Have used some of the local citizens generators in time of need as that's what they had access too
 - Ex. Ice storm area had a few years back

City of Lake Preston

Proposed Agenda

Regular MEETING
CITY COUNCIL
LAKE PRESTON, SD

CITY HALL
April 8th, 2024
7:00 PM

- A. Call meeting to order
- B. Approve Agenda
- C. Pre-Disaster Mitigation Plan Review Amy Arnold, First District
- D. Re-Zoning Request Explanation
- E. Motion to recess regular meeting and meet with Planning & Zoning Commission for purpose of a public hearing to amend comprehensive land use plan and re-zone West 1025' of the Municipal Airport Outlet of Lake Preston Development Park Addition, City of Lake Preston, Kingsbury County, South Dakota.
- F. Public Comments - Limited to 5 minutes per citizen.
- G. Both Planning & Zoning Commission and City Council close public hearing.
- H. Planning & Zoning Commission
 - a. Planning & Zoning Commission Resolution recommending changing comprehensive land use plan future land use map City Council Resolution 103-23
 - b. Planning & Zoning Commission Resolution recommending approval of Ordinance 464-24
 - c. First reading of Ordinance 464-24
 - d. Resolution 103-23
- I. Planning & Zoning Commission Adjourns
- J. Resolution 103-23
- K. First reading of Ordinance 464-24
- L. Set Ordinance second reading – April 15th 2024
- M. Public Comments - Limited to 5 minutes per citizen. Action may not be taken on items discussed at time of meeting.
- N. Banner Associates
 - a. Phase 1
 - b. Phase 2A
 - c. Phase 2B – Funding Package
 - d. Water Tower – Pay Request #1
 - e. Tap Grant – 2nd St. & Main St.
- O. Approve Minutes of March 11th regular meeting
- P. Approve Minutes of March 14th special meeting
- Q. Approve Minutes of March 20th regular meeting
- R. Committee Reports
 - a. Street Committee
 - b. Liquor Committee
 - i. Legion Operating Agreement
 - ii. Second reading of Ordinance 463-24
- S. Water/Sewer/Street Report – Brian Zeeck & Doug Bumann
- T. Finance Office Report – Brenda Klug
- U. Approval of Claims
- V. Financial Report
- W. Old Business
 - a. Building Permits*
 - b. Nuisance Properties*
- X. New Business
 - a. 2023 Drinking Water Report
 - b. Basketball Hoop-Park
 - c. Resolution 102-24
 - d. Review Applications
- Y. Employee/Council Concerns
- Z. Executive Session – (SDCL 1-25-2 (1 & 4) – Legal or Personnel)
- AA. Adjourn

Individuals in need of assistance in attaining access to the meeting, please contact City Hall within 24 hours of the meeting time for special arrangements. Those wishing to address the Council that do not appear on the agenda will be heard but limited to five minutes. Because of the twenty-four-hour public notice requirement, the Council reserves the right to delay any action requested until a future night. This meeting begins at 7:00 PM in the City Hall 111 3rd St NE, Lake Preston, SD.

Executive Session uses:

SDCL 1-25-2 (1-5) – Legal, Personnel, Contract Negotiations SDCL 9-34-19 - Economic Development

KINGSBURY COUNTY PRE-DISASTER MITIGATION PLANNING MEETING

Lake Preston

DATE: April 8th, 2024

Name	Organization
JODI HOPE	city Council
Donna Bumann	City Council
John McMasters	City Council
Andrew Lusk	City of LP
Rick Olson	City Council
Jeremy Woodcock	City Council
Arthur W. [unclear]	City Council
Brian [unclear]	Citizen
[unclear]	city of LP
Brian Zech	city of LP
Neel [unclear]	Zoning Board
Jeffrey Koch	Zoning Board
Loree Nyquist	Zoning Board
DEL SMITH	Zoning Board
Jan Brown	Zoning Board
Luke Smith	Dev. Board
Joel [unclear]	
Brandi [unclear]	
Morgan Larson	LP Dev. Corp.
TEKE KOELLNER	
[unclear]	
DAVID FIELDS	KINGSBURY JOURNAL

Regular Meeting of
Lake Preston City Council
Monday April 8th, 2024

A regular meeting of the Lake Preston City Council was held at the City Hall on Monday April 8th, 2024 at 7pm. Present were: Mayor Andy Wienk, John McMasters, Donna Bumann, Jodi Hope, Allen Wilde, Jeremy Woodcock, Rick Olson. Zoning Board: David Hillestad, Jerry Brown, Leroy Koch, Del Smith, Loren Trygstad. Also, present Brenda Klug, Brian Zeeck, Doug Bumann, David Fields from the Kingsbury Journal, Joel Gerleman, Morgan Larson and Luke Smith from the Development Board, Terri Koellner and Rebecca Kindt from the future meat locker, Amy Arnold from First District, Brian Verhey, Brandi Olson, Cedric Hay from Banner Associates, Brett Anderson.

The meeting was called to order by Mayor Wienk at 7:00 pm.

Motion by Bumann, seconded by McMasters to approve the agenda. All in favor, motion carried.

Amy Arnold from First District out of Watertown presented info for the pre-disaster mitigation plan. Every five years it needs to be updated, last time was 2019. Council reviewed all the disaster activities that could happen, they increased the odds of hail and wind. Various locations in town were discussed- new addresses or adding addresses.

Wienk gave a brief explanation for the rezoning of the airport land from Ag to Industrial. Luke Smith stated that it is only the SE corner of the Airport land.

Motion by Woodcock, seconded by Olson to recess the regular meeting and meet with Planning & Zoning commission for purpose of a public hearing to amend comprehensive land use plan and re-zone West 1025' of the Municipal Airport Outlet of Lake Preston Development Park Addition. All in favor, motion carried.

Wienk read resolution 103-24 aloud.

Wienk adjourned both planning and zoning commission and the city council at 7:23 pm.

Jerry Brown inquired about the new site of the water tower, whether it needed to be rezoned from R1. Klug planned to reach out to First District for clarification.

Motion by Brown, seconded by Leroy Koch to approve resolution 103-24 and ordinance 464-24. All in favor, motion carried.

David Hillestad adjourned planning and zoning commission at 7:27 pm.

Motion by Woodcock, seconded by McMasters to approve resolution 103-24. Roll-call vote. All in favor, motion carried.

Motion by Woodcock, seconded by Bumann to approve ordinance 464-24. Roll-call vote. All in favor, motion carried.

Council set second reading of ordinance 464-24 for April 15th @ 7 pm.

Luke Smith thanked the city on behalf of the development board, for the continued support. Also introduced the future owners of the meat locker, Terri Koellner and Rebecca Kindt.

Joel Gerleman introduced himself, whom is running for Ward 1 alderman; he has lived in the community for 14 years.

Cedric Hay briefly discussed phase 1, Halme will be in town the next few weeks wrapping things up. Bowes plans to be in town May 6th to get the top mat of asphalt completed. As far as Phase 2A, Rounds plans on being in town the end of April working on 5th St SE to get the infrastructure finished up. There has been some discussion on the paving part of 5th St. SE, between the development board and city. Hay discussed the beginning plans for the water tower, the ground work has started. Motion by Woodcock, seconded by Olson to approve Maguire Irons 1st pay request for \$22,500. All in favor, motion carried.

The TAP grant was briefly discussed, more discussion on the cities fund portion will be at the May meeting. The Main St project by 5th St N was discussed, they have explored doing cement-but it ended up being out of the budget. Hay discussed the drainage study he has been working on for the Development board, for the NW development by 7th St. N.

Hay explained the funding package that the city just received from the state for Phase 2B. Project costs keep climbing, the rates that DANR is setting as minimums keep increasing. Phase 2B drinking water application received an 85% principal forgiveness, which means a \$5.85 surcharge to be added. Phase 2B sewer application received a 40.1% principal forgiveness, which means a \$25.60 surcharge to be added. Council discussed doing a public meeting for the rate increase. Motion by Woodcock, seconded by Olson to approve moving ahead with the phase 2B project. All in favor, motion carried. Klug and council discussed adding the surcharges in stages or doing it all at once.

Motion by Bumann, seconded by Woodcock to approve March 11th regular meeting minutes. All in favor, motion carried.

Motion by McMasters, seconded by Hope to approve March 14th special meeting minutes. All in favor, motion carried.

Motion by Olson, seconded by Woodcock to approve March 20th regular meeting minutes. All in favor, motion carried.

Brett Anderson in @ unknown time. (BK)

Bumann stated that the streets committee had met to discuss future requirements for future growth, city plans on reviewing a few ordinances with Banner and 1st District. McMasters and Brett Anderson discussed the meeting between the city and the legion, agreed that they are close to finalizing the operator's agreement.

Wienk read through a few grammatical errors from the first reading of ordinance 463-24. Motion by Woodcock, seconded by McMasters to approve the second reading of ordinance 463-24. Roll Call Vote. Wilde Nay. All in favor, motion carried.

Zeeck stated that they started work on gravel surfaces, he did not have much to discuss due to multiple meetings in March.

Klug inquired about including the sales tax fees in the current fees, to save hassle of change; council agreed. Klug discussed that she has been in contact with Jesser's Greenhouse on a few different options this year for flowers, council okay'd only 1 color in each basket. Water tower meeting is April 18th in the community room @ 5:30, finance officer school is June 11th-14th, canvassing the ballots is April 15th @ 7pm. Wienk inquired about Banner including the rate increase for Phase2B in on the water tower meeting. Klug discussed that in the future she would be contacting the parks committee to discuss purchases from the baseball donations and sponsorship signs funds. Klug included that the city election is tomorrow April 9th from 7am to 7pm in the community room.

Motion by Bumann, seconded by Hope to approve the following claims as presented: All in favor, motion carried.

A & B Business \$173.00, printer contract; Amazon \$192.96, library supplies; Ambill Ass. \$1,015.00, amb. billings; Avera Health Plan \$635.01, health ins.; Avid Hawk \$49.00, website fee; Banner Ass. \$7,021.50, meat locker meeting/misc. engineering; Bode Const. \$408.16, snow removal/water; Cooks Wastepaper \$2,928.92, city trash/city dumpster; Deb Miller \$28.72, library supplies; DOR \$249.29, taxes; Henry Schein \$90.77, Amb. supplies; Kingbrook Rural Water \$6,250.25, purchased water; Kingsbury Co. \$2,080.00, contract law; Kingsbury Journal \$1,133.07, publishing; Lake Area Door \$693.65, garage doors; Lowes \$735.84, gen. gov.; Moleads \$58.87, election supplies; Nature Conservancy Magazine \$15.00, library mag. sub.; Northwestern Energy \$1,215.44, natural gas; Ottertail \$3,286.44, electric; Pioneer Research \$5,338.80, sewer; Prairie Ag Partners \$1,628.81, city; Public Health Lab \$15.00, water testing; SD Library Ass. \$23.00, annual dues; SDML Workers Comp Fund \$316.00, 2023 audit billing; Significant Digits, Inc. \$650.00, SD Reader-water; Titan HQ \$540.00, web titan cloud; Valley Fibercom \$219.18, phones/internet; Winwater \$2,323.88, water; Amazon \$37.81, office/election; Execubanc \$57.40, bank fees; USPS \$170.13, water bills; Voiceshot \$20.00, messaging/texting; Banner Ass. Inc. \$37,845.89, water tower; Rounds Const. \$107,719.77, pay request #8.

Motion by Woodcock, seconded by McMasters to approve Marchs financial report. All in favor, motion carried.

Klug stated that Tim Austin was very pleased with the nuisance properties in town, except it looked like a few properties were getting added debris.

Motion by Woodcock, seconded by Bumann to approve the 2023 drinking water report. All in favor, motion carried.

Zeeck stated that the basketball hoop at the park had been shattered again, the plans is to put a new one in that cannot be moved higher or lower.

Motion by McMasters, seconded by Olson to approve resolution 102-24. Roll Call Vote. All in favor, motion carried.

Zeeck stated that in June all 3 full-time employees may be gone all at the same time. Olson stated "Good luck to everyone, everyone get out and vote tomorrow".

Motion by Bumann, seconded by Olson to go into executive at 8:39 pm for personnel.

Council came out of executive session at 8:51 pm.

Motion by McMasters, seconded by Olson to hire Grace Greene as a 2024 lifeguard at \$13/hour. All in favor, motion carried.

Motion by Bumann, seconded by Hope to hire Amelia Holand as a 2024 lifeguard at \$13/hour. All in favor, motion carried.

Mayor Andy Wienk declared the meeting adjourned at 8:52 pm.

Brenda Klug, Finance Officer

Andy Wienk, Mayor

Published once at the approximate cost of _____.
1 Week extension

Outline
Pre-Disaster Mitigation Plan
Community Meetings

Introduction

Personal introduction:

Introduce the plan:

Why update the PDM?

Why is your community doing it individually/Why not just county?

What is a PDM?

Hazard review

Hazard Identification

The council and city staff present reviewed the hazard identifications and didn't see a need to change any of the probabilities they had listed from the previous plan.

Hazard Vulnerability

After reviewing the hazard vulnerabilities the council wanted to move hail and strong winds from Medium to High vulnerability since either occurrence would more than likely affect more than 10% of their jurisdiction.

Community Capabilities and Plans review

No changes to these

Community facilities

Identify/review critical facilities

Are there new facilities/facilities to be removed

New ambulance building – 103 Walters Ave N

Valley Fiber Com – 315 1st Street SE

New water tower – next to old one

Remove LP Clinic – Horizon Health is at 322 Main Ave N

Remove community daycare – Brenda will provide list of in home daycares

Siren on the water tower on the corner of 3rd St and Lake Ave N

Project review

Review past projects

Upgrades to lift station and wastewater management system were completed in 2021

Ask about other projects (not all require FEMA funding)

The council discussed projects to help mitigate hazards

- overhead powerline burial to help minimize loss of power
- adding an additional storm siren
- additional emergency ppe to make sure fire department is well stocked
- stormwater mitigation across town to help reduce localized flooding in the event of heavy rains

Ask about Policies/activities that already help mitigate Disaster

Conclusion

Town of Oldham

CITY OF OLDHAM
MEETING AGENDA
APRIL 8, 2024
6:00

Call to Order
Approve Agenda
March Minutes
April Bills
March Finances

OLD BUSINESS

- Delinquent bills
- Election
- Picnic Shelter

NEW BUSINESS

- Trash contract
- Pre-Disaster Mitigation Plan Review
 - First District Association of Local Governments

Maintenance Report

Public Comment

May meeting date

TOWN OF OLDHAM

253

Oldham PDM Meeting 04/08/2024 Meeting Notes

- Prerequisite for federal funding/grants you have to have in order to qualify
- Hazard mitigation project examples: Storm shelter, sirens, power line burials, tree branch trimming, drainage channels, etc. Projects that help to stave off probably emergency issues
- FEMA requires some sort of plan in place in order to qualify for the 80/20
 - FEMA says we need to prepare this plan to help minimize the chaos during emergency recovery efforts
 - Some events happen on a regular basis, sometimes, or almost never
- How likely are events to occur?
- ALWAYS GET COPY OF AGENDA
- When county updates premitigation plan so does the city
 - Updated every 5 years
- Worksheet #1
 - For flood events they have pumps so leave at low probability to occur
 - Rapid snow melt move from low probability to high probability
 - The rest the council was ok with
- Worksheet #2
 - Move Extreme heat from low to high vulnerability
 - Move Flood from medium vulnerability to high vulnerability
 - Move Hail from low vulnerability to high vulnerability
 - Move Heavy rain from low vulnerability to high vulnerability
 - Move Heavy snow from low vulnerability to high vulnerability
 - Move Strong winds from medium vulnerability to high vulnerability
 - Move Thunderstorm from low vulnerability to high vulnerability
 - Move Tornado from low vulnerability to high vulnerability
- Critical Infrastructure List from 2019-2024 PDM Plan
 - 126 S Lillie Ave should be 108 S Lillie Ave for Oldham Water tower
 - City Shop address wrong, need to look it up and find correct one
 - Local guys don't control the siren anymore. Huron does everything digitally and it doesn't work most of the time.
- Town of Oldham Hazard Vulnerability Critical Infrastructure Map
 - See Map with all the notes of changes and updates for locations
 - Add City Park to list
 - Does designated storm shelter areas need to be added to this list?
 - School gym
 - Lutheran Church
 - Library
 - Firehall
 - Elevator has 2 locations for fuel tanks
 - Ball park on south end of town
 - Sewer lift station on north end of Lillie Ave and east end of James St
 - North of town the 2 wells are owned by Kingbrook
 - Sewer lagoon is owned by city
- Project List from 2019-2024
 - None, no new projects have changed from this list.

- Wish list items
 - Bury electrical overhead lines
 - Tractor for snow removal/shed to store it in
 - New siren that actually works
 - Dust control
 - Paved streets, upgrade infrastructure
 - Curb/gutter to help with getting water from flooding homes and to drainage ponds
 - Tree trimming
 - Generator they have by can use another one
 - Water pump is ok, all water lines are owned by Kingbrook
 - Only thing the generator currently is able to run is the lift station, would be nice to have generator to run entire city or city buildings for shelter emergencies

Kingsbury County Board of County Commissioners
Kingsbury County Courthouse
202 2nd St SE
De Smet, SD 57231

November 19, 2024

HELD VIA ZOOM MEETING: <https://us02web.zoom.us/j/9828723314>

PHONE NUMBERS: 1-301-715-8592 or 1-312-626-6799

PASS CODE: 9828723314

8:30 AM Call Meeting to Order

- *Pledge of Allegiance
- *Approve Agenda
- *Approve Minutes
- *Public Comment
- *Conflict of Interest
- *Bills
- *Office Reports

8:45- Highway Department

9:15-Risty Benefits- Insurance

10:30- Ordinance 71- Second Reading

12:00- First District- Luke Muller PDM Plan

- *Commissioner's Open Discussion
- *State's Attorney – Consultant
- *Auditor- Extension Memorandum of Understanding, Community Health Services Contract, Executive Session- Contract Negotiations
- *Treasurer- Budget, Office Equipment
- *DOE- Computer purchase, Pickup tires, Tax Abatement
- *Executive Session- (only if needed) *SDCL 1-25-2 (sections 1-5) allows a majority of the body present to vote to close a meeting when discussion revolves around 1) personnel, 2) legal matters, or 3) contract negotiations. Meetings may also be closed for certain 4) economic development matters (SDCL 9-34-19).

UPCOMING MEETINGS

December 3, 2024

December 17, 2024

December 30, 2024

KINGSBURY COUNTY PRE-DISASTER MITIGATION PLANNING MEETING

KINGSBURY COUNTY COMMISSIONERS

NOVEMBER 19, 2024

Name	Organization
<i>Steven J. Spalding</i>	
<i>Troy Nelson</i>	<i>Kingsbury Co</i>
<i>Corey Lundquist</i>	<i>Kingsbury County Commission</i>
<i>Echo Steffensen</i>	<i>Kingsbury Co Auditor</i>
<i>Roger Walls</i>	<i>Kingsbury Commission</i>

Outline
Pre-Disaster Mitigation Plan
Community Meetings

Introduction

Personal introduction:

Introduce the plan:

Why update the PDM?

Why is your community doing it individually/Why not just county?

What is a PDM?

Hazard review

Hazard Identification

The County Commissioners and staff present reviewed the hazard identifications and didn't see a need to change most of the probabilities they had listed from the previous plan except that certain hazards may occur but not affect any assets or may be ancillary to other hazards.

Hazard Vulnerability

The County Commissioners and staff present reviewed the hazard identifications and didn't see a need to change most of the probabilities they had listed from the previous plan except that certain hazards may occur but not affect any assets or may be ancillary to other hazards.

Community Capabilities and Plans review

No changes to these except that the county has adopted floodplain regulations

Community facilities

Identify/review critical facilities

Are there new facilities/facilities to be removed

New / existing campgrounds were listed.

The county expects to have on-site work force housing for dairies and Gevo construction project

Project review

Review past projects

County adopted new regulations and floodmaps with Base engineering to show BFE

Ask about other projects (not all require FEMA funding)

Commissioners discussed burn ban policies and support for Project Mainstem to address drought (along with prayer); Commissioners noted need for storm sirens at Lake Albert, Henry, and Thompson. Also a need for tornado safe room(s) and storm shelters is necessary for seasonal residents on Lake Henry and Thompson. The commissioners discussed upgrades to the only road between Henry and Thompson (lakes).

Ask about Policies/activities that already help mitigate Disaster

Conclusion

Muller discussed next meetings and adoption timeline.

Appendix D - Hazard Identification/Vulnerability Worksheets

Appendix D includes master worksheets for Hazard Identification and Vulnerability for jurisdictions compiled as described in Appendix C. Lists were gathered at meetings as described below:

Entity	Date
Arlington	February 6, 2024
Badger	March 11, 2024
Bancroft	April 16, 2024
De Smet	February 15, 2024
Erwin	March 4, 2024
Hetland	March 19, 2024
Iroquois	April 15, 2024
Lake Preston	April 8, 2024
Oldham	April 8, 2024
Kingsbury County	November 19, 2024

Master worksheets for Hazard Identification and Vulnerability for generated by the participating jurisdictions (communities and Kingsbury County) are listed below.

Kingsbury County

Kingsbury County PDM Worksheet #1 (PDM Planning Team) Risk Assessment Worksheet – Hazard Identification

What is the probability of occurrence of the following hazards?

Hazard	High Probability to Occur (At least once in a year)	Low Probability to Occur (May have occurred in the past but do not occur on a yearly basis)	Unlikely to Occur (Never occurred in the area before or are unlikely to occur)
Dam Failure			X
Drought		X	
Earthquake			X
Extreme Cold	X		
Extreme Heat	X		
Flood	X		
Freezing Rain/Sleet/Ice	X		
Hail	X		
Heavy Rain	X		
Heavy Snow		X	
Ice Jam		X	
Landslide			X
Lightning	X		
Rapid Snow Melt	X		
Strong Winds	X		
Subsidence			X
Thunderstorm	X		
Tornado		X	
Urban Fire	X		
Wildfire	X		

Kingsbury County

Kingsbury County PDM Worksheet #2 (PDM Planning Team) Risk Assessment Worksheet – Hazard Vulnerability

How vulnerable is the community from the following hazard? In other words, if the hazard occurs is there a potential to impact the community? If so, what would be impacted?

Hazard	High Vulnerability Significant risk/major damage potential (more than 10% of the jurisdiction and/or regular occurrence)	Medium Vulnerability Moderate damage potential (5-10% of the jurisdiction and/or irregular occurrence)	Low Vulnerability Little damage potential (less than 5% of the jurisdiction)	NA Not a hazard to the jurisdiction
Dam Failure				X
Drought		X		
Earthquake				X
Extreme Cold		X		
Extreme Heat		X		
Flood	X			
Freezing Rain/Sleet/Ice	X			
Hail		X		
Heavy Rain		X		
Heavy Snow		X		
Ice Jam			X	
Landslide				X
Lightning			X	
Rapid Snow Melt	X			
Strong Winds	X			
Subsidence				X
Thunderstorm		X		
Tornado		X		
Urban Fire		X		
Wildfire		X		

City of Arlington

**Kingsbury County PDM
Worksheet #1 (Arlington)
Risk Assessment Worksheet – Hazard Identification**

What is the probability of occurrence of the following hazards?

Hazard	High Probability to Occur (At least once in a year)	Low Probability to Occur (May have occurred in the past but do not occur on a yearly basis)	Unlikely to Occur (Never occurred in the area before or are unlikely to occur)
Dam Failure			X
Drought		X	
Earthquake			X
Extreme Cold	X		
Extreme Heat	X		
Flood		X	
Freezing Rain/Sleet/Ice	X		
Hail	X		
Heavy Rain	X		
Heavy Snow	X		
Ice Jam			X
Lightning	X		
Rapid Snow Melt		X	
Strong Winds	X		
Subsidence			X
Thunderstorm	X		
Tornado		X	
Urban Fire		X	
Wildfire		X	

**Kingsbury County PDM
Worksheet #2 (Arlington)
Risk Assessment Worksheet – Hazard Vulnerability**

How vulnerable is the community from the following hazard? In other words, if the hazard occurs is there a potential to impact the community? If so, what would be impacted?

Hazard	High Vulnerability Significant risk/major damage potential (more than 10% of the jurisdiction and/or regular occurrence)	Medium Vulnerability Moderate damage potential (5-10% of the jurisdiction and/or irregular occurrence)	Low Vulnerability Little damage potential (less than 5% of the jurisdiction)	NA Not a hazard to the jurisdiction
Dam Failure				X
Drought		X		
Earthquake				X
Extreme Cold		X		
Extreme Heat		X		
Flood			X	
Freezing Rain/Sleet/Ice		X		
Hail		X		
Heavy Rain		X		
Heavy Snow		X		
Ice Jam				X
Lightning			X	
Rapid Snow Melt		X		
Strong Winds	X			
Subsidence				X
Thunderstorm		X		
Tornado	X			
Urban Fire			X	
Wildfire			X	

City of Badger

Kingsbury County PDM Worksheet #1 (Badger) Risk Assessment Worksheet – Hazard Identification

What is the probability of occurrence of the following hazards?

Hazard	High Probability to Occur (At least once in a year)	Low Probability to Occur (May have occurred in the past but do not occur on a yearly basis)	Unlikely to Occur (Never occurred in the area before or are unlikely to occur)
Dam Failure			X
Drought		X	
Earthquake			X
Extreme Cold	X		
Extreme Heat	X		
Flood		X	
Freezing Rain/Sleet/Ice	X		
Hail	X		
Heavy Rain	X		
Heavy Snow	X		
Ice Jam			X
Lightning	X		
Rapid Snow Melt		X	
Strong Winds	X		
Subsidence			X
Thunderstorm	X		
Tornado		X	
Urban Fire		X	
Wildfire		X	

**Kingsbury County PDM
Worksheet #2 (Badger)
Risk Assessment Worksheet – Hazard Vulnerability**

How vulnerable is the community from the following hazard? In other words, if the hazard occurs is there a potential to impact the community? If so, what would be impacted?

Hazard	High Vulnerability Significant risk/major damage potential (more than 10% of the jurisdiction and/or regular occurrence)	Medium Vulnerability Moderate damage potential (5-10% of the jurisdiction and/or irregular occurrence)	Low Vulnerability Little damage potential (less than 5% of the jurisdiction)	NA Not a hazard to the jurisdiction
Dam Failure				X
Drought		X		
Earthquake				X
Extreme Cold			X	
Extreme Heat			X	
Flood			X	
Freezing Rain/Sleet/Ice		X		
Hail		X		
Heavy Rain		X		
Heavy Snow		X		
Ice Jam				X
Lightning			X	
Rapid Snow Melt			X	
Strong Winds		X		
Subsidence				X
Thunderstorm			X	
Tornado	X			
Urban Fire			X	
Wildfire			X	

City of Bancroft

**Kingsbury County PDM
Worksheet #1 (Bancroft)
Risk Assessment Worksheet – Hazard Identification**

What is the probability of occurrence of the following hazards?

Hazard	High Probability to Occur (At least once in a year)	Low Probability to Occur (May have occurred in the past but do not occur on a yearly basis)	Unlikely to Occur (Never occurred in the area before or are unlikely to occur)
Dam Failure			X
Drought		X	
Earthquake			X
Extreme Cold	X		
Extreme Heat	X		
Flood		X	
Freezing Rain/Sleet/Ice	X		
Hail	X		
Heavy Rain	X		
Heavy Snow	X		
Ice Jam			X
Lightning	X		
Rapid Snow Melt		X	
Strong Winds	X		
Subsidence			X
Thunderstorm	X		
Tornado		X	
Urban Fire		X	
Wildfire		X	

**Kingsbury County PDM
Worksheet #2 (Bancroft)
Risk Assessment Worksheet – Hazard Vulnerability**

How vulnerable is the community from the following hazard? In other words, if the hazard occurs is there a potential to impact the community? If so, what would be impacted?

Hazard	High Vulnerability Significant risk/major damage potential (more than 10% of the jurisdiction and/or regular occurrence)	Medium Vulnerability Moderate damage potential (5-10% of the jurisdiction and/or irregular occurrence)	Low Vulnerability Little damage potential (less than 5% of the jurisdiction)	NA Not a hazard to the jurisdiction
Dam Failure				X
Drought		X		
Earthquake				X
Extreme Cold			X	
Extreme Heat			X	
Flood		X		
Freezing Rain/Sleet/Ice	X			
Hail	X			
Heavy Rain	X			
Heavy Snow	X			
Ice Jam			X	
Lightning			X	
Rapid Snow Melt		X		
Strong Winds		X		
Subsidence				X
Thunderstorm	X			
Tornado	X			
Urban Fire			X	
Wildfire		X		

Town of De Smet
Kingsbury County PDM
Worksheet #1 (De Smet)
Risk Assessment Worksheet – Hazard Identification

What is the probability of occurrence of the following hazards?

Hazard	High Probability to Occur (At least once in a year)	Low Probability to Occur (May have occurred in the past but do not occur on a yearly basis)	Unlikely to Occur (Never occurred in the area before or are unlikely to occur)
Dam Failure			X
Drought		X	
Earthquake			X
Extreme Cold	X		
Extreme Heat	X		
Flood		X	
Freezing Rain/Sleet/Ice	X		
Hail	X		
Heavy Rain	X		
Heavy Snow	X		
Ice Jam			X
Lightning	X		
Rapid Snow Melt		X	
Strong Winds	X		
Subsidence			X
Thunderstorm	X		
Tornado		X	
Urban Fire		X	
Wildfire		X	

**Kingsbury County PDM
Worksheet #2 (De Smet)
Risk Assessment Worksheet – Hazard Vulnerability**

How vulnerable is the community from the following hazard? In other words, if the hazard occurs is there a potential to impact the community? If so, what would be impacted?

Hazard	High Vulnerability Significant risk/major damage potential (more than 10% of the jurisdiction and/or regular occurrence)	Medium Vulnerability Moderate damage potential (5-10% of the jurisdiction and/or irregular occurrence)	Low Vulnerability Little damage potential (less than 5% of the jurisdiction)	NA Not a hazard to the jurisdiction
Dam Failure				X
Drought		X		
Earthquake				X
Extreme Cold			X	
Extreme Heat			X	
Flood			X	
Freezing Rain/Sleet/Ice	X			
Hail		X		
Heavy Rain		X		
Heavy Snow		X		
Ice Jam				X
Lightning			X	
Rapid Snow Melt			X	
Strong Winds		X		
Subsidence				X
Thunderstorm			X	
Tornado	X			
Urban Fire			X	
Wildfire			X	

City of Erwin

Kingsbury County PDM Worksheet #1 (Erwin) Risk Assessment Worksheet – Hazard Identification

What is the probability of occurrence of the following hazards?

Hazard	High Probability to Occur (At least once in a year)	Low Probability to Occur (Hazards that may have occurred in the past or could occur in the future but do not occur on a yearly basis)	Unlikely to Occur (Hazards or disasters that have never occurred in the area before and are unlikely to occur)
Dam Failure			X
Drought		X	
Earthquake			X
Extreme Cold	X		
Extreme Heat	X		
Flood		X	
Freezing Rain/Sleet/Ice	X		
Hail	X		
Heavy Rain	X		
Heavy Snow	X		
Ice Jam			X
Lightning	X		
Rapid Snow Melt		X	
Strong Winds	X		
Subsidence			X
Thunderstorm	X		
Tornado	X		
Urban Fire		X	
Wildfire		X	

**Kingsbury County PDM
Worksheet #2 (Erwin)
Risk Assessment Worksheet – Hazard Vulnerability**

How vulnerable is the community from the following hazard? In other words, if the hazard occurs is there a potential to impact the community? If so, what would be impacted?

Hazard	High Vulnerability Significant risk/major damage potential (for example, destructive, damage to more than 10% of the jurisdiction and/or regular occurrence)	Medium Vulnerability Moderate damage potential (causing partial damage to 5-10% of the jurisdiction, and irregular occurrence)	Low Vulnerability Little damage potential (minor damage to less than 5% of the jurisdiction)	NA Not a hazard to the jurisdiction
Dam Failure				X
Drought		X		
Earthquake				X
Extreme Cold			X	
Extreme Heat			X	
Flood		X		
Freezing Rain/Sleet/Ice	X			
Hail	X			
Heavy Rain		X		
Heavy Snow		X		
Ice Jam				X
Lightning			X	
Rapid Snow Melt		X		
Strong Winds	X			
Subsidence				X
Thunderstorm		X		
Tornado	X			
Urban Fire		X		
Wildfire		X		

Town of Hetland
Kingsbury County PDM
Worksheet #1 (Hetland)
Risk Assessment Worksheet – Hazard Identification

What is the probability of occurrence of the following hazards?

Hazard	High Probability to Occur (At least once in a year)	Low Probability to Occur (May have occurred in the past but do not occur on a yearly basis)	Unlikely to Occur (Never occurred in the area before or are unlikely to occur)
Dam Failure			X
Drought		X	
Earthquake			X
Extreme Cold	X		
Extreme Heat	X		
Flood	X		
Freezing Rain/Sleet/Ice	X		
Hail	X		
Heavy Rain		X	
Heavy Snow		X	
Ice Jam		X	
Lightning		X	
Rapid Snow Melt		X	
Strong Winds	X		
Subsidence			X
Thunderstorm	X		
Tornado	X		
Urban Fire		X	
Wildfire			X

**Kingsbury County PDM
Worksheet #2 (Hetland)
Risk Assessment Worksheet – Hazard Vulnerability**

How vulnerable is the community from the following hazard? In other words, if the hazard occurs is there a potential to impact the community? If so, what would be impacted?

Hazard	High Vulnerability Significant risk/major damage potential (more than 10% of the jurisdiction and/or regular occurrence)	Medium Vulnerability Moderate damage potential (5-10% of the jurisdiction and/or irregular occurrence)	Low Vulnerability Little damage potential (less than 5% of the jurisdiction)	NA Not a hazard to the jurisdiction
Dam Failure			X	
Drought		X		
Earthquake				X
Extreme Cold		X		
Extreme Heat		X		
Flood		X		
Freezing Rain/Sleet/Ice			X	
Hail	X			
Heavy Rain		X		
Heavy Snow		X		
Ice Jam			X	
Lightning			X	
Rapid Snow Melt		X		
Strong Winds	X			
Subsidence				X
Thunderstorm			X	
Tornado	X			
Urban Fire			X	
Wildfire			X	

City of Iroquois

**Kingsbury County PDM
Worksheet #1 (Iroquois)
Risk Assessment Worksheet – Hazard Identification**

What is the probability of occurrence of the following hazards?

Hazard	High Probability to Occur (At least once in a year)	Low Probability to Occur (May have occurred in the past but do not occur on a yearly basis)	Unlikely to Occur (Never occurred in the area before or are unlikely to occur)
Dam Failure			X
Drought	X		
Earthquake			X
Extreme Cold	X		
Extreme Heat	X		
Flood		X	
Freezing Rain/Sleet/Ice	X		
Hail	X		
Heavy Rain	X		
Heavy Snow	X		
Ice Jam			X
Lightning	X		
Rapid Snow Melt	X		
Strong Winds	X		
Subsidence			X
Thunderstorm	X		
Tornado		X	
Urban Fire		X	
Wildfire		X	

**Kingsbury County PDM
Worksheet #2 (Iroquois)
Risk Assessment Worksheet – Hazard Vulnerability**

How vulnerable is the community from the following hazard? In other words, if the hazard occurs is there a potential to impact the community? If so, what would be impacted?

Hazard	High Vulnerability Significant risk/major damage potential (more than 10% of the jurisdiction and/or regular occurrence)	Medium Vulnerability Moderate damage potential (5-10% of the jurisdiction and/or irregular occurrence)	Low Vulnerability Little damage potential (less than 5% of the jurisdiction)	NA Not a hazard to the jurisdiction
Dam Failure				X
Drought			X	
Earthquake				X
Extreme Cold			X	
Extreme Heat			X	
Flood			X	
Freezing Rain/Sleet/Ice		X		
Hail	X			
Heavy Rain	X			
Heavy Snow	X			
Ice Jam			X	
Landslide			X	
Lightning		X		
Rapid Snow Melt		X		
Strong Winds	X			
Subsidence				X
Thunderstorm	X			
Tornado	X			
Urban Fire			X	
Wildfire	X			

City of Lake Preston

Kingsbury County PDM Worksheet #1 (Lake Preston) Risk Assessment Worksheet – Hazard Identification

What is the probability of occurrence of the following hazards?

Hazard	High Probability to Occur (At least once in a year)	Low Probability to Occur (May have occurred in the past but do not occur on a yearly basis)	Unlikely to Occur (Never occurred in the area before or are unlikely to occur)
Dam Failure			X
Drought		X	
Earthquake			X
Extreme Cold	X		
Extreme Heat	X		
Flood		X	
Freezing Rain/Sleet/Ice	X		
Hail	X		
Heavy Rain	X		
Heavy Snow	X		
Ice Jam			X
Lightning	X		
Rapid Snow Melt		X	
Strong Winds	X		
Subsidence			X
Thunderstorm	X		
Tornado		X	
Urban Fire		X	
Wildfire		X	

**Kingsbury County PDM
Worksheet #2 (Lake Preston)
Risk Assessment Worksheet – Hazard Vulnerability**

How vulnerable is the community from the following hazard? In other words, if the hazard occurs is there a potential to impact the community? If so, what would be impacted?

Hazard	High Vulnerability Significant risk/major damage potential (more than 10% of the jurisdiction and/or regular occurrence)	Medium Vulnerability Moderate damage potential (5-10% of the jurisdiction and/or irregular occurrence)	Low Vulnerability Little damage potential (less than 5% of the jurisdiction)	NA Not a hazard to the jurisdiction
Dam Failure				X
Drought			X	
Earthquake				X
Extreme Cold			X	
Extreme Heat			X	
Flood			X	
Freezing Rain/Sleet/Ice		X		
Hail	X			
Heavy Rain		X		
Heavy Snow		X		
Ice Jam				X
Lightning				X
Rapid Snow Melt		X		
Strong Winds	X			
Subsidence				X
Thunderstorm			X	
Tornado	X			
Urban Fire			X	
Wildfire	X			

Town of Oldham

Kingsbury County PDM Worksheet #1 (Oldham) Risk Assessment Worksheet – Hazard Identification

What is the probability of occurrence of the following hazards?

Hazard	High Probability to Occur (At least once in a year)	Low Probability to Occur (May have occurred in the past but do not occur on a yearly basis)	Unlikely to Occur (Never occurred in the area before or are unlikely to occur)
Dam Failure			X
Drought	X		
Earthquake			X
Extreme Cold	X		
Extreme Heat	X		
Flood		X	
Freezing Rain/Sleet/Ice	X		
Hail	X		
Heavy Rain		X	
Heavy Snow		X	
Ice Jam		X	
Lightning		X	
Rapid Snow Melt	X		
Strong Winds	X		
Subsidence			X
Thunderstorm	X		
Tornado		X	
Urban Fire		X	
Wildfire		X	

**Kingsbury County PDM
Worksheet #2 (Lake Preston)
Risk Assessment Worksheet – Hazard Vulnerability**

How vulnerable is the community from the following hazard? In other words, if the hazard occurs is there a potential to impact the community? If so, what would be impacted?

Hazard	High Vulnerability Significant risk/major damage potential (more than 10% of the jurisdiction and/or regular occurrence)	Medium Vulnerability Moderate damage potential (5-10% of the jurisdiction and/or irregular occurrence)	Low Vulnerability Little damage potential (less than 5% of the jurisdiction)	NA Not a hazard to the jurisdiction
Dam Failure				X
Drought	X			
Earthquake				X
Extreme Cold	X			
Extreme Heat	X			
Flood	X			
Freezing Rain/Sleet/Ice	X			
Hail	X			
Heavy Rain	X			
Heavy Snow	X			
Ice Jam				X
Lightning			X	
Rapid Snow Melt		X		
Strong Winds	X			
Subsidence				X
Thunderstorm	X			
Tornado	X			
Urban Fire			X	
Wildfire			X	

Appendix E

Township Vulnerable and Potential Mitigation Project Site Maps

In January of 2024, First District mailed a request to the Township Clerk or Road Supervisor of every township in Kingsbury County. They were requested to list any critical infrastructure and identify (on a map) any areas which are most vulnerable to natural hazards, specifically flooding. The Association of Kingsbury County Townships Annual Meeting was held on March 19th, 2024. Townships in attendance were requested to complete the maps and hazard information, if they had not responded to the maps that had been previously mailed to them. Of the 13 requests sent, 6 maps were returned with vulnerable areas identified (see table below).

Township Name	Response
Badger Township	Returned/ Identified vulnerabilities
Baker Township	Not returned/ No vulnerabilities identified
Denver Township	Not returned/ No changes to identified vulnerabilities
De Smet Township	Not returned/ No vulnerabilities identified
Esmond Township	Returned/ No changes to identified vulnerabilities
Hartland Township	Returned/ Identified vulnerabilities
Iroquois Township	Not returned/ No changes to identified vulnerabilities
Le Suer Township	Returned/ Identified vulnerabilities
Manchester Township	Returned/ Identified vulnerabilities
Mathews Township	Not returned/ No vulnerabilities identified
Spirit Lake Township	Not returned/ No vulnerabilities identified
Spring Lake Township	Returned/ No changes to identified vulnerabilities
Whitewood Township	Not returned/ No vulnerabilities identified

Maps identifying vulnerable areas for those townships which identified such areas are shown below.



First District Association of Local Governments

418 18th Ave NE ■ PO Box 1207 ■ Watertown, SD 57201

Phone: (605) 882-5115

Fax: (605) 882-5049

Serving counties and communities for over 50 years

MEMO TO: Kingsbury County Townships
FROM: Amy Arnold, First District Association of Local Governments
DATE: January 12th, 2024
RE: Pre-Disaster Mitigation Plan Information

As you may be aware, the First District is assisting Kingsbury County in the update of the county's Pre-Disaster Mitigation (PDM) Plan. Kingsbury County is required to update its PDM Plan every five years in order to maintain eligibility for federal funding for disaster mitigation projects and other federal funding/programs. For the purposes of this plan, Townships are considered participating units of government under the umbrella of the County. One of the components of the PDM Plan involves identifying critical infrastructure to be protected from potential hazards.

Attached you will find a map of your township. This is different than the DOT Road Report Map you will receive from First District. Please review the map to verify the location of any critical infrastructure (if any) which is owned, operated, and/or maintained by your Township. Also review the areas where the township, as a result of natural hazards, has repeatedly experienced the following: water over the road, soft spots in the road, undersized or washed-out bridges/culverts, or other projects which may minimize the impact of natural disasters in your township. Please mark and label these locations on the map included.

I have enclosed a self-addressed, stamped envelope for your use; or you may email (amye@1stdistrict.org) to send in your responses. We would appreciate receiving your information by March 1st, 2024 to include them in the initial PDM plan draft. Please contact me (605-882-5115) regarding any questions, comments, or for any discussion regarding the information requested here. I look forward to hearing from you soon.

Sincerely,

Amy Arnold
Senior GIS Analyst
First District Association of Local Governments

**KINGSBURY COUNTY TOWNS AND TOWNSHIP
ASSOCIATION ANNUAL MEETING AGENDA**

March 19, 2023

4-H Building, DeSmet SD

Call to Order

- Welcome- Thank the Cooks and Sponsors
- Roll Call of Townships and New Officers
 - a. Please fill in phone numbers and emails on signup sheet
- Minutes from Secretary- Stan
- Treasurer's Report- Paul

Old Business:

- a. County Commissioners
- b. Tammy Anderson-DOE

New Business:

- c. Cindy Bau- First District- Amy Arnold
- SDATAT Report-
 - a. District 8/State Report- Dustin Leiseth
- Election of Officers for 2022- 1-year terms
 - a. President- Wayne Soren
 - b. VP-
 - c. Secretary- Stan Rauch
 - d. Treasurer- Paul Johnson
 - e. State Representative-Dustin Leiseth- term 2022-2025
- Adjournment

TOWNSHIP ANNUAL MEETING SIGN IN SHEET

Registration March 19 2024		
Name	Town	Township
1 Scottie Hoyer	Oldham	Spring Lake
2 Paul Johnson	Oldham	Spring Lake
3 STAN RACCH	Oldham	Whitewood
4 Greg Noem	De Smet	Spirit Lake
5 Brian Christensen	De Smet Arlington	Denver
6 Roger Walls		Troquois
7 Troy Nelson	Erwin	Hartland
8 Greg Duffy	Oldham	Whitewood
9 Matt Fickes	De Smet	De Smet
10 Doug Kring	Erwin	Hartland
11 Eugene Weerts	Bancroft	Le Sueur
12 Bonnie Rurche	Bancroft	Le Sueur
13 Amy Arnold	1st District	
14 Erland Weerts		
15 Justin Odum	De Smet LP	Balaton
16 Wayne Soren	Spring Lake	Lake Preston
17 Dennis Rasmussen	Manchester	Bancroft
18		
19		
20		
21		
22		
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24		
25		
26		
27		
28		
29		

TOWNSHIP ANNUAL MEETING MINUTES

Kingsbury County Towns and Townships Annual Meeting Minutes

March 19, 2024

De Smet 4-H Building

President Wayne Soren called the meeting to order at 12:35 pm.

Roll call of County Townships was made with nine Townships being present.

Wayne introduced County Commission Chairman Doug Kazmerzak who advised that there continues to be overall growth in the county. He also noted that there has been a road and bridge tax increase.

Secretary Stan Rauch read the minutes from the 2023 annual meeting. Motion was made to accept and seconded. Motion approved.

Treasurer Paul Johnson gave the treasure's report. Motion was made and seconded. Motion approved.

There was no old business.

New business. Cindy Bau of Emergency Management addressed fire danger considerations and noted that it is important to have current township phone numbers. She advised that there has been a change in FEMA computer procedures that will be difficult to adjust to.

Amy Arnold from the First District Association of Local Governments in Watertown provided updates on the mitigation process.

Dustin Leiseth, District 8 representative, gave a report on legislative issues as they pertained to the Townships. He noted that a 4-year extension to the Rural Access Infrastructure (RAIF) was passed and that minimum maintenance is now included in the RAIF.

The election of County Officers was conducted:

A motion was made to re-elect the current slate of officers for one year. The motion was seconded and passed.

President- Wayne Soren 1 year

Vice-President - vacant

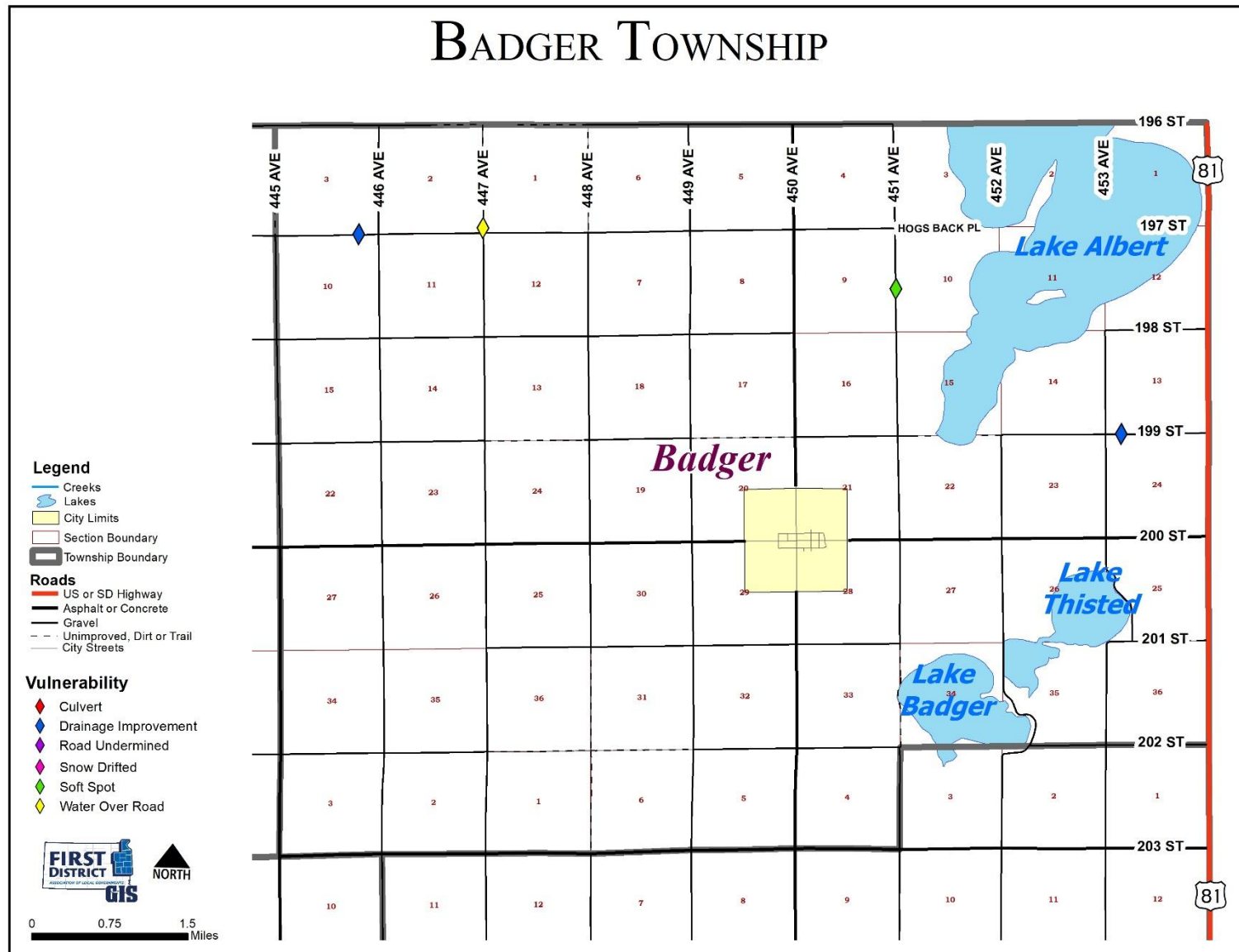
Secretary - Stan Rauch 1 year

Treasurer - Paul Johnson 1 year

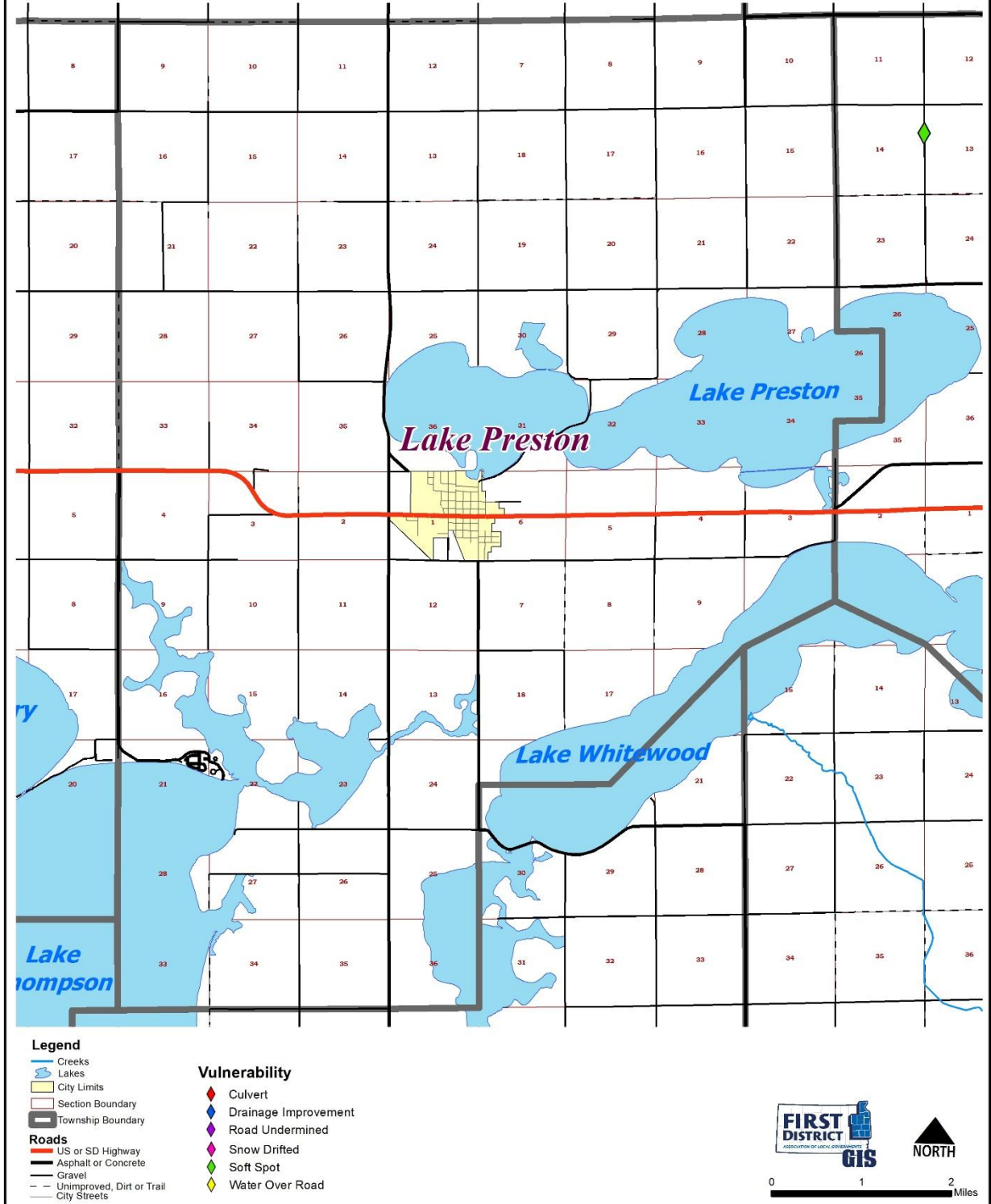
There being no other business the meeting was adjourned at 1:11 pm.

Stan Rauch, Secretary

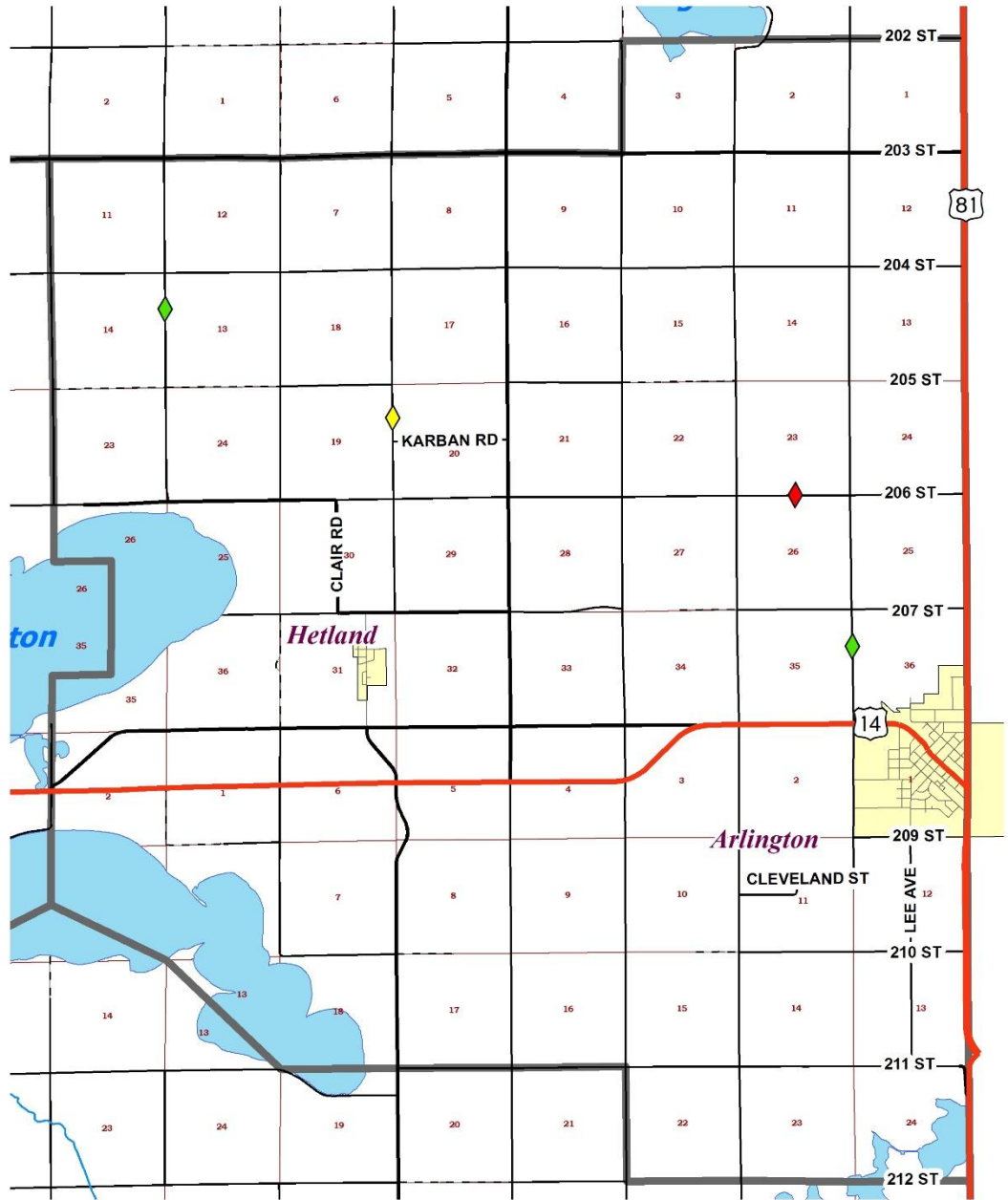
BADGER TOWNSHIP



BAKER TOWNSHIP



DENVER TOWNSHIP



Legend

- Creeks
- Lakes
- City Limits
- Section Boundary
- Township Boundary
- Roads**
- US or SD Highway
- Asphalt or Concrete
- Gravel
- Unimproved, Dirt or Trail
- City Streets

Vulnerability

- ◆ Culvert
- ◆ Drainage Improvement
- ◆ Road Undermined
- ◆ Snow Drifted
- ◆ Soft Spot
- ◆ Water Over Road



0 1 2 Miles

DESMET TOWNSHIP



Legend

- Creeks
- Lakes
- City Limits
- Section Boundary
- Township Boundary

Roads

- US or SD Highway
- Asphalt or Concrete
- Gravel
- Unimproved, Dirt or Trail
- City Streets

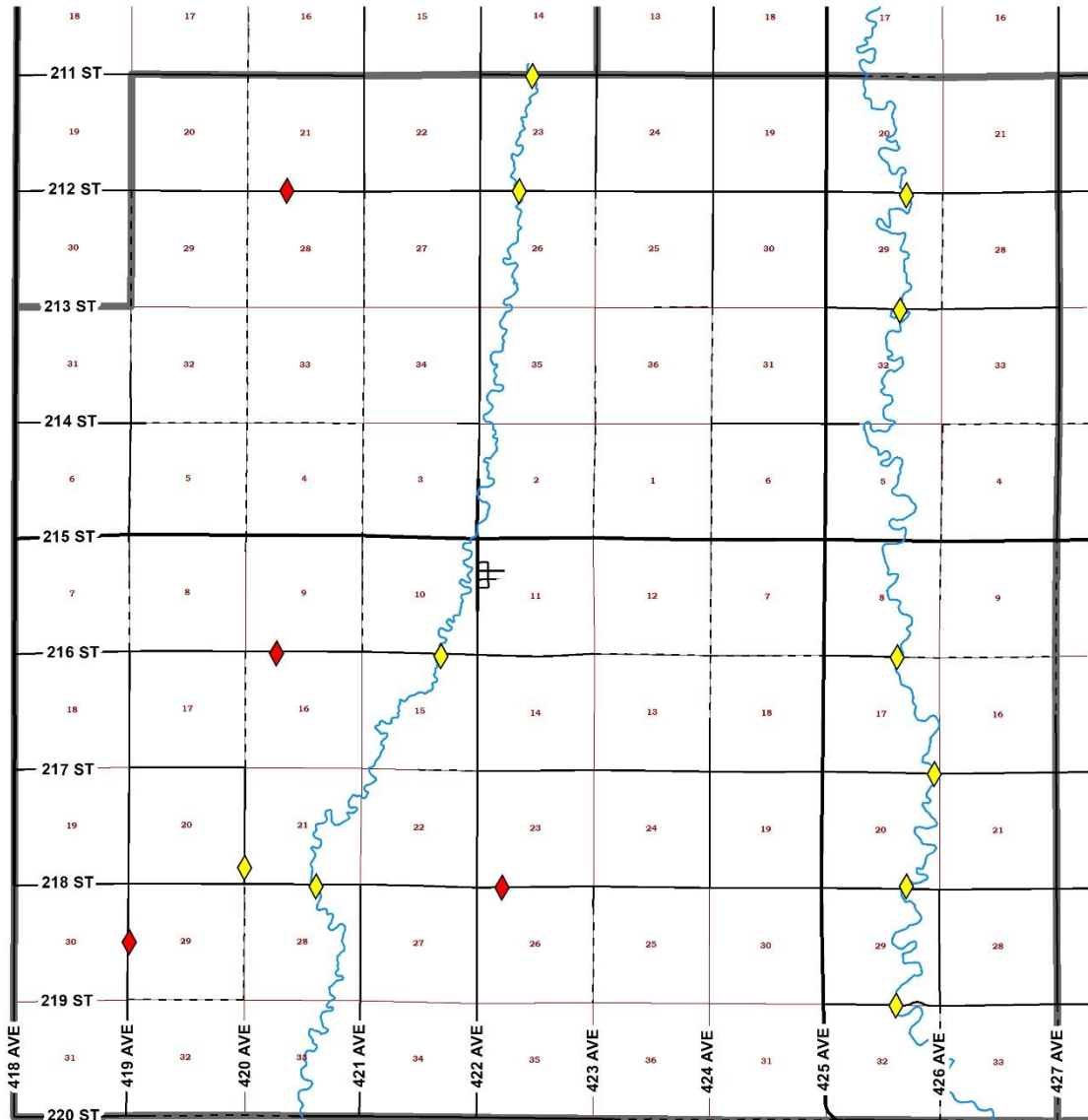
Vulnerability

- Culvert
- Drainage Improvement
- Road Undermined
- Snow Drifted
- Soft Spot
- Water Over Road



0 1 2 Miles

ESMOND TOWNSHIP



Legend

- Creeks
- Lakes
- City Limits
- Section Boundary
- Township Boundary
- Roads**
- US or SD Highway
- Asphalt or Concrete
- Gravel
- Unimproved, Dirt or Trail
- City Streets

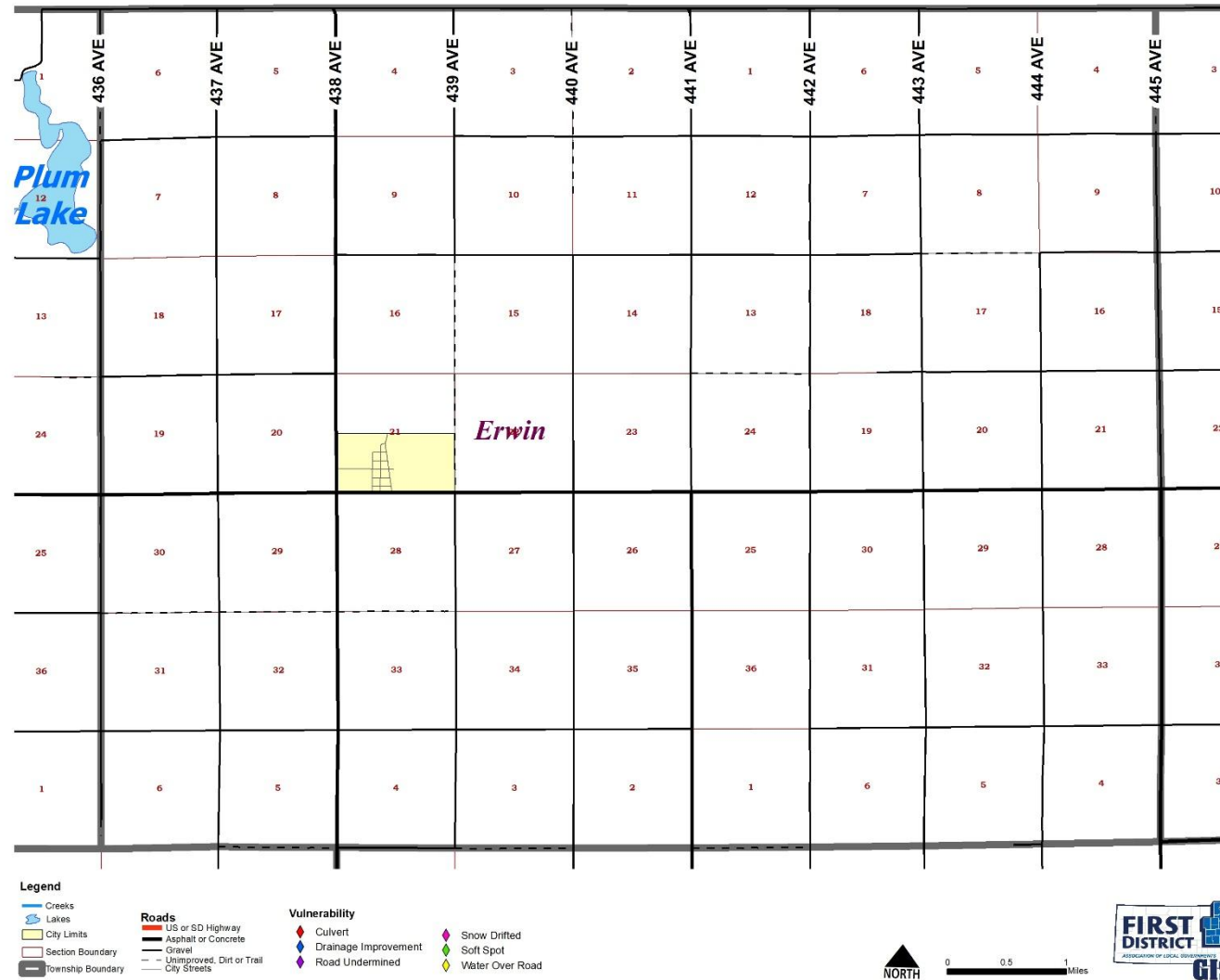
Vulnerability

- Culvert
- Drainage Improvement
- Road Undermined
- Snow Drifted
- Soft Spot
- Water Over Road

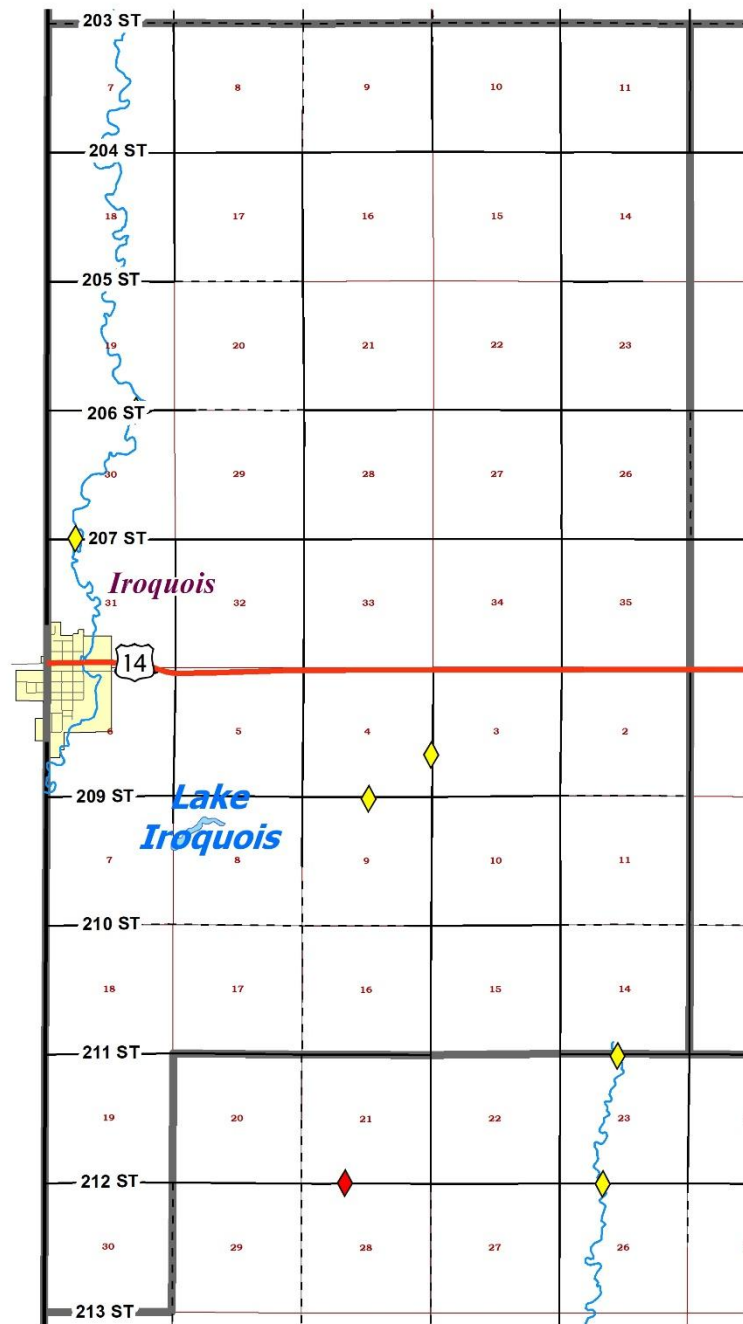


0 1 2 Miles

HARTLAND TOWNSHIP



IROQUOIS TOWNSHIP



Legend

- Creeks
- Lakes
- City Limits
- Section Boundary
- Township Boundary

Roads

- US or SD Highway
- Asphalt or Concrete
- Gravel
- Unimproved, Dirt or Trail
- City Streets

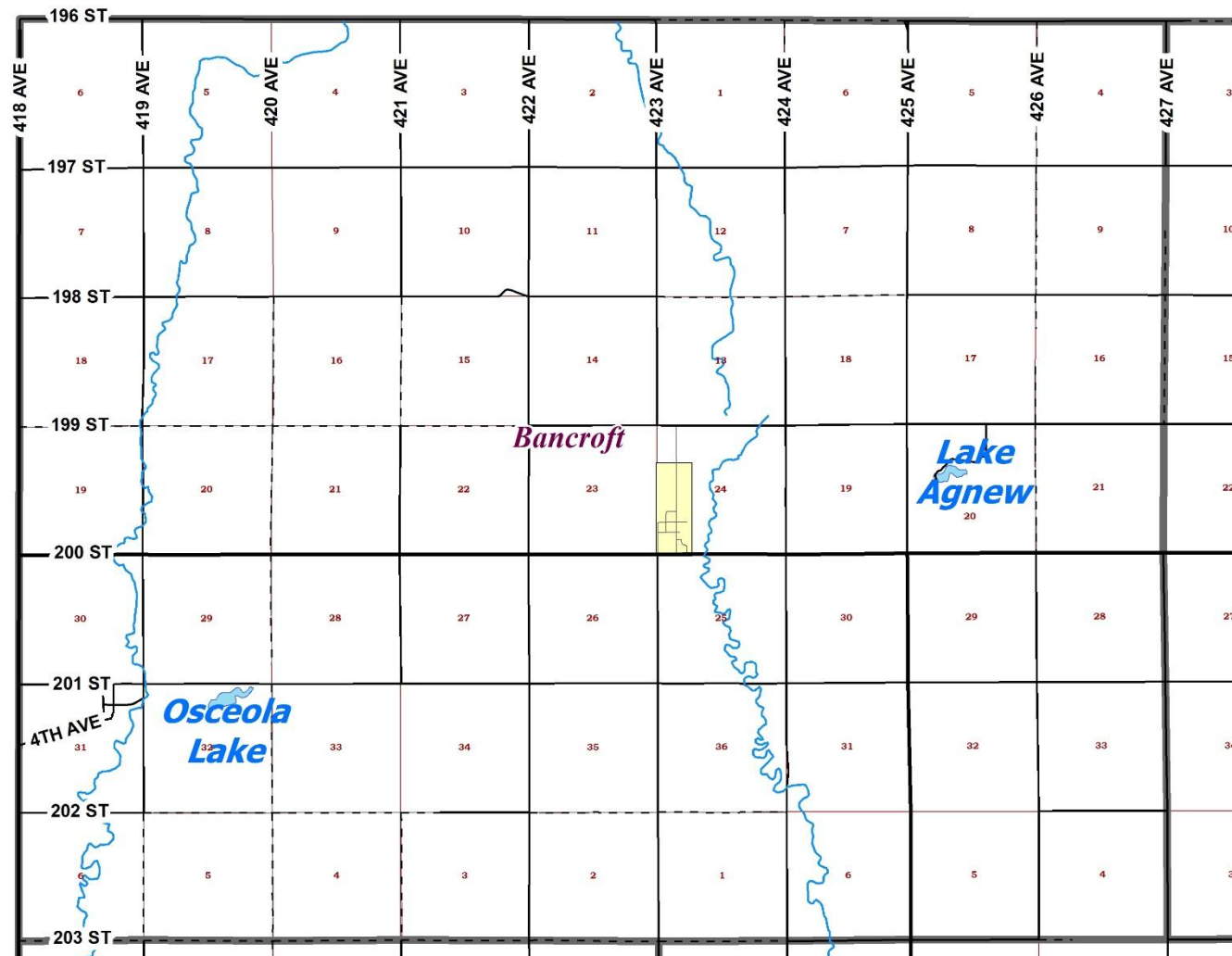
Vulnerability

- Culvert
- Drainage Improvement
- Road Undermined
- Snow Drifted
- Soft Spot
- Water Over Road



0 0.75 1.5 Miles

LESUEUR TOWNSHIP



Legend

- Creeks
- Lakes
- City Limits
- Section Boundary
- Township Boundary

Roads

- US or SD Highway
- Asphalt or Concrete
- Gravel
- Unimproved, Dirt or Trail
- City Streets

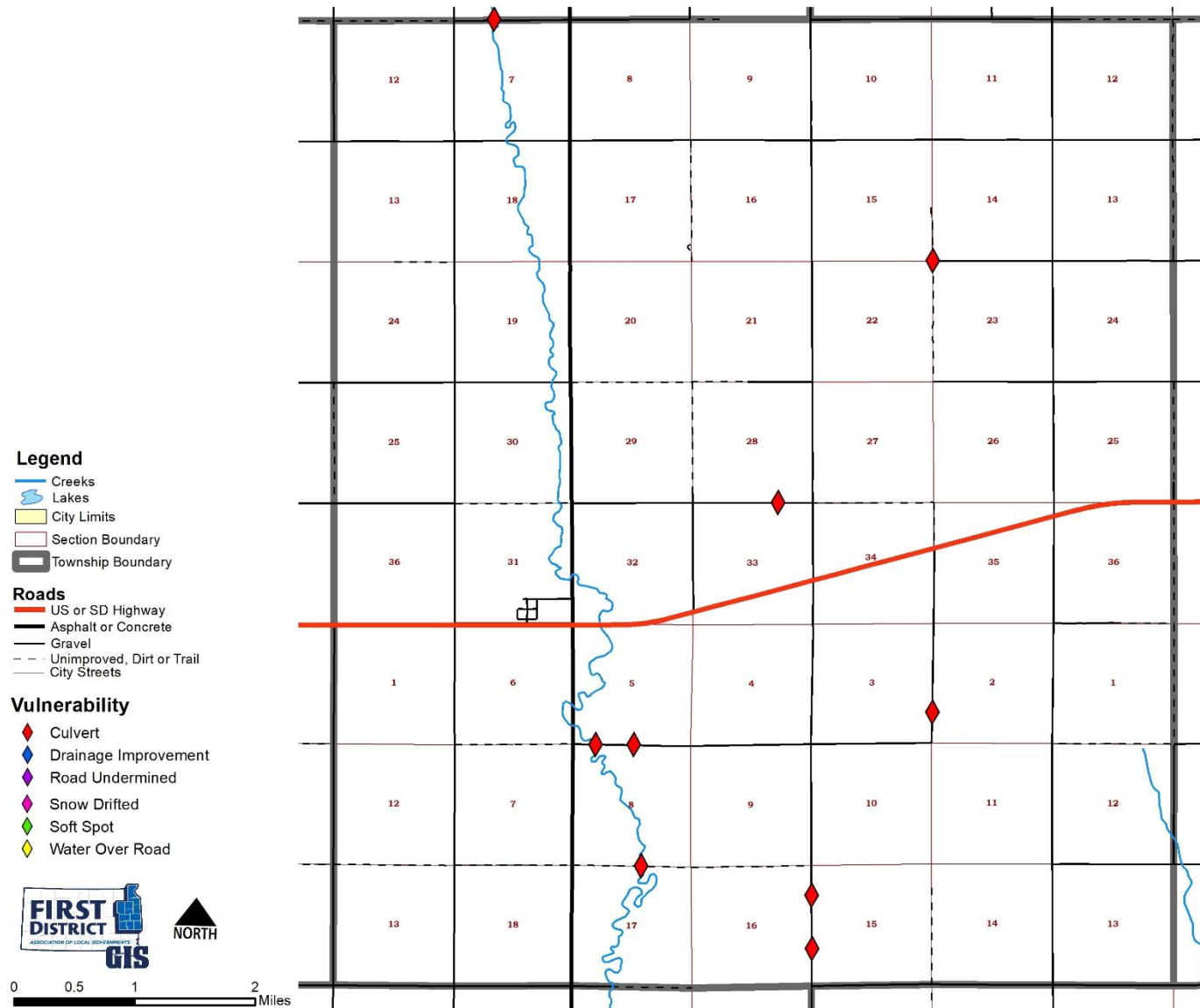
Vulnerability

- Culvert
- Drainage Improvement
- Road Undermined
- Snow Drifted
- Soft Spot
- Water Over Road

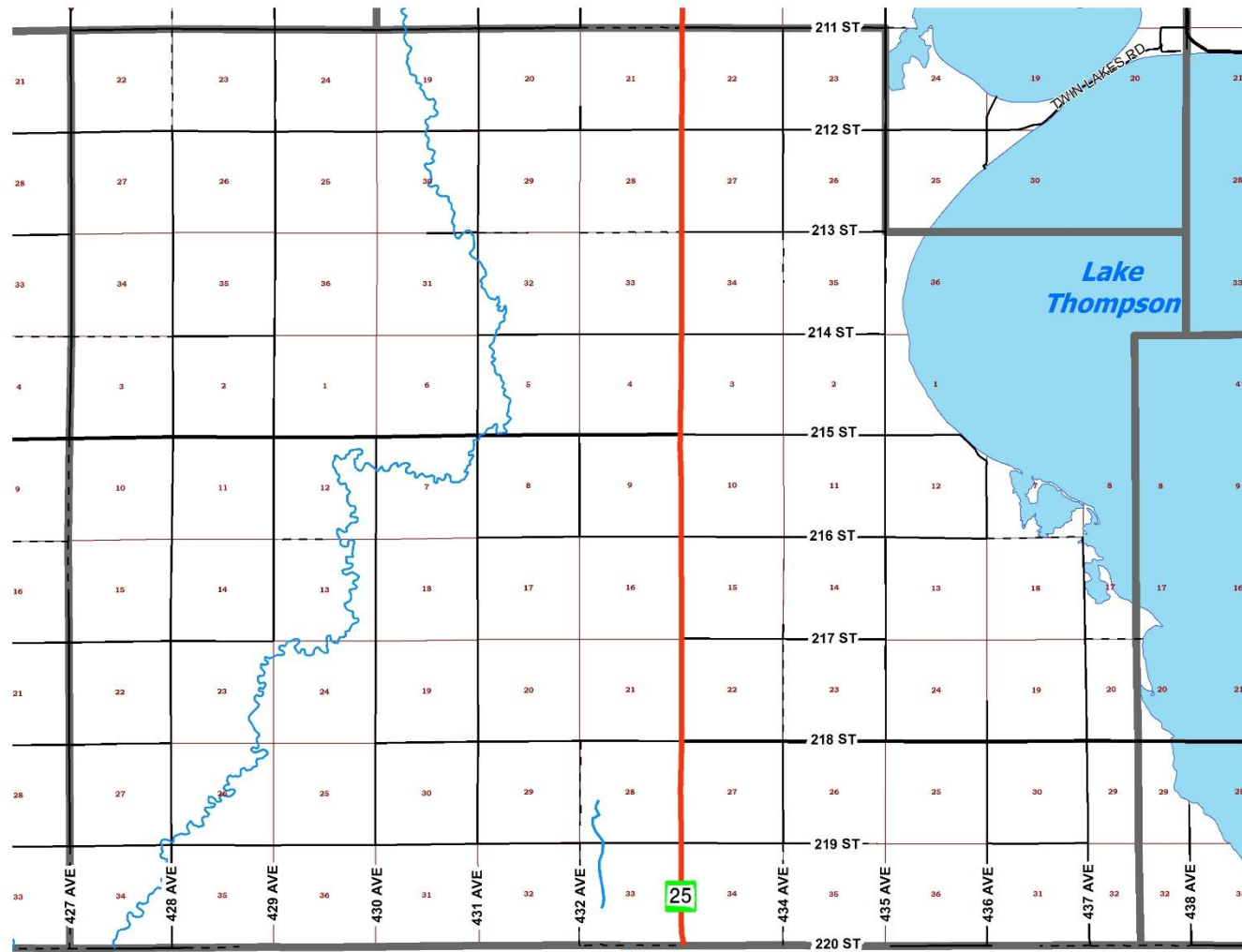
0 0.5 1 Miles



MANCHESTER TOWNSHIP



MATHEWS TOWNSHIP



Legend

- Creeks
- Lakes
- City Limits
- Section Boundary
- Township Boundary

Roads

- US or SD Highway
- Asphalt or Concrete
- Gravel
- Unimproved, Dirt or Trail
- City Streets

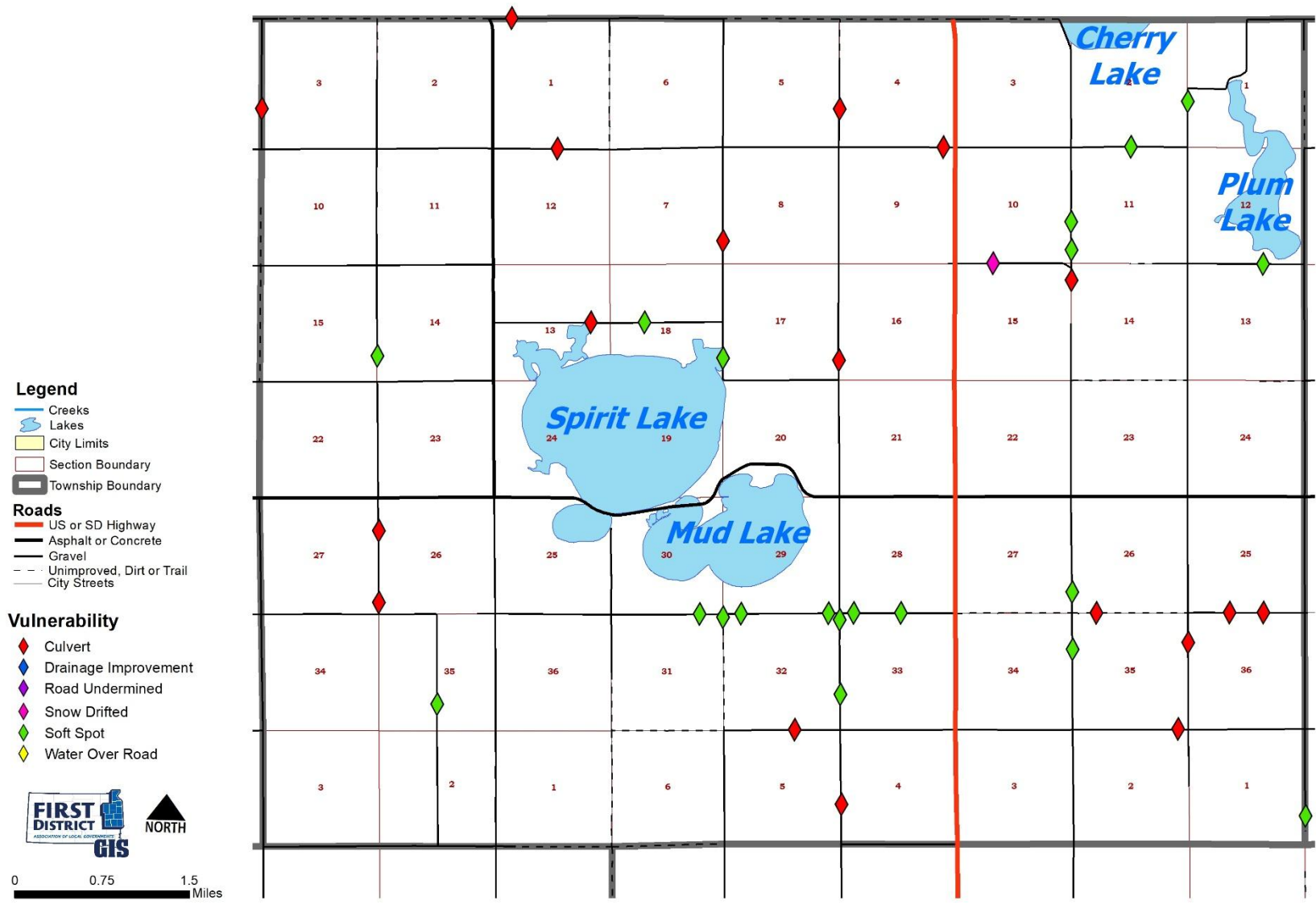
Vulnerability

- Culvert
- Drainage Improvement
- Road Undermined
- Snow Drifted
- Soft Spot
- Water Over Road

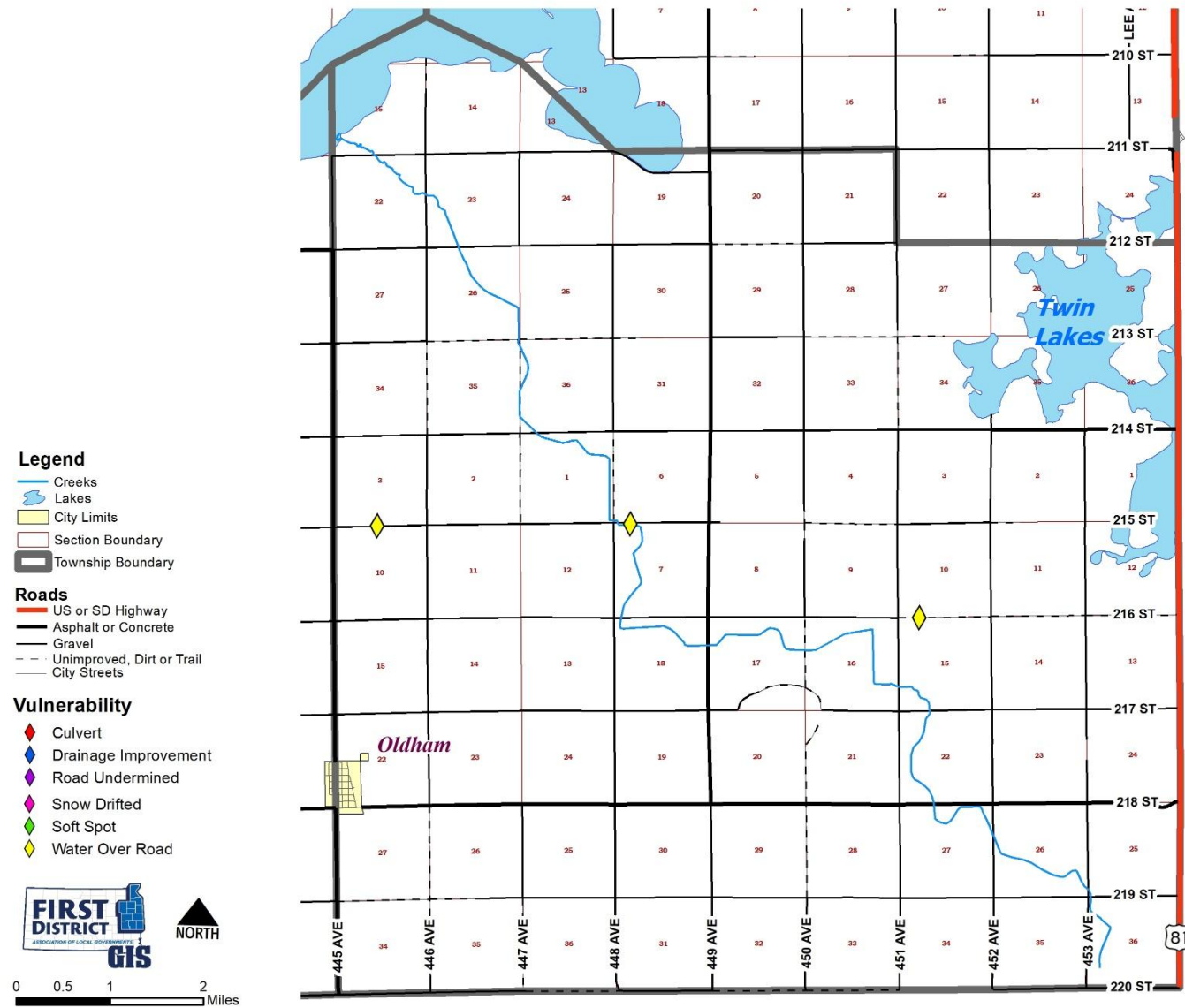


0 0.75 1.5 Miles NORTH

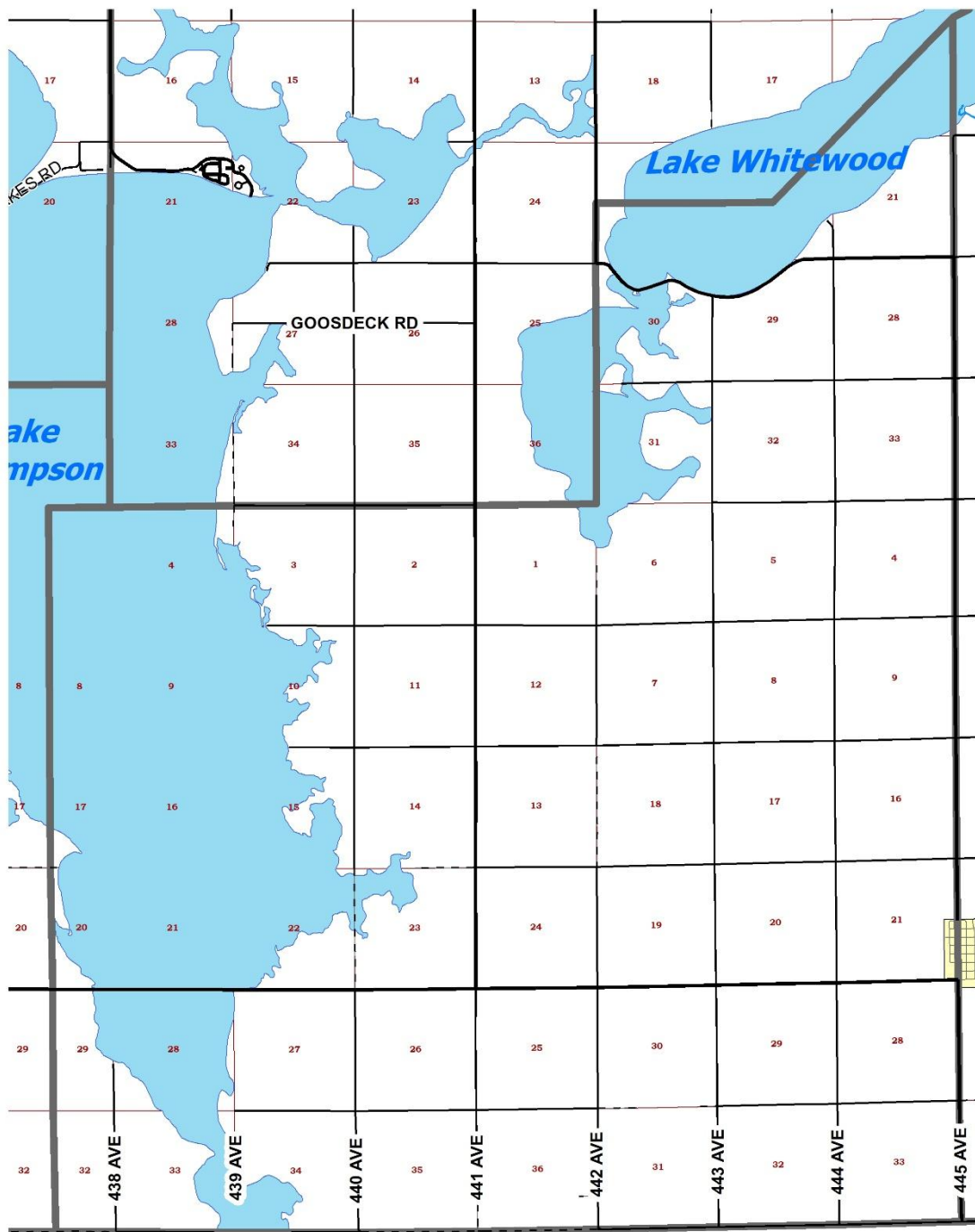
SPIRIT LAKE TOWNSHIP



SPRING LAKE TOWNSHIP

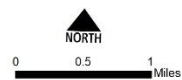


WHITEWOOD TOWNSHIP



Legend

- | | | |
|--|---|---|
| <ul style="list-style-type: none"> — Creeks — Lakes City Limits Section Boundary Township Boundary | Roads <ul style="list-style-type: none"> — US or SD Highway — Asphalt or Concrete — Gravel — Unimproved, Dirt or Trail — City Streets | Vulnerability <ul style="list-style-type: none"> ◆ Culvert ◆ Drainage Improvement ◆ Road Undermined ◆ Snow Drifted ◆ Soft Spot ◆ Water Over Road |
|--|---|---|



Appendix F – Online Survey Information

Survey Notice to Participate

kingsburyjournal.com | KINGSBURY JOURNAL

WEDNESDAY, JANUARY 17, 2024 17

Public Notices

5:02:04:17. Notice of deadline for filing primary nominating petitions. Between the fifteenth and thirtieth day of January in an even-numbered year, the person in charge of the local election shall publish a notice in the following form:

NOTICE OF DEADLINE FOR FILING NOMINATING PETITIONS FOR THE PRIMARY ELECTION AND FOR FILING INDEPENDENT CANDIDATE PETITIONS

The deadline for filing nominating petitions for the primary election is March 26, 2024, at 5:00 p.m. central time. If a petition is mailed by registered mail by March 26, 2024, at 5:00 p.m. central time, it is considered filed.

The deadline for filing nominating petitions to run as an independent candidate in the general election is April 30, 2024, at 5:00 p.m. central time. If a petition is mailed by registered mail by April 30, 2024, at 5:00 p.m. central time, it is considered filed. For the offices of County Commissioner - District 2, County Commissioner - District 4, States Attorney, County Treasurer, and County Coroner, nominating petitions must be filed in the office of the Kingsbury County auditor, and nominating petitions for the offices of U.S. Representative, Public Utilities Commissioner and Legislator must be filed in the Office of the Secretary of State, 500 E Capitol Ave., State Capitol Building, Pierre, SD 57501.

The deadline for filing nominating petitions to run as an independent candidate for president in the general election is August 6, 2024, at 5:00 p.m. central time. If a petition is mailed by registered mail by August 6, 2024, at 5:00 p.m. central time, it is considered filed.

Nominating petitions for the offices of County Commissioner - District 2, County Commissioner - District 4, States Attorney, County Treasurer, County Coroner, and Republican Delegates to the State Convention must be filed in the office of the Kingsbury County auditor during regular business hours. Nominating petitions for the offices of U.S. Representative, and Legislator must be filed in the Office of the Secretary of State, State Capitol Building, 500 E Capitol Ave., Pierre, SD 57501, between the hours of 8:00 a.m. and 5:00 p.m. central time.

Echo Steffensen
Kingsbury County Auditor

Published twice at the approximate cost of \$50.55 and can be viewed free of charge at www.sdpublishnotices.com

INVITATION TO PARTICIPATE IN KINGSBURY COUNTY PDM PLANNING PROCESS

Kingsbury County, including its communities, are updating their Pre-Disaster Mitigation Plan to meet Federal Emergency Management Agency regulations. The purpose of the Plan is to better understand the natural hazards that pose a threat to the area and develop actions that reduce the risk associated with these hazards. You are invited to participate in this survey to help gauge local household and business preparedness for disasters and to identify actions that would reduce risk and loss from natural hazards. The information you provide will help prioritize local risk reduction activities. To participate, use the following link to access the survey <https://survey.alchemer.com/s3/7675674/KingsburyPDM>. The deadline for completing this survey is April 1, 2024. Your participation will be greatly appreciated.

Cindy Bau
Kingsbury County
Emergency Manager

Published once at the approximate cost of \$15.28 and can be viewed free of charge at www.sdpublishnotices.com

OFFICIAL PROCEEDINGS KINGSBURY COUNTY BOARD OF COUNTY COMMISSIONERS
****UNAPPROVED DRAFT MINUTES DE SMET, SOUTH DAKOTA JANUARY 4, 2024**

The Kingsbury County Board of County Commissioners met Thursday, January 4, 2024, at 8:30 AM in the Courtroom of the County Courthouse with Commissioners Roger Walls, Kyle Lee, Steve Spilde, Corey Lundquist and Doug Kazmerzak present.

Attending via Zoom were Tammy Anderson - Director of Equalization, Michelle Longville - Treasurer and Amy Halverson - Kingsbury Journal

Echo Steffensen, Auditor, called the meeting to order.

PLEDGE OF ALLEGIANCE
Those present stood and recited the Pledge of Allegiance

NOMINATIONS
Steffensen called for nominations for the Chairman of the Board.

Kazmerzak nominated Kyle Lee as Chairman of the Board.

Motion by Kazmerzak and seconded by Lundquist to nominate Kyle Lee as Chairman and to cease nominations and cast a unanimous vote in favor of Lee as Chairman. All present voting aye. Motion carried.

Commissioner Lee chaired the remainder of the meeting.

Chairman Lee called for nominations for Vice Chairman.

Motion by Walls and seconded by Spilde to nominate Corey Lundquist as Vice Chairman and to cease nominations and to cast a unanimous vote in favor of Lundquist as Vice Chairman. All present voting aye. Motion carried.

Chairman Lee thanked Commissioner Kazmerzak for his service and commended him for his leadership while serving as chairman.

APPROVE AGENDA
Chairman Lee asked if there were any additions or changes to the agenda.

Echo Steffensen, Auditor, stated the approval of the Spirit Lake RAIIF grant and Resolution 2024-1 for election worker pay would need to be added and acted upon.

Kazmerzak stated he had a couple items to add to the open discussion.

Motion by Lundquist and seconded by Walls to approve the agenda with the additions. All present voting aye. Motion carried.

PUBLIC COMMENT
Chairman Lee asked for public comment. There was none.

CONFLICT OF INTEREST
Chairman Lee asked the Board if there was any conflict of interest. There was none.

APPROVE CLAIMS
Motion by Kazmerzak and seconded by Spilde, that the following claims presented to the Board for consideration be approved and the County Auditor be directed to issue warrant checks for payment of same. All present voting aye. Motion carried.

CINDY BAU 60.00 UTILITIES, BLACKBURN & STEVENS, PROF LLC 160.50 BMI CAA FEES, JEFF BURNS 1674.76 CAA FEES, CASTLEROCK CONSTRUCTION 27836.78 REPAIRS, CENTURY BUSINESS PRODUCTS 380.19 PROFESSIONAL SERV. CITY OF DESMET 133.54 UTILITIES, DANR- FISCAL OFFICE 250.00 REPAIRS, TRIMOND MOWERS LLC 722.12 SUPPLIES, FLEGELS FLOWERS 69.95 MISC EXPENSE, I STATE TRUCK CENTER 156.22 SUPPLIES, JAY'S AUTOBODY 65.00 REPAIRS, DOUG KAZMERZAK 76.50 TRAVEL, KINGSBROOK RURAL WATER 36.00 UTILITIES, KINGSBURY ELECTRIC COOP 1134.31 REPAIRS, KINGSBURY ELECTRIC COOP 347.14 REPAIRS, KINGSBURY JOURNAL 519.97 PUBLISHINGS, KINGSBURY COUNTY TREASURER 55996.53 ADVANCED TAX, KYLE LEE 20.40 TRAVEL, COREY LUNDQUIST 93.84 TRAVEL, MULTI BUSINESS SOLUTIONS, INC 2350.00 HR SERVICES, EASTLINE SUPPLY 222.49 SUPPLIES, NAPA CENTRAL 310.51 SUPPLIES, OFFICE PEEPS INC 69.72 SUPPLIES, PURITON ABSTRACT & TITLE LLC 65.00 PROF SERVICES, PUILL 101.57 SUPPLIES, ROLLING PRAIRIE GRAIN CO 2636.70 SNOW, GARY SCHUMACHER 10800.00 PROFESSIONAL SERVICES SD DEPT OF TRANSPORTATION 60404.78 STRIPING & BRIDGE INS, SDACO 126.00 FEES, SD EMERGENCY MANAGEMENT ASSOC 30.00 DUES, SDN COMMUNICATIONS 917.00 PRO SERVICES, STEVEN L SPILDE 114.75 TRAVEL, STEVE STRANDE 24.69 SUPPLIES, TRUSTWORTHY HARDWARE 304.22 REPAIRS AND SUPPLIES, TWO WAY SOLUTIONS, INC. 87.96 SUPPLIES, VERIZON 209.60 UTILITIES, VISA 811.62 SUPPLIES, REPAIRS, MISC, ROGER WALLS 61.20 TRAVEL, DAVID WHEELER 586.50 CAA FEES, WW TIRE 1570.85 SUPPLIES, WW TIRE 667.72 SUPPLIES,

END OF MONTH
COURTHOUSE SALARIES \$126,784.14
HIGHWAY SALARIES 54,422.51

PAYROLL DEDUCTIONS
Wellmark Health Plan 38,383.59
Three Fivers Benefits 6,718.41
AFLAC 1,410.52
AFLAC 327.64
Life Alliance Life Insurance 184.84
Aflac Dental 763.98
Reliance Matrix Dental 1,104.81
Beam Vision 127.53
Reliance Matrix Vision 118.55
SD Retirement Supplement Pretax 225.00
SD Retirement System 26,905.78
SD Retirement Supplement 780.00
AFSCME 93.04
53,568.00

MINUTES
Motion by Lundquist and seconded by Spilde to approve the minutes of December 28, 2023. All present voting aye. Motion carried.

OFFICE REPORTS
The Register of Deeds, Sheriff's and Director of Equalization's Reports of Fees Collected during the month of December 2023 were reviewed by the Board. Motion by Lundquist and seconded by Walls that the Auditor's report with the Treasurer as of the

close of business December 31, 2023, be accepted as follows. All present voting aye. Motion carried.

Cash on Hand	\$1,200.00
Checks in Treas. Possession less than 3 days	20,322.62
Credit Card	371.93
Uncollected Credit Cards	62.00
Cash Short	0.00
Demand Deposits	25,374.41
Savings Account	2,150,894.32
Revolving Loan Fund	188,705.49
Big Ditch MM	357,759.27
Time Deposits	1,657,523.80
TOTAL	\$4,402,214.44

BREAKDOWN OF MONEY BY FUNDS
County General Fund 2,232,208.01
Special Revenue Funds (Road & Bridge, E911 Fund
CH Bldg, Revolving Loan, Emergency Management, Domestic Abuse Funds 24/7 & MAP Fund
American Rescue, Rural Infrastructure) 1,687,902.39
Drainage Ditch #4 164,811.69
Drainage Ditch Debt Service Cash 9,805.52
Amount held for School Dist. 37,868.47
Amount held for Townships 24,012.74
Amount held for Cities 14,143.73
Amount held for East Dakota Water Dist. 125.83
State Remittance 140,138.17
Amount held for others 91,196.89
TOTAL \$4,402,214.44

COMMISSION BOARD APPOINTMENTS
The Board reviewed and discussed the duties of the previous Board Appointments.

Motion by Walls and seconded by Spilde for Board appointments to remain the same. All present voting aye. Motion carried.

The assignments for 2024 are as follows:

Kazmerzak - Contract Law, Health Insurance, Courthouse Assistant, Emergency Management, Railroad Authority
Lundquist - First Planning District and Labor Negotiations
Walls - Weed Board, Glacial Lakes, SD Public Assurance Alliance, 4-H & Fair Board
Lee - Courthouse Assistant, Child Protection, ICAP Liaison, Health Insurance Alternate
Spilde - Courthouse, Human Services, Labor Negotiation, SD Public Assurance Alliance

NEW YEAR REORGANIZATION
Depositories
The current banks used by the Treasurer's office are American Bank & Trust in De Smet, Citizens State Bank and CorTrust Bank in Arlington, American Bank & Trust in Inverness, First National Bank in Oldham, and First National in Lake Preston. Though no money may currently be held at any one of the banks listed, all these banks are contacted for CD rates on a random basis.

Motion by Kazmerzak and seconded by Spilde to keep the depositories the same. All present voting aye. Motion carried.

Newspapers
The county currently has The Kingsbury Journal and The Arlington Sun listed as the official county newspapers.

Motion by Lundquist and seconded by Walls, the official newspapers remain the same. All present voting aye. Motion carried.

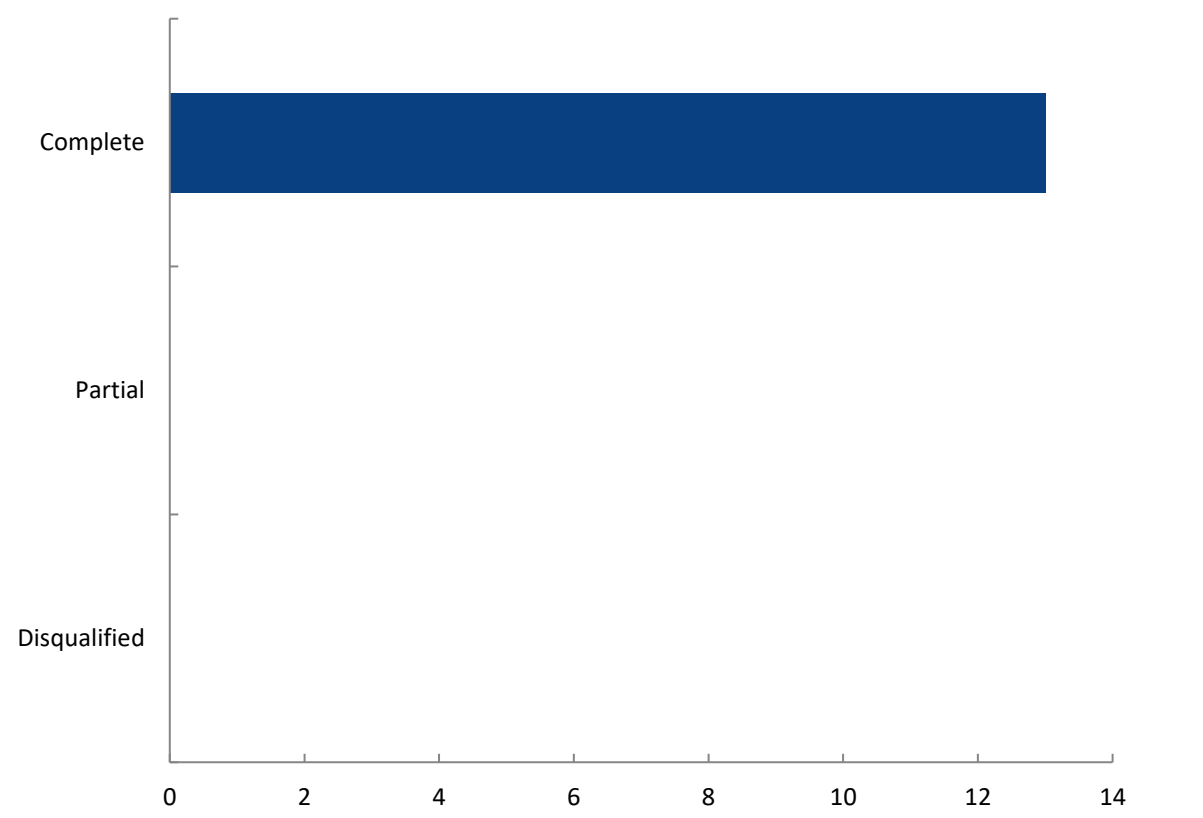
AUDITOR

Continued on next page

Report for Kingsbury County PDM

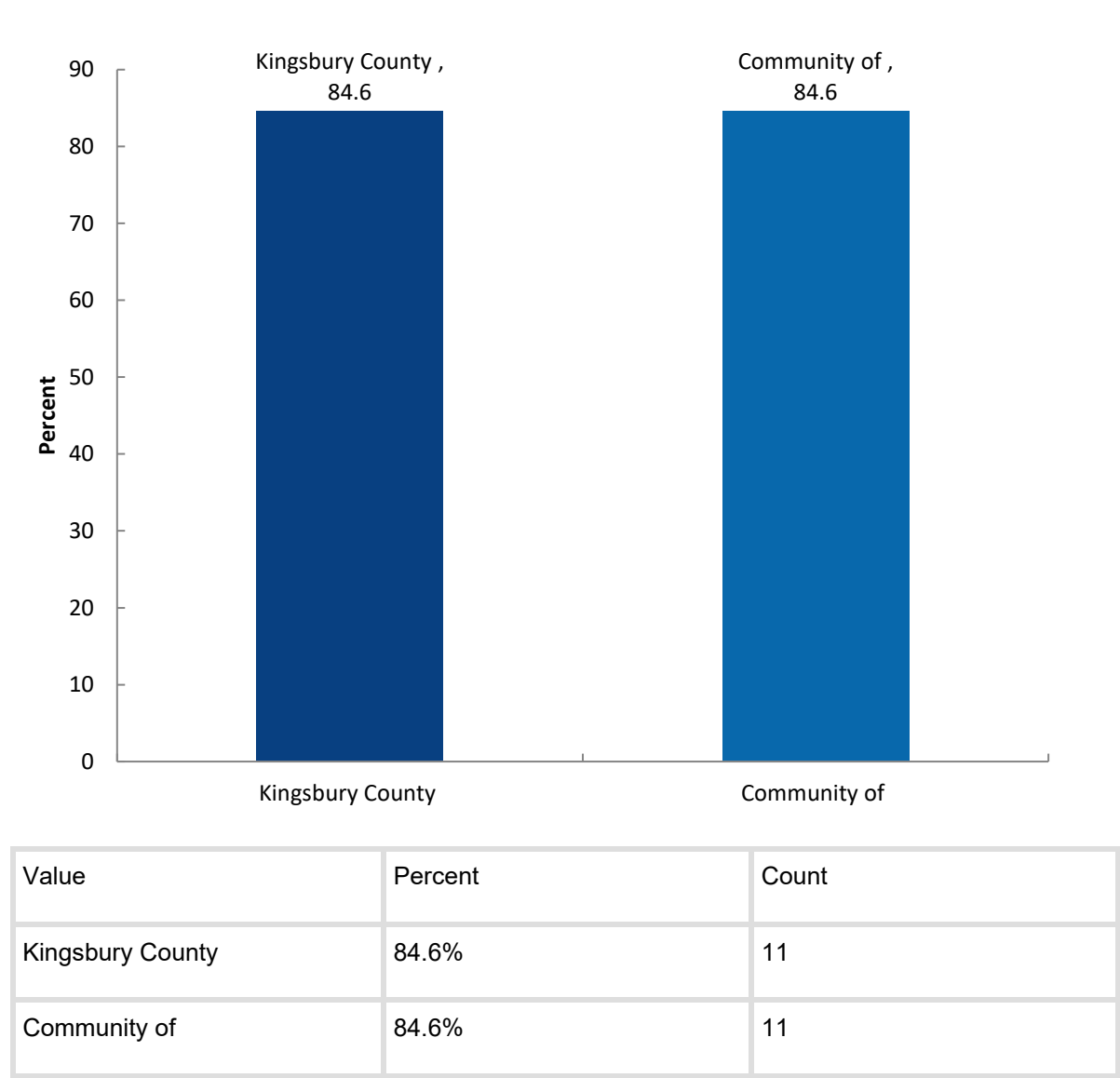
Kingsbury County PDM

Response Statistics

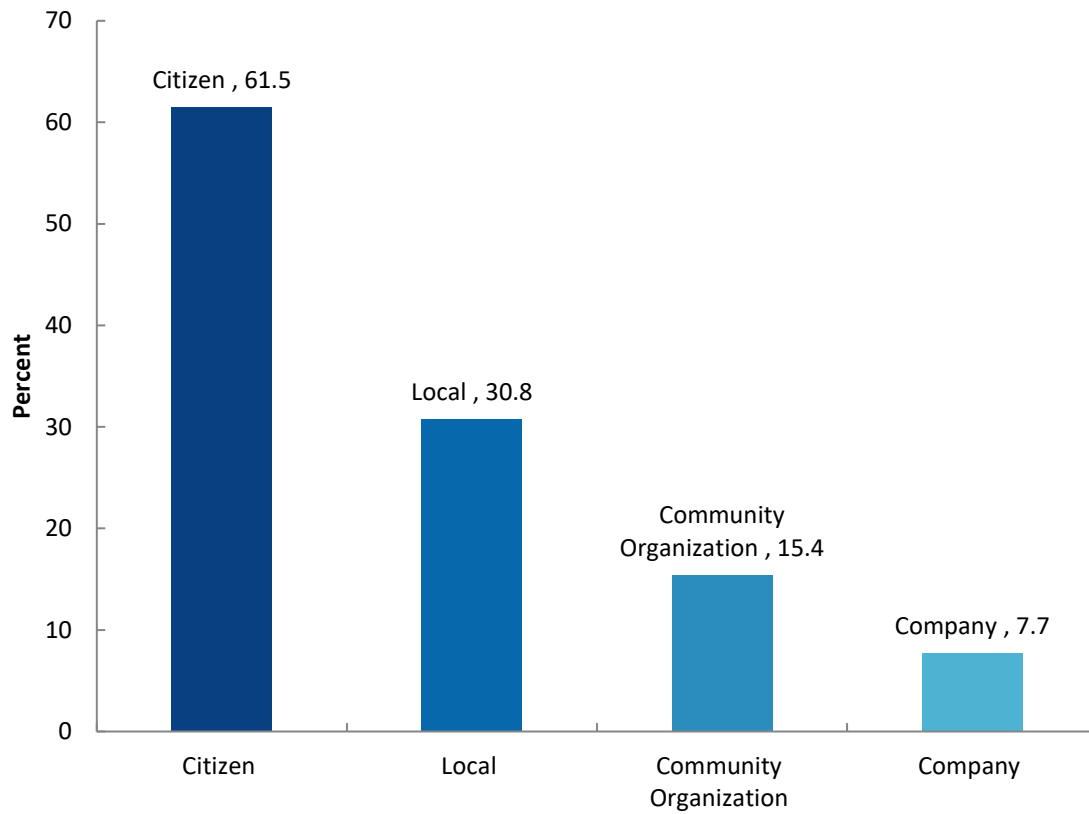


	Count	Percent
Complete	13	100
Partial	0	0
Disqualified	0	0
Totals	13	

1.Please indicate the municipality you reside in:

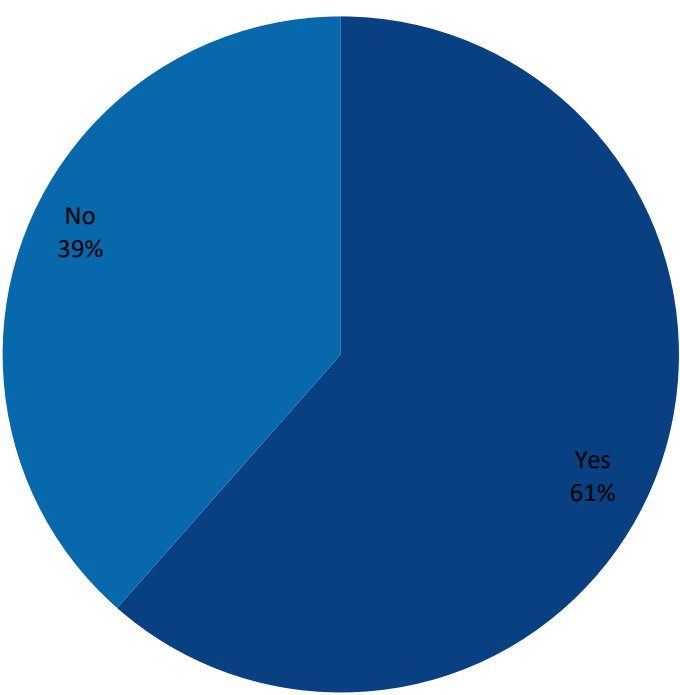


2.Are you responding as:



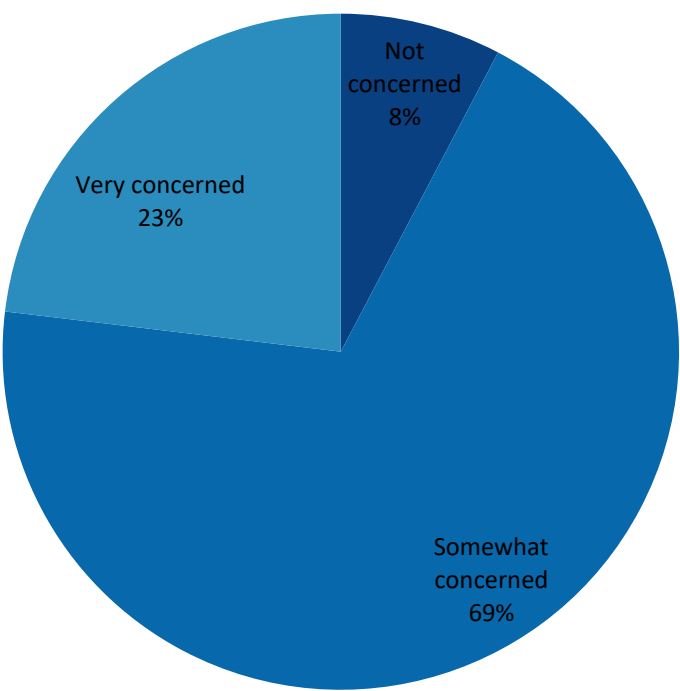
Value	Percent	Count
Citizen	61.5%	8
Local	30.8%	4
Community Organization	15.4%	2
Company	7.7%	1

3.Have you ever experienced or been impacted by a natural disaster?



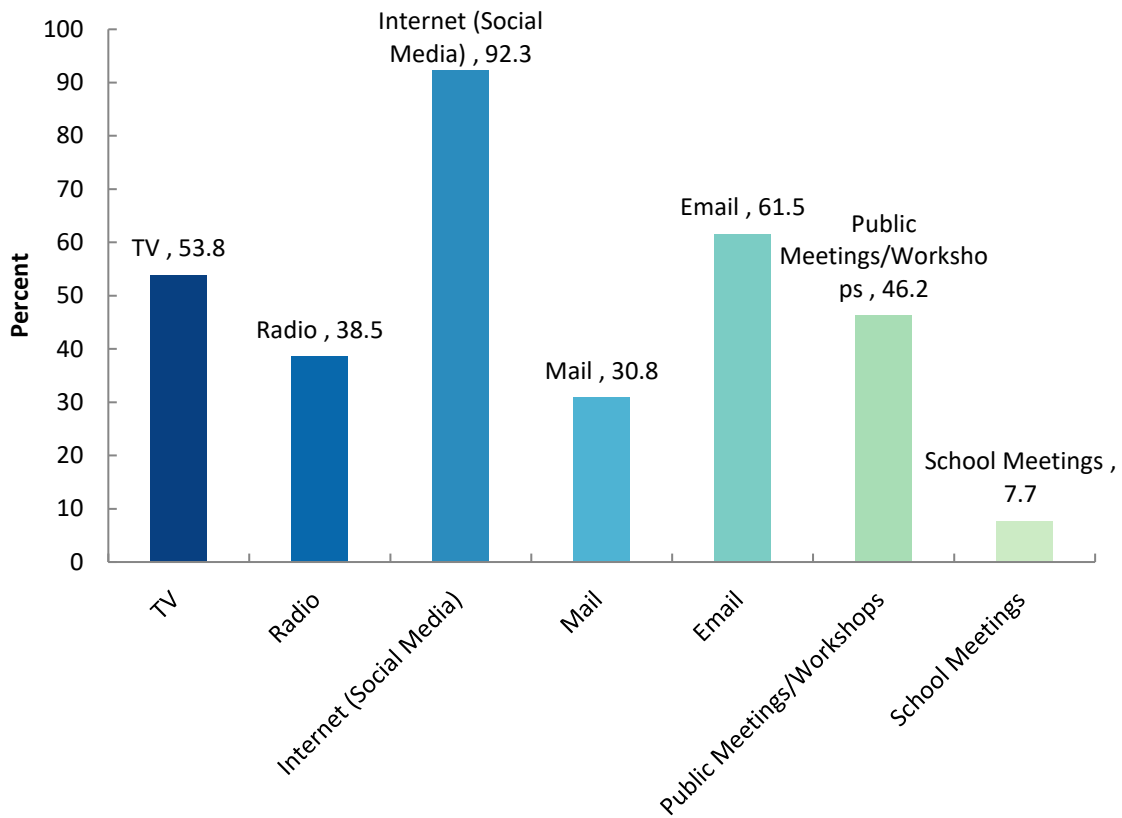
Value	Percent	Count
Yes	61.5%	8
No	38.5%	5
	Totals	13

4.How concerned are you about the possibility of your community being impacted by a natural disaster?



Value	Percent	Count
Not concerned	7.7%	1
Somewhat concerned	69.2%	9
Very concerned	23.1%	3
	Totals	13

5.What is the most effective way for you to receive information about how to protect your family and prepare your home from hazard events? Select all that apply.

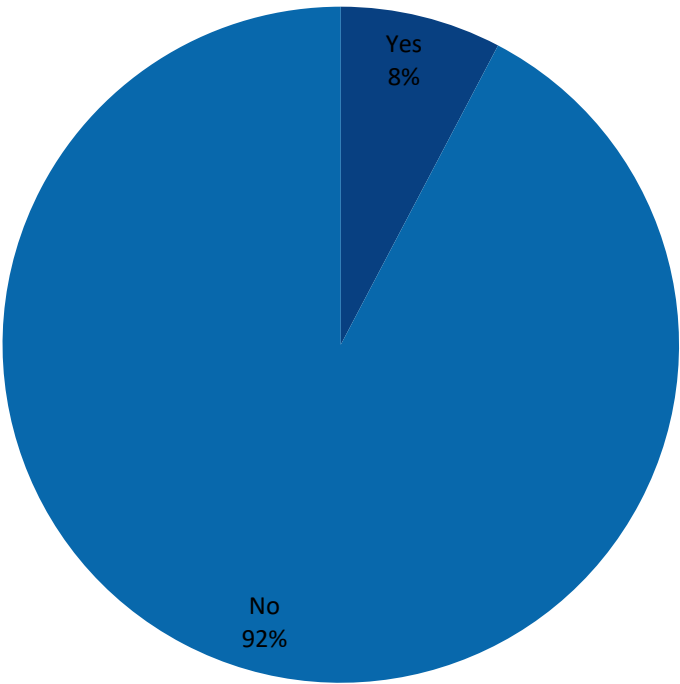


Value	Percent	Count
TV	53.8%	7
Radio	38.5%	5
Internet (Social Media)	92.3%	12
Mail	30.8%	4
Email	61.5%	8
Public Meetings/Workshops	46.2%	6
School Meetings	7.7%	1

6. Please rank the following hazards according to the degree of threat faced by your community. One (1) represents the highest/greatest threat and twelve (12) represents the lowest/least threat. Use each number once.

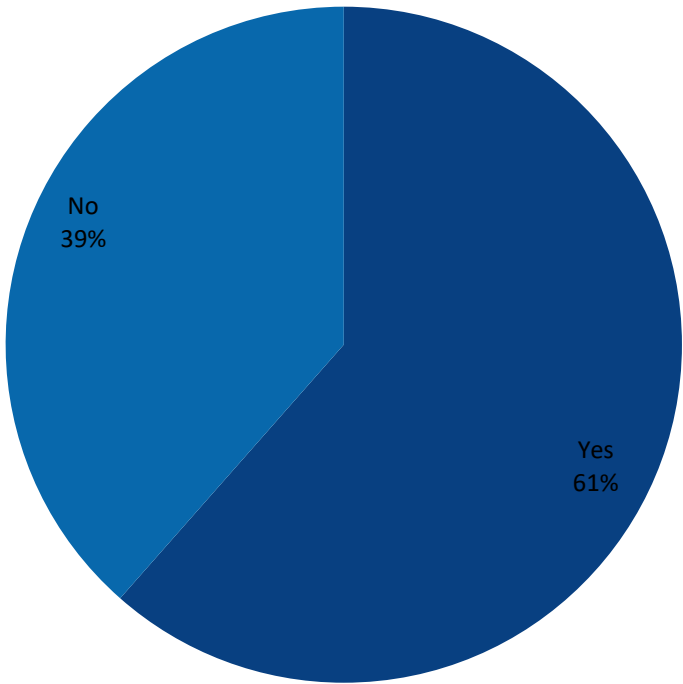
Item	Overall Rank	Score	Total Respondents
Tornado	1	125	13
Severe Winter Warning	2	118	11
High Wind	3	116	12
Thunderstorm (Including Lightning/Hail)	4	113	11
Extreme Temperatures	5	69	11
Drought	6	59	8
Wildfire	7	56	9
Urban Fire	8	54	11
Flood	9	53	10
Ice Jam	10	42	12
Earthquake	11	26	10
Dam Failure	12	18	9

7.Is there another significant natural hazard that is a threat to your community that is not listed above?



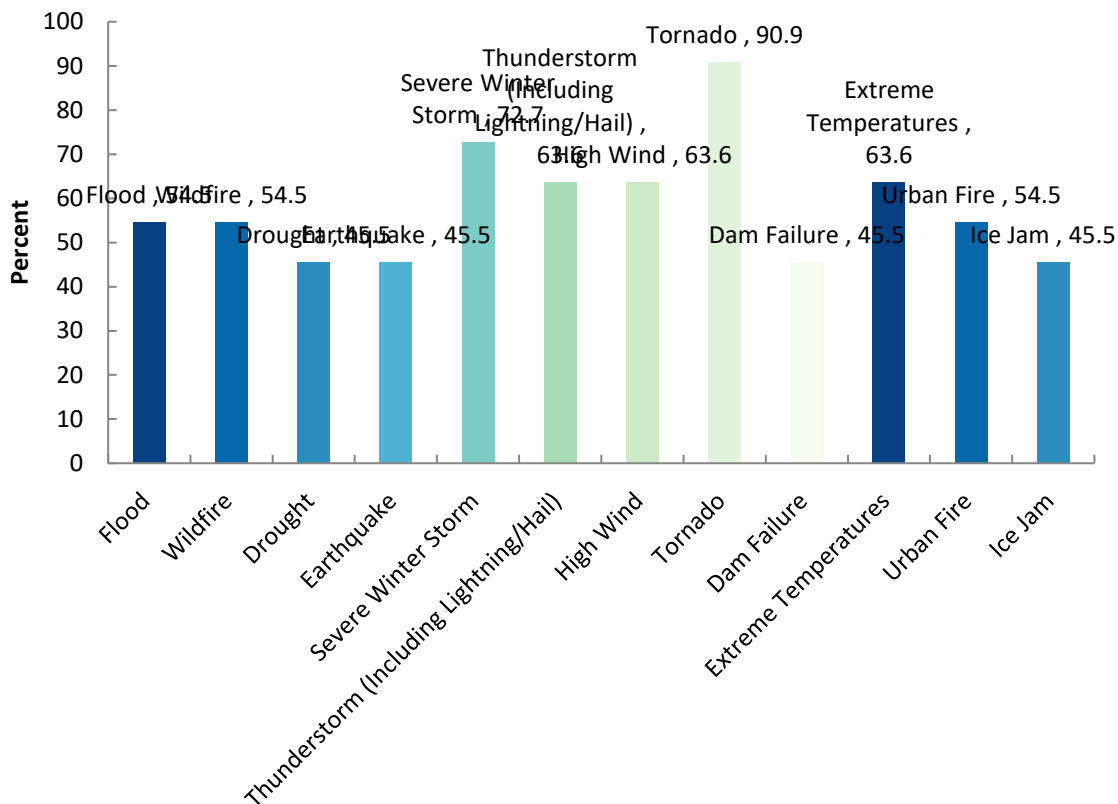
Value	Percent	Count
Yes	7.7%	1
No	92.3%	12
	Totals	13

8.Have you or your community taken any actions to make your home or community more resistant to hazards?



Value	Percent	Count
Yes	61.5%	8
No	38.5%	5
	Totals	13

9. We would like your opinion on how to best reduce risk from the natural hazards in your community. Please briefly describe at least one project to mitigate each of the following hazards. Examples of projects are creating green spaces, floodproofing structures, designating emergency shelters, construction of tornado safe rooms etc.

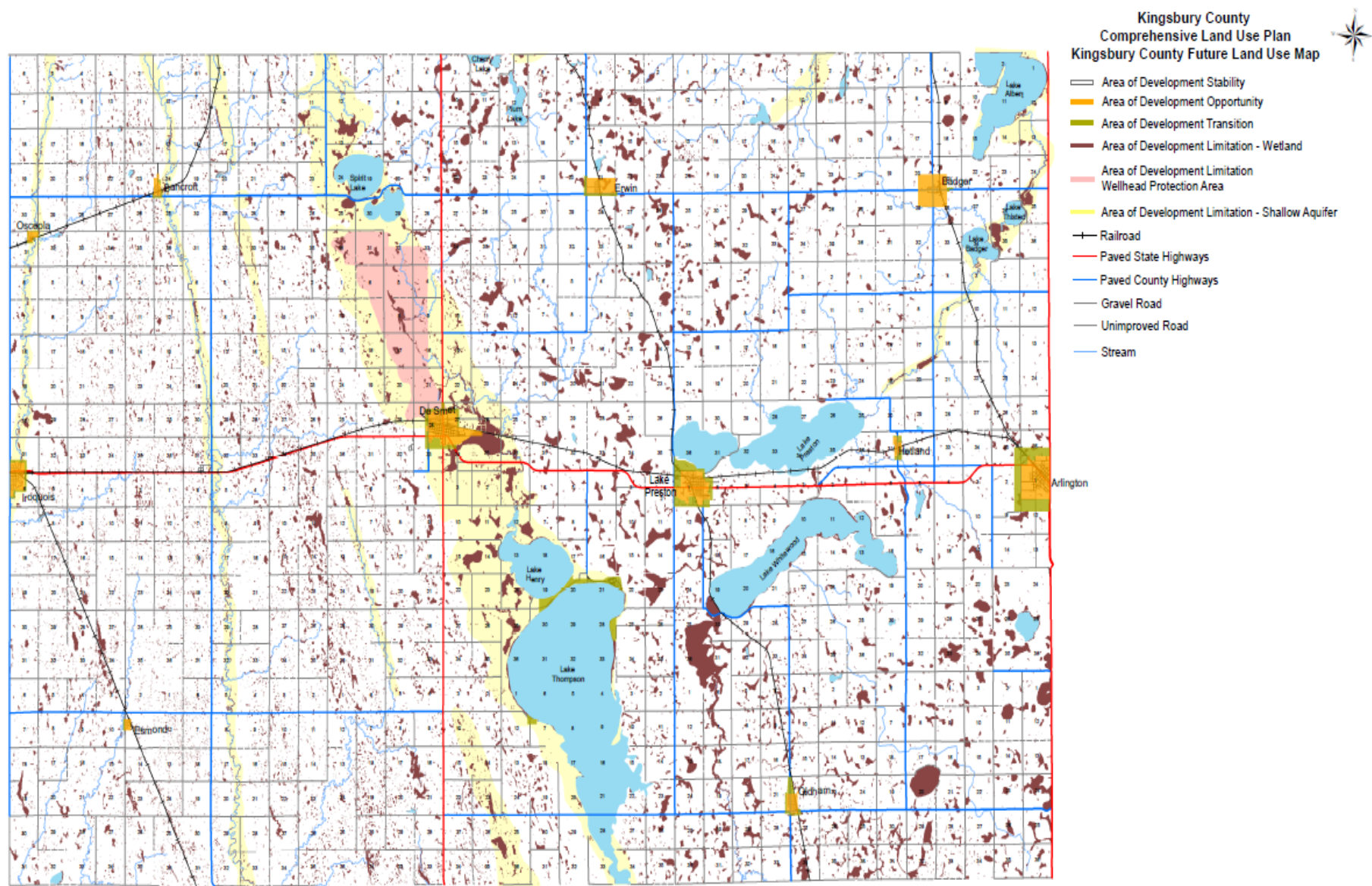


Value	Percent	Count
Flood	54.5%	6
Wildfire	54.5%	6
Drought	45.5%	5
Earthquake	45.5%	5
Severe Winter Storm	72.7%	8

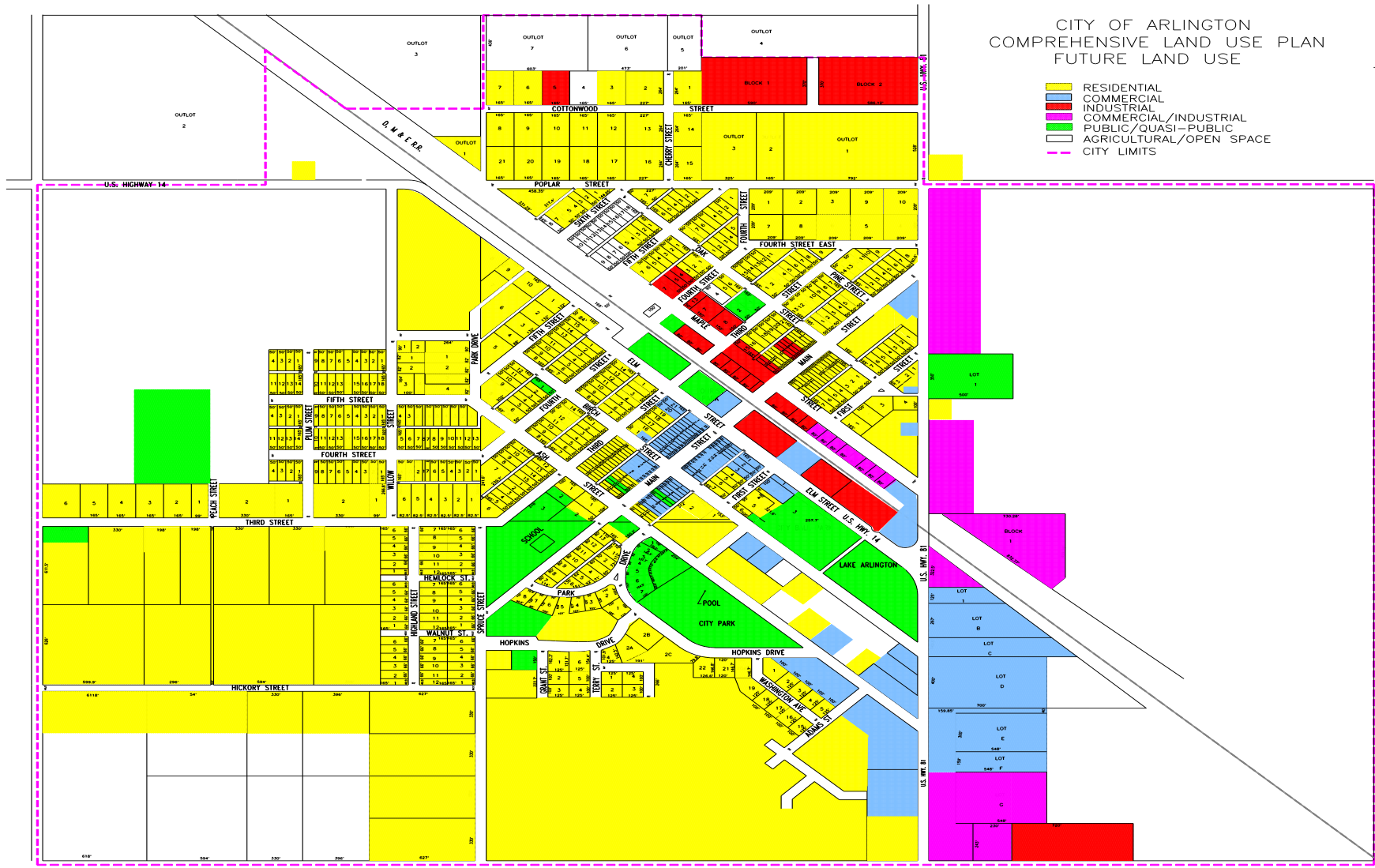
Thunderstorm (Including Lightning/Hail)	63.6%	7
High Wind	63.6%	7
Tornado	90.9%	10
Dam Failure	45.5%	5
Extreme Temperatures	63.6%	7
Urban Fire	54.5%	6
Ice Jam	45.5%	5

Appendix G – Comprehensive Land Use Maps

Kingsbury County Future Land Use Map



City of Arlington Future Land Use Map

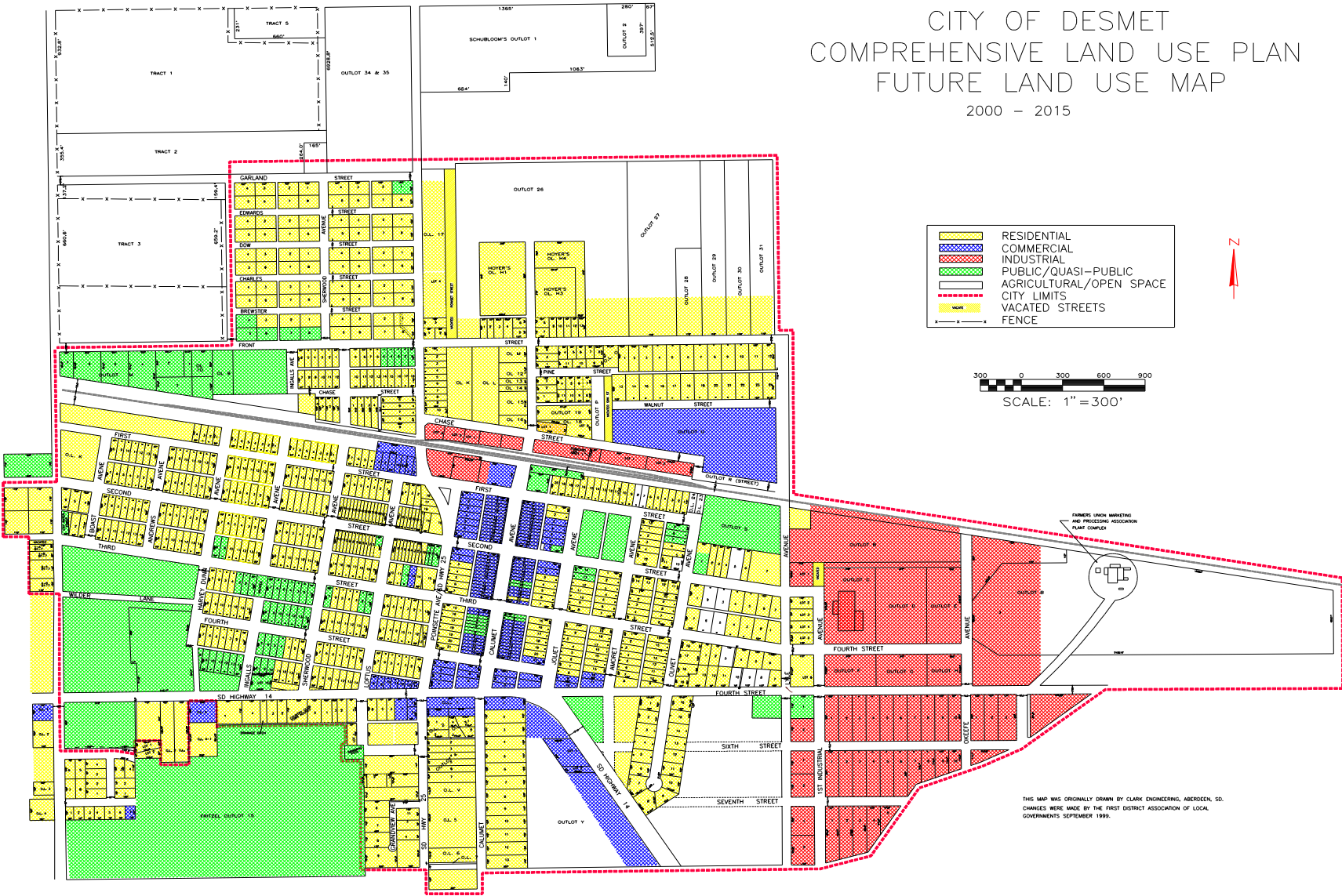


Town of Bancroft Future Land Use Map

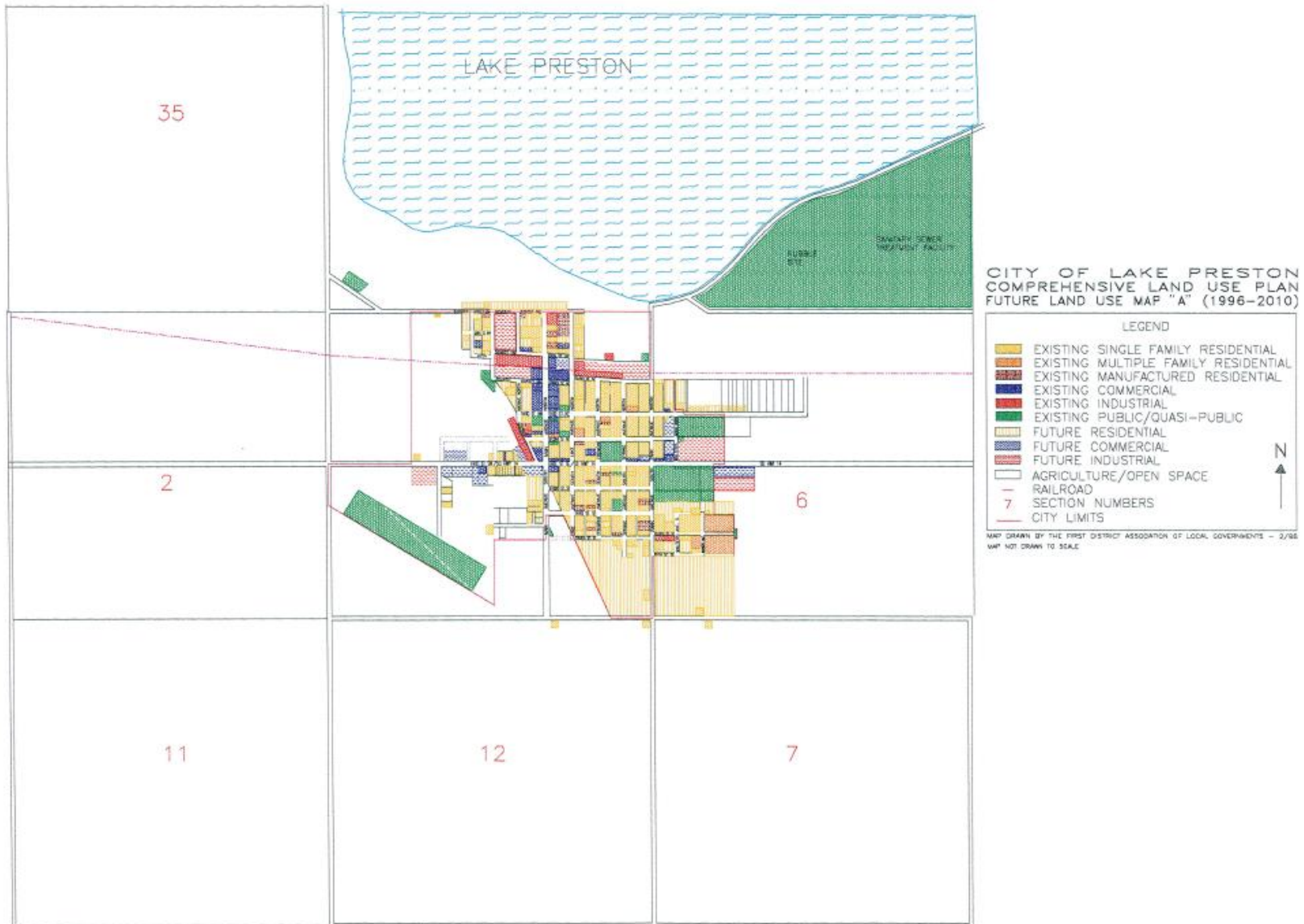


City of De Smet Future Land Use Map

CITY OF DESMET COMPREHENSIVE LAND USE PLAN FUTURE LAND USE MAP 2000 - 2015



City of Lake Preston Future Land Use Map



Town Oldham Future Land Use Map



Appendix H – Review of Previous PDM Mitigation Project Implementation

2019 PDM Plan Mitigation Project Implementation

COMMUNITY	POTENTIAL MITIGATION PROJECTS	HAZARD	INCLUDED IN 2024 PLAN?	STATUS
Kingsbury County	Identify location, elevation, size, and condition(s) of culvert and other drainage improvements in rights-of-way.	Flooding	No	Complete/ Removed from Tables 5.1-5.13
Kingsbury County	Establishment of floodplain boundaries for rural and incorporated portions of the county.	Flooding	No	Complete/ Removed from Tables 5.1-5.13
Kingsbury County	Identify Base Flood (100-year) Elevation of each lake.	Flooding	No	Complete/ Removed from Tables 5.1-5.13
Kingsbury County	Establish lowest floor elevation for structures constructed near Lake Thompson.	Flooding	No	Complete/ Removed from Tables 5.1-5.13
Badger	Upgrade wastewater system to remain operational during weather events.	Flooding	No	Complete/ Removed from Tables 5.1-5.13
Badger	Replace culvert under highway to facilitate better drainage.	Flooding	Yes	Ongoing/Included in Tables 5.1-5.13
De Smet	Purchase & upgrade firefighting equipment (specifically trucks).	Fire	Yes	Ongoing/Included in Tables 5.1-5.13
De Smet	Update Comprehensive Land Use Plan and Zoning Regulations	Flooding	No	Complete/ Removed from Tables 5.1-5.13
Iroquois	Replace culverts along Highway 14.	Flooding	Yes	Ongoing/Included in Tables 5.1-5.13
Iroquois	Purchase fire suits and equipment.	Fire	No	Ongoing/Removed from Tables 5.1- 5.13
Lake Preston	Install upgrades to lift station and wastewater system.	Flooding	No	Complete/ Removed from Tables 5.1-5.13

*Any projects/activities listed in the 2019 PDM Plan that are not referenced in this section were retained in this Plan, with or without modification, and listed in Tables 5.1 - 5.13.

Appendix I – Worksheet 10: Plan Update Evaluation Form

PLANNING PROCESS

Participants

Should new jurisdictions be invited to participate in future plan updates?

How have communities and agencies helped to carry out mitigation actions?

Could anything from the initial planning process be done more efficiently?

Have there been any changes in public support or priorities about hazard mitigation?

Is there anything else you would like to consider?

Public Involvement

Has the public been actively involved in the plan's implementation? How can public participation improve?

Have there been any ongoing public outreach activities for the plan?

Is there anything else you would like to consider?

RISK ASSESSMENT

Hazard History

Have there been any recent disaster events? If so, how did they affect your community?

Should the list of hazards addressed in the plan be updated? If so, which hazards should be added or removed?

Have there been any new issues with hazards in a certain area of your community?

Is there anything else you would like to consider?

New Data

Are any new data sources available (e.g., studies, reports, maps, etc.)?

Do any new critical facilities or infrastructure need to be added to the asset lists?

Have any changes in development trends occurred that could create additional risks?

Does any new development *reduce* risk?

Is there anything else you would like to consider?

MITIGATION STRATEGY

Capabilities

Have jurisdictions adopted new policies, plans, regulations, or reports that could support the plan?

Are there different or new education and outreach programs and resources available for mitigation activities?

Has NFIP participation changed in the participating jurisdictions?

Is there anything else you would like to consider?

Actions

Is the mitigation strategy being carried out as expected? Were the cost and timeline estimates accurate?

Are there new projects to consider?

Should existing mitigation actions be revised or removed from the plan?

Are there new funding sources to consider?

Have parts of the plan been worked into other planning mechanisms?

What challenges were there, and how can those be overcome over time?

Is there anything else you would like to consider?

Appendix J - References

City of Arlington Comprehensive Land Use Plan, Zoning and Subdivision Ordinances – First District Association of Local Governments, 2001.

Town of Bancroft Comprehensive Land Use Plan and Zoning Ordinances – First District Association of Local Governments, 2005.

City of De Smet Comprehensive Land Use Plan, Zoning and Subdivision Ordinances – First District Association of Local Governments, 2000 & 2024.

City of Lake Preston Comprehensive Land Use Plan, Zoning and Subdivision Ordinances – First District Association of Local Governments, 2003.

Kingsbury County Comprehensive Land Use Plan and Zoning Ordinance – First District Association of Local Governments, 2015.

Kingsbury County Pre-Disaster Mitigation Plan, 2019.

Local Hazard Mitigation Planning Tool – Federal Emergency Management Agency, 2011.

NFIP Flood Insurance Rate Maps, FEMA.

State of South Dakota Hazard Mitigation Plan. South Dakota Office of Emergency Management. 2019.

Town of Oldham Comprehensive Land Use Plan and Zoning Ordinances – First District Association of Local Governments, 2014.