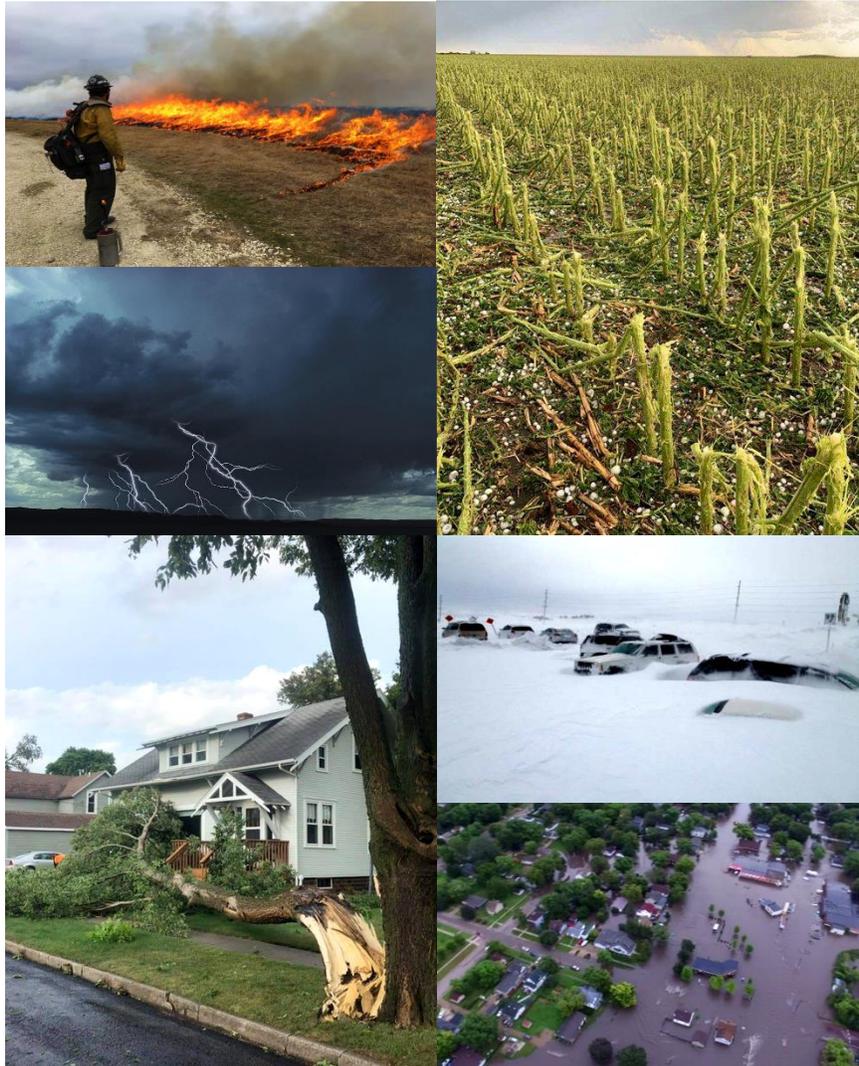


# Codington County Pre-Disaster Mitigation Plan 2023-2027



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**For: Federal Emergency Management Agency**

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## CHAPTER 1 | INTRODUCTION

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### INTRODUCTION

Codington 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 Codington County Board of Commissioners, in conjunction with the South Dakota Office of Emergency Management 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 Codington 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 2012 and updated in 2018. The document will serve as a strategic planning tool for use by the county and its communities in its efforts to mitigate against future disaster events. The plan identifies and analyzes the 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 do much to reduce threats to existing citizens and avoid creating new problems in the future. In addition, many mitigation actions can be implemented at minimal cost.

There have been 625 Major Presidential Disaster Declarations (all hazards) proclaimed in the United States, of those 625 declarations, there have been 21 major Disaster Declarations which have occurred fully or partially within the state of South Dakota. Codington County is no stranger to natural and man-made disasters. All or portions of Codington County have been included in six Presidential Disaster Declarations 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 Codington County Pre-Disaster Mitigation Plan developed. This plan identifies hazards that occur throughout Codington 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**

In October of 2000, the Disaster Mitigation Act (DMA2K) was signed to amend the 1988 Robert T. Stafford Disaster Relief and Emergency Assistance Act. Section 322 (a-d) requires that local governments, as a condition of receiving federal disaster mitigation funds, have a pre-disaster mitigation (PDM) 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 to 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 and 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 Codington 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, environmentally, 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.

## **CODINGTON COUNTY PROFILE**

### **Population**

Codington County is in northeastern South Dakota. The county has a geographic area of 720 square miles and its 2020 Census population was 28,325, which averages to 39.3 persons per square mile. Due to the ongoing coronavirus pandemic, 2020 Census data has been limited to only providing total population data. Therefore all other demographic data will be taken from the 2020 American Community Survey Estimates (ACS). According to the 2020 ACS, just over seventeen percent of the population is older than age 65. Education levels of persons include ninety-one percent high school graduates and twenty percent bachelor's degree holders.

The county seat is Watertown, which is situated at the intersection of US Highway 81 and US Highway 212. Table 1.1 shows the population and number of housing units of the county's municipalities. Table 1.2 lists the seventeen County Townships by population. The County has continued to experience population growth since 1930. This is due primarily to the growth of the City of Watertown, which serves as the governmental, employment, and trade center for the county and region.

**Table 1.1: Codington County Municipalities**

<b>Name</b>	<b>Population</b>	<b>Location</b>	<b>Elevation</b>	<b>Housing Units</b>
Florence	337	45 03' 20" N 97 19' 34" W	1,768 feet	144
Henry	256	44 52' 51" N 97 27' 46" W	1,790 feet	117
Kranzburg	163	44 53' 11" N 96 54' 36" W	1,960 feet	68
South Shore	189	45 06' 06" N 96 55' 49" W	1,980 feet	120
Wallace	91	45 05' 06" N 97 28' 39" W	1,770 feet	42
Watertown	22,655	44 54' 45" N 97 10' 00" W	1,739 feet	10,878
Unincorporated Areas	4,634	44 57' 30" N 97 11' 11" W		1,842
Codington County	28,325	44 57' 30" N 97 11' 11" W		13,211

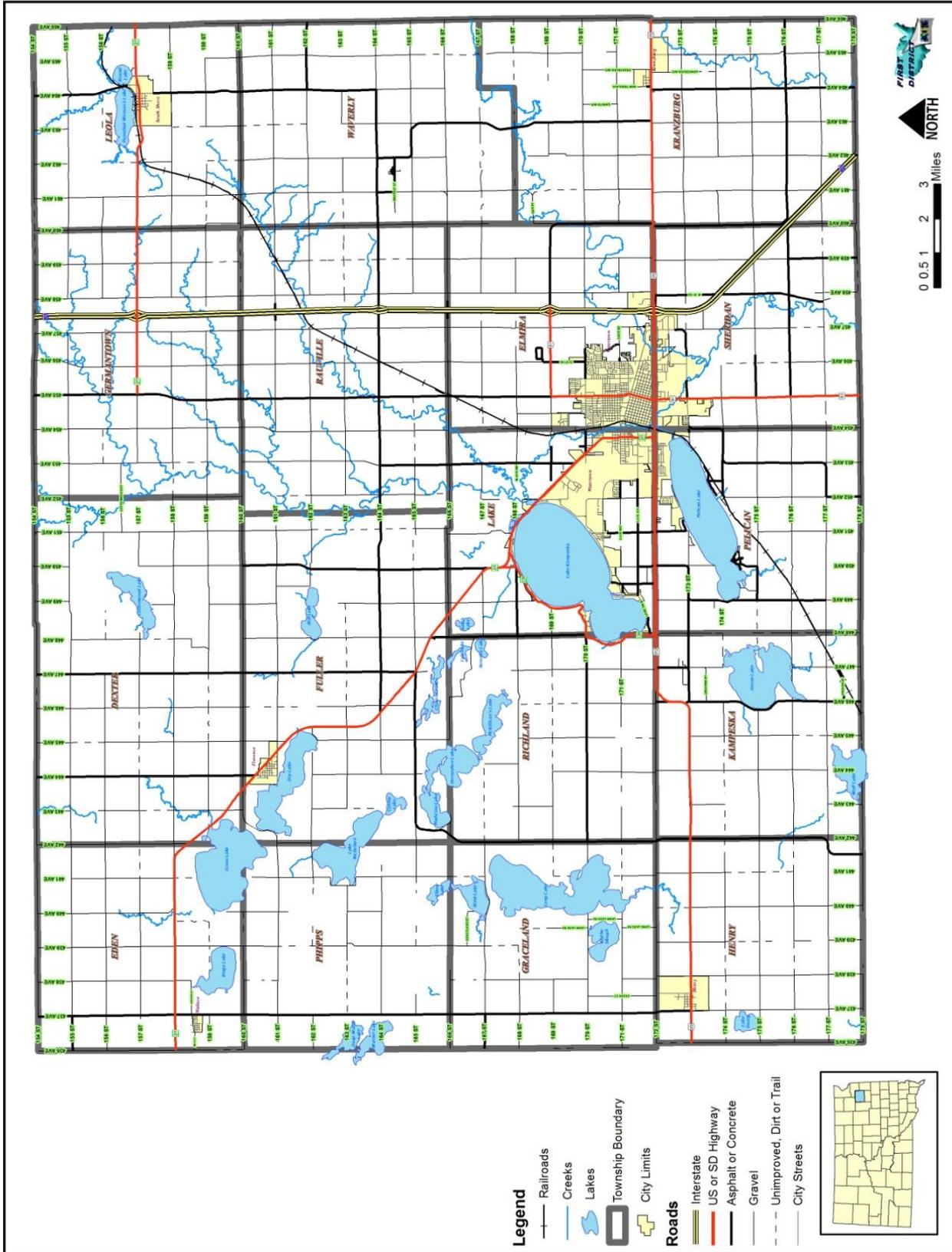
Source: 2020 Census Redistricting Data, [www.data.census.gov](http://www.data.census.gov); [www.Lat-Long.com](http://www.Lat-Long.com); [www.usbeacon.com](http://www.usbeacon.com)

**Table 1.2: Codington County Townships**

<b>Township</b>	<b>Population</b>	<b>Township</b>	<b>Population</b>
Dexter	193	Lake	641
Eden	123	Leola	48
Elmira	450	Pelican	726
Fuller	281	Phipps	72
Germantown	174	Rauville	271
Graceland	89	Richland	155
Henry	104	Sheridan	481
Kampeska	296	Waverly	200
Kranzburg	330		

Source: 2020 Decennial Census Redistricting Data, [www.data.census.gov](http://www.data.census.gov)

Figure 1.1 Political Map



## **Social and Economic Description**

The County's economy is dependent upon its agricultural and manufacturing sectors. Most non-agricultural employment is in manufacturing, education, health care, or retail trade industries. Watertown is the governmental, employment, and retail hub for the county and region. The remaining rural communities in the County serve as bedroom communities to Watertown and provide "small town" atmosphere to those residents. A large majority of the residents within these communities commute to Watertown or other employment centers. Most of the communities have limited retail and service sectors which provide basic needs to its residents. Florence, Henry, and the unincorporated community of Waverly also have K-12 elementary/secondary schools.

Unemployment rates in South Dakota have remained under 3.5% over the last 5 years with the exception of an 8.8% 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 through 2022. According to the South Dakota Department of Labor and Regulation, Codington County followed a similar pattern with unemployment spiking to 10.9% in April of 2020 but fell back to about 3.5% by the fall. Since 2021, Codington County has experienced a consistent decrease in the unemployment rate with an average around 3.0%.

According to the 2020 American Community Survey 5-Year Estimates, approximately 13.2% of the population of Codington County falls below the poverty line. The City of Watertown is the largest community in Codington County. Watertown serves as the county seat and retail hub of the county. Most of the smaller communities in Codington County serve as bedroom communities and have limited retail and service sectors which provide basic needs to their residents. Watertown is also the home of Lake Area Technical College.

## **Physical Description and Climate**

A majority of the land area within the County is very lightly settled (less than 7 persons per square mile in the unincorporated areas of the county) with most of the land consisting of grassland, pasture, and cropland.

The topography of the County is mostly flat to undulating. The County's elevation has a range of approximately 1,740 feet above sea level to approximately 1,980 feet above sea level. The northeast corner of the county drains to the east, through the North Fork of the Yellow Bank River, and then into the Minnesota River. The remainder of the county drains into the Big Sioux River which divides the county: approximately forty percent lies east of the river and sixty percent to the west. The valley of the Big Sioux River is a gently undulating outwash from two to twelve miles wide. It is not uncommon for the Big Sioux River to experience minimum stream flow in the County during some winter and late summer months. Conversely, during wet years, the Big Sioux can accumulate enough moisture so as to cause flooding conditions, as was the case in 1997, 2001, 2011, and 2019.

The headwaters for the Big Sioux River are found approximately forty miles north of the County. The river flows in a southerly direction. Contained within the drainage pattern are twenty-one meandered lakes including Lake Pelican and Lake Kampeska. Lake Kampeska has approximately 5,000 surface acres.

The County's climate is considered Mid-Continental with hot summers and cold winters. Normally the temperature is moderate until the beginning of July, after which short, hot periods are experienced until the end of August. Average summer temperatures are around eighty degrees Fahrenheit and winter temperature around twenty-one degrees (about twelve degrees in January). 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.

Average annual precipitation is twenty-four inches with approximately eighty percent of the precipitation falling between the months of April and 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.

The average annual snowfall is forty inches, although as much as eighty inches and as little as five inches have fallen annually. The heaviest snowstorms often occur from late March through May or mid-October to mid-November. 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. Due to the strong winds that usually accompany the snowfall, it is common to find open fields bare while snow piles up in the sheltered areas. Additionally, high winds often result 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 to 19 inches or more have occurred. Even without falling snow in the colder conditions of midwinter, high winds can pick up loose snow resulting in local grounds blizzards.

## **Transportation and Utility Infrastructure**

Codington County meets its current transportation needs through a mixture of state and federal highways, railroads, county roads, municipal road systems, and township 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.

Major transportation infrastructure in the county includes roads. US Interstate 29, US Highway 212, SD Highway 20, and SD Highway 81 provide the main transportation routes through Codington County. The bulk of the transportation infrastructure is made up of county highways and township roads that are used for rural travel involving residents, agricultural products, and other commodities.

The County's 1,119-mile road system encompasses 789 gravel road miles, 222 hard surfaced road miles, 108 primitive/unimproved road miles, and 42 bridges. In Codington County, the transportation choices are limited to mostly private automobiles traveling over state and federal highways and county roads. Public transportation is available around the City of Watertown through a company Community Transit.

The Burlington Northern Santé Fe railroad runs from the northeast corner of the county through the City of Watertown and exits in the southwest area of the county. The City of Watertown has a commercial service airport. Commercial Service Airports are publicly owned airports that board at least 2,500 passengers each calendar year and receive scheduled passenger service.

The cities of Watertown and South Shore operate their own municipal water systems. Sioux Rural Water, Clark Rural Water, and Grant-Roberts water systems serve rural households in the county, including the residents of Florence, Henry, Kranzburg, South Shore, and Wallace. Watertown's water comes from well fields located a few miles north of the city.

Regarding wastewater disposal, all of the municipalities within the County have municipal wastewater collection and treatment systems. Rural residences rely on individual septic tanks and drainfields. The density of septic systems and their potential to cause water contamination is an environmental concern. Although residential growth is not expected to be significant in the county, 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 the Codington-Clark Electric Cooperative, Northwestern Energy, and Otter Tail Power. Watertown operates its own municipal power system. The primary telephone companies serving the County's rural population are ITC Telecommunications and RC Technologies. Cellular phone service is available in most parts of the county, but there are still places in the county where signals are weak. The high-pressure, large diameter Northern Border natural gas pipeline and Magellan gas pipeline pass through the county along with many high-tension power lines, both AC and DC circuits.

## **Medical and Emergency Services**

The primary medical facility in the county is the Prairie Lakes Health Care System, a regional health care facility which has an eighty-one bed maximum capacity. The facility has the capacity to provide basic services, emergency procedures, critical care, and other advanced services. Brown Clinic and Quick Care provide basic services, such as wellness screenings, laboratory services, and primary care. 911 services are provided through the Watertown Regional 911 Center.

The Codington County Sheriff's Department provides law enforcement for the entire county. Additional law enforcement agencies include the Watertown Police Department, the South Dakota Highway Patrol, and South Dakota Game, Fish and Parks. Watertown has a full-time fire and ambulance department. Florence, Henry, South Shore, and Wallace have fully operational fire departments. All four departments are staffed by volunteers but respond to both structural and wildland fires. South Shore also has a part-time, evenings only ambulance service.



## CHAPTER 2 | PREREQUISITES

### ADOPTION BY LOCAL GOVERNING BODY

The local governing body that oversees the update of the Codington County Pre-Disaster Mitigation Plan is the Codington County Board of Commissioners. The Commission has tasked the Codington 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)(5). Local Mitigation Plan Review Tool – E2.*

*Requirement 201.6(c)(5). Local Mitigation Plan Review Tool – E1.*

This plan is a multi-jurisdictional plan which serves the entire geographical area located within the boundaries of Codington County, South Dakota. The County has six incorporated municipalities. All of the incorporated municipalities located within the County elected to participate in the planning process and the update of the existing PDM. The participating local jurisdictions include the following municipalities:

**Table 2.1: Plan Participants**

<b>Continuing Participants</b>	<b>Do Not Participate*</b>
Florence	All 17 Townships
Henry	Grover Village
Kranzburg	Kampeska Village
South Shore	Rauville Village
Wallace	Waverly Village
Watertown	
Codington County	

\*All villages and townships were represented by their Township Officials and are eligible to benefit from future mitigation projects identified by the County.

All of the non-participants are unincorporated communities with very small populations (50 people or less) with the exception of Kampeska. Kampeska is located 5.5 miles west of Watertown (1 mile southwest of Lake Kampeska) with an estimated population of 98. Grover is located 7.5 miles southwest of Watertown and has an estimated population of 10. Rauville is located 3.5 miles north of Watertown and has an estimated population of 20. Waverly is located 7 miles northeast of Watertown and has an estimated population of 22. While none of the unincorporated communities directly participated in the PDM update, they were represented by their local Township Officials.

The 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 and asked to identify hazard risks, vulnerability, and critical infrastructure through a letter sent in May 2022. All township supervisors in the County were invited to participate via US mail. Eight townships returned information to First District for projects they would like to see included in the PDM. Unreturned maps were presumed to have no changes, unless stated otherwise.

The Codington County Commission and each of the listed participating municipalities will pass resolutions to adopt the updated PDM. In addition to these municipalities, Clark Rural Water System and Grant-Roberts Rural Water, local rural water providers, Codington-Clark Electric and H-D Electric, local rural electric cooperatives, also participated in the plan update. 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**

<b>Jurisdiction</b>	<b>Date of Adoption</b>
Codington County	
Florence	
Henry	
Kranzburg	
South Shore	
Wallace	
Watertown	

All of the participating jurisdictions were involved in the plan update. Representatives from each municipality, the County, Clark Rural Water System, Codington-Clark Electric Cooperative Inc, and H-D Electric Cooperative attended the planning meetings or provided valuable perspective on the changes required for the plan. All representatives took part in the risk assessment exercise at the March 3rd, 2022 meeting.

Representatives also took information from the PDM planning meetings back to their respective councils and presented the progress of the plan update. 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 the Appendix.

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**

<b>Nature of Participation</b>	<b>Florence</b>	<b>Henry</b>	<b>Kranzburg</b>	<b>South Shore</b>	<b>Wallace</b>	<b>Watertown</b>	<b>Codington County</b>
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 local critical facilities and infrastructure at risk from specific Hazard worksheet).	■	■	■	■	■	■	■
Submitted a description or map of local land-use patterns (current and proposed/expected).	■	■	■	■	■	■	■
Developed goals for the community.	■	■	■	■	■	■	■
Developed mitigation actions with an analysis or explanation of why those actions were selected.	■	■	■	■	■	■	■
Prioritized actions emphasizing relative cost-effectiveness.	■	■	■	■	■	■	■
Reviewed and commented on draft Plan.	■	■	■	■	■	■	■
Hosted opportunities for public involvement (allowed time for public comment at a minimum of two city council meetings after giving a status report on the progress of the PDM update).	■	■	■	■	■	■	■
■ Requirement Met							



## CHAPTER 3 | PLANNING PROCESS

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### 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 Codington 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 and whose 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 it is an acknowledged leader in geographic information systems (GIS) technology in South Dakota. First District assisted the County in the development of the county's original PDM in 2004. The following staff members of the First District Association of Local Governments were involved in the production of the plan. Payton Carda, planner and economic development officer was the project manager of the plan. Carda attended the PDM Planning Team meetings as the plan was being developed and directed the floodplain risk analysis (see next section). Also assisting was Amy Arnold, Geographic Information Systems Specialist, who produced all the maps for the plan. Luke Muller, Planner, completed the county land cover analysis discussed in the previous chapter.

Additional research and information gathering were provided by Payton Carda. Several other individuals at the state level provided additional support and information that was quite useful, which include:

- Heather Allemang, South Dakota State Hazard Mitigation Officer – provided guidance and direction as the plan was being developed.
- 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.
- South Dakota State Fire Marshall Office – provided information on fire events in the County.
- Whitney Kilts, Department of Agricultural and Natural Resources, Water Rights Program – provided information on dams located in the County.
- SD Department of Transportation – provided bridges and road mileage information within the County.

## **DOCUMENTATION OF THE PLANNING PROCESS**

*Requirement 201.6(b)(2). Local Mitigation Plan Review Tool – A2.*

### **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:

- Planning Framework
- Risk Identification and Assessment
- Mitigation Strategy
- Review of Plan
- Plan Adoption and Maintenance

### **Planning Framework**

The planning framework component identified five objectives:

- Develop Plan to Plan;
- Establish PDM Planning Team;
- Define Scope of the Plan;
- Identify Governmental Entities/Stakeholders; and
- Establish PDM Planning Team

Prior to receiving funding public meetings were held at the Codington 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 in January of 2022. Once funding was secured, the Codington County Emergency Management Director and the First District acted as the PDM Planning Team 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 Codington County Emergency Management Director wrote letters to all the 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. 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 the PDM Planning Team members, and it includes their attendance at the planning meetings, all of which were open to the public, which were held as the plan was being developed. An agenda was sent out to the PDM Planning Team prior to each meeting, and the meeting minutes were sent to them afterward to keep everybody informed of what was discussed and any decisions that were made.

**Table 3.1: Participation in Plan Development**

Invited				Meeting Attendance		
Last Name	First Name	Entity Represented	Job Title	Meeting 1	Meeting 2	Meeting 3
Barrios	Derek	Watertown School District	Assistant Superintendent		■	
Bloom	Adam	City of Watertown	Fire & Rescue/ Fire Marshal	■	■	■
Callan	Patrick	Town of Florence	Mayor	■	■	■
Carda	Payton	First District	Planner	■	■	■
Delgado	Andrew	Codington County	Emergency Manager	■	■	■
Eide	Dave	Codington-Clark Electric	General Manager	■		
Hanten	Brenda	Codington County	Commissioner	■	■	■
Hartley	Rick	Codington County	Highway Superintendent	■	■	■
Howell	Brad	Codington County	Sheriff	■		
Howell	Cheri	Codington County	Emergency Management	■		■
Kakacek	Michelle	Watertown Development Co.	Executive Director	■		
Kuefler	Todd	Grant-Roberts Rural Water		■		
Langerock	Gary	City of Watertown	Fire & Rescue	■	■	
Lewis	David	Clark County	Emergency Manager	■		
Lindner	Brent	Prairie Lakes Healthcare		■		
Monnier	Sheila	Deuel County	Emergency Manager	■		

Last Name	First Name	Entity Represented	Job Title	Meeting 1	Meeting 2	Meeting 3
Muller	Luke	Codington County	Zoning Officer	■		
Pearson	Jim	Sisseton Wahpeton Oyate	Emergency Manager	■		
Remmers	Ryan	City of Watertown	Police Dept	■		
Schuelke	Kevin	Grant County	Emergency Manager	■		
Stahl	Chad	City of Watertown	Police Dept	■		
Solberg	Lynn	Codington County	Highway Dept	■	■	
Terhark	Jared	Codington-Clark Electric Co	Line Superintendent		■	■
VanDusen	Troy	City of Watertown	Police Dept/911	■		■

Leadership and guidance in the planning effort and at the planning meetings was provided by the First District staff and the Codington 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 provided supporting information.

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 at the Watertown Fire Department on March 3rd, 2022. An agenda was distributed to prospective PDM Planning Team members. The Appendix includes a copy of each meeting agenda, attendance sheet, and minutes.

Those who attended the March 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 provided changes and updates to the existing plan. There were no external contributors such as contractors or private businesses, other than Codington-Clark Electric Cooperative Inc, Grant-Roberts Rural Water, and Clark Rural Water System, and H-D Electric Cooperative. Each of the local jurisdictions had a member of their respective councils represent the municipalities in the plan.

The representatives from the municipalities were asked to share the progress of the plan at their council meetings and to ensure that those attending the 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 local residents at the city council and PDM Planning Team meetings were collected and incorporated into the plan.

The public was provided several opportunities to comment on the plan during the drafting stages at the PDM Planning Team meetings and City Council/Town Board meetings. There were several work sessions and public hearings held to keep the public updated and involved in the plan. Primarily, public input included the involvement in hazard assessment and mitigation projects. Those who were most involved were the representatives of the PDM Planning Team and from the municipalities. The municipalities put the PDM update on the agenda at their council meetings and allowed people to comment at the meetings. Table 3.2 identifies the location and date of each opportunity that was provided for the public to comment and how it was advertised.

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 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 two important decisions. The PDM Planning Team decided that:

- More information and data regarding the risk assessment was needed, more informative tables and maps would be helpful, and the mitigation strategy needed to be rethought.
- 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.

**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 Mtg/Township Survey	Public Notice	Website
Florence	05/09/2022	■			■	
	TBD	■			■	
Henry	03/07/2022	■			■	■
	TBD	■			■	■
Kranzburg	04/04/2022	■			■	
	TBD	■			■	

Location of Opportunity	Date	City Council or County Commission Meeting	PDM Meeting	City Staff Mtg/Township Survey	Public Notice	Website
South Shore	04/12/2022	■			■	■
	TBD	■			■	■
Wallace	05/02/2022	■			■	
	TBD	■			■	
Watertown	04/07/2022			■		
	06/06/2022	■			■	■
	TBD	■			■	■
Townships				■		
Codington County	PDM Grant Awarded 12/29/21					
	03/03/2022		■		■	
	07/07/2022		■		■	
	12/05/2022		■		■	
	TBD	■			■	

**Risk Identification & Assessment/Mitigation Strategy/Review of Plan**

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

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

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

The Risk Identification and Assessment component identified three objectives: 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 objectives: 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 were sufficient, but an update and review of sections were needed. Before the second meeting, First District Staff revised or created the Introduction, Pre-requisites, Risk Assessment, Mitigation Strategy, and Plan Implementation components of the PDM. First District also met with each participating jurisdiction to review proposed mitigation actions, including estimated costs, responsibility, and priority.

Risk Identification/Assessment was discussed at the end of the PDM Planning Team kickoff meeting in March 2022. First District staff reviewed the hazards identified in the State of South Dakota Hazard Mitigation Plan and that risk assessment portion of the existing PDM. A profile of each of the hazards was discussed at this meeting.

Prior to the second PDM Planning Team meeting, First District Staff met with the participating municipalities, as well as City and County staff, at public noticed meetings to identify hazards and critical facilities, assess vulnerability, discuss development trends, and develop mitigation goals. Meeting dates are referenced in Table 3.2. First District staff also conducted research regarding the history of disaster events in the county, including events that had occurred since the original plan was developed.

First District also conducted a technical review of existing documents. This review incorporated existing plans, studies, reports, technical information, and zoning and flood damage prevention ordinances into the PDM Update. It should be noted that most of the planning documents of each of the communities had been previously developed by the First District. However, some of the smaller communities did not have such planning documents. Additionally, the 2017 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 2017 PDM, the First District reviewed several other existing documents including but not limited to the State of South Dakota Hazard Mitigation Plan, Codington County Hazardous Materials Plan, and Flood Insurance Rate Maps for the local jurisdictions. A summary of the technical review and incorporation of existing plans is included in Table 3.3.

At the second PDM Planning Team meeting in July 2022, First District reviewed hazards discussed at the first meeting. The list of hazards that the PDM Planning Team decided to focus on is presented in Chapter 4. The plan profile included information from each of the participating jurisdictions about how the hazard affected their community.

First District staff also provided an overview of the information regarding Critical Facilities, Risk Identification, Hazard Vulnerability, and mitigation goals identified by the County's municipalities. Discussion also occurred regarding the existing strategies being used to mitigate each hazard, with a particular emphasis on the critical and essential facilities in each community.

The PDM Planning Team also dealt with the Mitigation Strategy at the July 2022 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 began by reviewing 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.

At the end of the meeting the First District was instructed to conduct an internal review of the document and forward the South Dakota Office of Emergency Management for their review and comment. The draft plan was also to be posted on the First District Association of Local Governments and Codington County website and notices regarding the draft plan emailed to all participants and emergency managers in the neighboring counties of: Clark, Day, Grant, and Hamlin. Everyone who received an email notice regarding the plan draft was allowed forty-five days to comment on the draft.

At the third and final meeting in December 2022, the PDM Planning Team met to review and discuss the final draft. During this meeting, minor changes were suggested from the planning team and representatives of the county's communities. At the end of the meeting, the PDM Planning Team recommended that the plan as amended based upon comments be submitted to FEMA. The final draft of the plan was again posted on the First District Association of Local Governments website and emailed to all of the participants.

**Table 3.3: Record of Review (Summary)**

Existing Program/Policy/Technical Documents	Local Jurisdiction						
	Florence	Henry	Kranzburg	South Shore	Wallace	Watertown	Codington County
Aquifer Protection Ordinance							
Building Code	NA	NA	NA	NA	NA	✓	NA
Capital Improvement Plan	NA	NA	NA	NA	NA	✓	NA
Comprehensive Plan	✓	✓	✓	✓	NA	✓	✓
Critical Facilities maps	✓	✓	✓	✓	✓	✓	✓
Drainage Ordinance	NA	NA	NA	NA	NA	✓	NA
Economic Development Plan	NA	NA	NA	NA	NA	✓	✓
Elevation Certificates	NA	NA	NA	NA	NA	✓	✓
Emergency Operations Plan	NA	NA	NA	NA	NA	✓	✓
Existing Land Use maps	✓	✓	✓	✓	NA	✓	✓
Flood Damage Prevention Ordinance	✓	NA	NA	NA	NA	✓	✓
Flood Insurance Studies or Engineering Studies for Streams	✓	NA	NA	NA	NA	✓	✓
Hazard Vulnerability Analysis (by the local Emergency Management Office)	C	C	C	C	C	C	C
Land Use Regulation Near Pipelines	NA	NA	NA	NA	NA	✓	✓
Site Plan Review	✓	✓	✓	✓	NA	✓	✓
State Hazard Mitigation Plan	✓	✓	✓	✓	✓	✓	✓
Stormwater Management/ Drainage Plan	NA	NA	NA	NA	NA	✓	NA
Subdivision Ordinance	NA	NA	NA	NA	NA	✓	✓
Transportation Plan	NA	NA	NA	NA	NA	✓	NA
Zoning Ordinance	✓	✓	✓	✓	NA	✓	✓

NA The jurisdiction does not have this program/policy/technical document.

O The jurisdiction has the program/policy/technical document but did not review/incorporate it in the mitigation plan.

C The jurisdiction is regulated under the County's policy/program/technical document.

✓ The jurisdiction reviewed the program/policy/technical document.



## CHAPTER 4 | RISK ASSESSMENT

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### **IDENTIFICATION OF HAZARDS**

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

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. The PDM Planning Team also reviewed records of hazard events that have occurred in the county as of 2012, 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 National Climatic Data Center's Storm Events Database. A summary of the findings for significant 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: Significant Hazard Occurrences**

<b>Type of Hazard</b>	<b># of Occurrences Since 2012</b>	<b>Source</b>
Drought	5	NOAA & University of Nebraska-Lincoln
Wildfire/Urban Fire	781	NOAA & State Fire Marshall's Office
Flood	24	NOAA & SHELDUS
Hail	45	NOAA
Lightning	0	NOAA
Tornado	1	NOAA
Temperature Extremes	22	NOAA
Snow and Ice	51	NOAA
Thunderstorm and High Wind	37	NOAA

Hazards were analyzed in terms of the hazard’s probability of occurrence in the county. Representatives from each participating jurisdiction and the PDM Planning Team were asked to complete worksheets that categorized hazards by the likelihood of occurrence for either their specific geographical location, or for county-wide risks.

Every possible hazard or disaster was evaluated and placed into one of three 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; and hazards or disasters that have never occurred in the area before and are unlikely to occur in the PDM jurisdiction any time in the future were placed in the Unlikely to Occur column. While man-made hazards were discussed briefly during the completion of the worksheets, the PDM Planning Team decided to eliminate man-made hazards from the PDM because those types of hazards are difficult to predict and assess due to wide variations in the types, frequencies, and locations. Types and scopes of manmade hazards are unlimited.

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**

<b>High Probability</b>	<b>Low Probability</b>	<b>Unlikely to Occur</b>
Extreme Cold	Drought	Dam Failure
Extreme Heat	Ice Jam	Earthquake*
Flood	Tornado	Landslide
Freezing Rain/Sleet/Ice	Urban Fire	Subsidence
Hail		
Heavy Rain		
Heavy Snow		
Lightning		
Rapid Snow Melt		
Strong Winds		
Thunderstorm		
Wildfire		
* Earthquakes are marked with an asterisk because they occur but are so small that the effects are minimal. Thus, mitigation measures specifically for earthquakes are not a priority.		

## **TYPES OF NATURAL HAZARDS IN THE PDM JURISDICTION AREA**

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

Some descriptions of the natural hazards likely to occur in the County were taken directly from the 2017 Codington County PDM. Some descriptions were revised for better clarity. For the purpose of consistency throughout the plan, additional definitions were included to reflect all of the hazards that have a chance of occurring in the area and all of the hazards are alphabetized. 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.

**Blizzards** are a snowstorm 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 white out conditions. Snow accumulations vary, but another contributing factor is loose snow existing on the ground which can get whipped up and aggravate the white 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.

**Drought** is an extended period of months or years when a region notes a deficiency in its water supply. Generally, this occurs when a region receives consistently below average precipitation. It can have a substantial impact on the ecosystem and agriculture of the affected region. Although droughts can persist for several years, even a short, intense drought can cause significant damage and harm the local economy. This global phenomenon has a widespread impact on agriculture.

**Dam Failure** Dams function to serve the needs of flood control, recreation, and water management. During a flood, a dam's ability to serve as a control agent may be challenged. An excessive amount of water may result in a dam breach, simply an overflowing. Dams that are old or unstable, dams that receive extreme amounts of water, or dams that get debris pile-up behind their face may result in dam failure, a cracking and/or breaking. The County has two dams, with neither of the dams having the potential to endanger lives and damage property.

**Earthquakes** are a sudden rapid shaking of the earth caused by the shifting of rock beneath the earth's surface. Earthquakes can cause buildings and bridges to collapse, disrupt gas, electric and phone lines, and often cause landslides, flash floods, fires, avalanches, and tsunamis. Larger earthquakes usually begin with slight tremors but rapidly take the form of one or more violent shocks and are followed by vibrations of gradually diminishing force called aftershocks. The underground point of origin of an earthquake is called its focus; the point on the surface directly above the focus is the epicenter.

**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 Codington County PDM jurisdiction area as temperatures below zero.

**Extreme Heat**, also known as a Heat Wave, is a prolonged period of excessively hot weather, which may be accompanied by high humidity. There is no universal definition of a heat wave; the term is relative to the usual weather in the area. Temperatures in the County have a very wide range typically between 0 to 100 degrees Fahrenheit, therefore anything outside those ranges could be considered extreme. The term is applied both to routine weather variations and to extraordinary spells of heat which may occur only once a century.

**Flooding** is an overflow of water that submerges land, producing measurable property damage or forcing evacuation of people and vital resources. Floods can develop slowly as rivers swell during an extended period of rain, or during a warming trend following a heavy snow. Even a very small stream or dry creek bed can overflow and create flooding. Two different 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.
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 in areas along the Willow Creek, Big Sioux River, and its tributaries. Heavy, slow-moving thunderstorms often produce large amounts of rain. The threat of flooding would be increased during times of high soil moisture.

**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, platforms, 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.

**Hail** is formed through rising currents of air in a storm. These currents carry water droplets to a height at which they freeze and subsequently fall to earth as round ice particles. 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.

**Heavy Rain** is defined as precipitation falling with intensity in excess of 0.30 inches (0.762 cm) per hour. Short periods of intense rainfall can cause flash flooding while longer periods of widespread heavy rain can cause rivers to overflow.

**Ice Jams** occur when warm temperatures and heavy rain cause snow to melt rapidly. Snow melt 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.

**Landslide** is a geological phenomenon which includes a wide range of ground movement, such as rock falls, deep failure of slopes and shallow debris flows, which can occur in offshore, coastal, and onshore environments. Although the action of gravity is the primary driving force for a landslide to occur, there are other contributing factors build up specific sub-surface conditions that make the area/slope prone to failure, whereas the actual landslide often requires a trigger before being released.

**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.

**Severe 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. Like summer storms, winter storms are considered a weather event not a natural hazard, and thus will not be evaluated as a natural hazard throughout this PDM.

**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.

**Snow** is a common occurrence throughout the County during the months from October to April. Average annual snowfall for the county is twenty-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.

**Strong winds** are usually defined as winds over forty miles per hour, are not uncommon in the area. Winds over fifty miles per hour 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.

**Subsidence** is defined as the motion of a surface as it shifts downward relative to a datum. The opposite of subsidence is uplift, which results in an increase in elevation. There are several types of subsidence such as dissolution of limestone, mining-induced, faulting induced, isostatic rebound, extraction of natural gas, groundwater related, and seasonal effects.

**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. Summer storms are considered a weather event rather than a natural hazard; therefore summer storms are not evaluated as a natural hazard throughout this PDM.

**Thunderstorms** are formed when moisture, rapidly rising warm air, and a lifting mechanism such as clashing warm and cold air masses combine. The three most dangerous items associated with thunderstorms are hail, lightning, and strong winds.

**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 touchdown can occur. The Fujita Tornado Damage Scale categorizes tornadoes based on their wind speed:

- F0 = winds less than 73 m/h
- F1 = winds 73-112 m/h
- F2 = winds 113-157 m/h
- F3 = winds 158-206 m/h
- F4 = winds 207-260 m/h
- F5 = winds 261-318 m/h
- F6 = winds greater than 318 m/h

**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.

**Climate Change** is a long-term change in the earth’s climate, especially a change due to an increase in the average atmospheric temperature. In particular, a change apparent from the mid to late 20<sup>th</sup> century onwards and attributed largely to the increased levels of atmospheric carbon

dioxide produced by the use of fossil fuels. Rising temperatures will lead to more climate and weather hazards of greater intensity such as flooding, droughts, severe storms, and winter storms. Many scientists consider climate change a global phenomenon.

## HAZARD PROFILE

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

*Requirement 201.6(c)(2)(i). Local Mitigation Plan Review Tool – B2.*

*Requirement 201.6(c)(2)(ii). Local Mitigation Plan Review Tool – B3.*

It should be stated that most of the hazards identified in the previous 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, 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 SD including Codington County**

Date	Disaster Dec #	Type	Total Damage	Public Assistance Cost
04/18/1969	257	Flooding	\$4,599,306	
05/03/1986	764	Severe Storms and Flooding	\$5,158,130	
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	
06/01/1998	1218	Flooding, Severe Storms, and Tornadoes	\$16,853,902	
05/17/2001	1375	Severe Winter Storm and Flooding	\$10,441,684	\$5,097,818
12/20/2005	1620	Severe Winter Storm	\$28,071,441	\$24,647,039
05/13/2010	1915	Flooding		\$21,319,859
05/13/2011	1984	Flooding		\$26,952,484
08/02/2013	4137	Severe Storms, Tornadoes, and Flooding		\$1,711,263
02/01/2017	4298	Severe Winter Storm		\$9,130,061
06/07/2019	4440	Severe Storms, Tornadoes, and Flooding		\$56,527,220
11/18/2019	4469	Severe Storms, Tornadoes, and Flooding		\$18,647,293

SOURCE: <https://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 100 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 which have occurred over the last ten years.

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

Dam breach or failure is of lesser concern for the citizens of the County than flooding. Codington County has a number of structures which control or regulate flow from one water body to another. South Dakota Department of Agriculture and Natural Resources identifies only three dams in the County (listed below). None of the dams are listed as vulnerable to failure.

### 4.4 Dam Locations in Codington County

Dam Name	Owner	Location	Water Body
Lake Pelican Flood Control Dam	Lake Pelican Water Project District (Local Government)	NW1/4 of NE1/4 of Section 24-T119N-R52W	Soo Creek Tributary
Murphy Farms Dam	Murphy Farm Partnership (Private)	NE1/4 of SE1/4 of Section 20-T117N-R55W	Big Sioux River Tributary
Roe WPA Dam	US Fish and Wildlife Service (Federal)	NW1/4 of SW1/4 of Section 17-T118N-R55W	Big Sioux River Tributary

## 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. Roughly every fifty years a significant drought is experienced within the county, while many less severe droughts can occur at times every three years. Table 4.5 identifies the ten-year drought history for the County.

**Table 4.5: Codington County Ten-Year Drought History**

Location	Date Start	Date End	Type
Codington County	01/01/2012	03/31/2012	Severe Drought
Codington County	09/01/2012	02/01/2013	Severe to Exceptional Drought
Codington County	03/17/2015	05/26/2015	Moderate Drought
Codington County	07/18/2017	08/08/2017	Moderate Drought
Codington County	06/01/2021	09/01/2021	Severe to Extreme Drought

SOURCE: <http://droughtmonitor.unl.edu/archive.html> and <https://www.ncdc.noaa.gov/stormevents/>

### **Major Drought Occurrences:**

- **February 2012-2013** – After abnormally low precipitation early on in 2012, the drought intensified and expanded across parts of central and into northeast South Dakota throughout September resulting in severe to extreme drought conditions. Several locations recorded a record dry September and the fire danger remained high to extreme throughout the month into October. The drought continued into 2013. The persistent drought conditions continued to affect livestock producers and agriculture. Severe to exceptional drought conditions continued across most of central and northeast South Dakota throughout February of 2013. Calculated soil moisture deficits continued to range from 2 to 4 inches. Winter wheat and alfalfa continued to suffer and was generally rated from very poor to fair across the region.
- **June-August 2021** – Severe to extreme drought conditions continued from June into July and August with a slight expansion of D3 (Extreme) early in the month. Severe to extreme drought conditions covered roughly 80 percent of the region. Above-average temperatures were observed across South Dakota during July, with several days in the high 90s to the lower 100s. The drought conditions significantly impacted crops. Spring wheat closely resembled conditions during the 1988 drought. A shortage of pastureland and feed caused a growing concern for the lack of feed for the winter months. Many cattle producers were forced to sell off some of their cattle. Stock ponds and creeks remained very low or completely dry. Drought conditions contributed to several grassland fires across central and northeast South Dakota throughout July as well. State parks in the Pierre area issued burn bans. Fires continued to be an issue with widespread dry fuels for the first half of August. Several rounds of storms and a widespread stratiform rain event during the latter half of the month brought much needed moisture.

## **FLOOD**

Flooding is a temporary overflow of water onto lands not normally covered by water producing measurable property damage or forcing evacuation of people and resources. Floods 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. Table 4.7 is a ten-year flood history in the County from 2012 to 2021.

**Table 4.6: Codington County Ten-Year Flood History**

Location	Type	Date	Time	Property Damage	Crop Damage
Watertown Airport	Flash Flood	06/20/2012	01:15	0.00K	0.00K
Watertown Airport	Flash Flood	08/11/2016	22:31; 22:48	0.00K	0.00K
Watertown Airport	Flood	09/19/2017	22:15	0.00K	0.00K
Florence	Flood	04/20/2018	04:15	0.00K	0.00K
Florence	Flood	05/01/2018	00:00	0.00K	0.00K
Watertown	Flood	06/11/2018	09:50	0.00K	0.00K
Rauville	Flood	03/21/2019	15:30	0.00K	0.00K
Florence	Flood	03/23/2019	17:00	0.00K	0.00K
Wallace	Flood	03/25/2019	07:00	0.00K	0.00K
Grover	Flood	04/01/2019	00:00	0.00K	0.00K
Wallace	Flood	04/01/2019	00:00	471.70K	0.00K
Watertown Airport	Flood	04/01/2019	00:00	0.00K	0.00K
Rauville	Flood	04/18/2019	13:45	0.00K	0.00K
South Shore	Flood	04/18/2019	18:30	0.00K	0.00K
Watertown Airport	Flood	05/01/2019	00:00	0.00K	0.00K
Wallace	Flood	05/01/2019	00:00	0.00K	0.00K
Wallace	Flood	06/01/2019	00:00	0.00K	6.880M
Wallace	Flood	08/02/2019	11:20	0.00K	0.00K
Rauville	Flood	08/02/2019	21:15	0.00K	0.00K
Rauville	Flood	08/03/2019	00:45	0.00K	0.00K
Watertown Airport	Flood	09/11/2019	01:45	0.00K	0.00K
Rauville	Flood	09/12/2019	13:00	0.00K	0.00K
Watertown Airport	Flood	10/01/2019	00:00	0.00K	0.00K
Watertown Airport	Flood	11/01/2019	00:00	0.00K	0.00K

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

**Major Flood Occurrences:**

- April 2019** – The continuation of snowmelt from a much above normal snowfall winter combined with a historic heavy snow/blizzard in mid-April resulted in widespread flooding across central and northeast South Dakota. Countless roads along with thousands of acres of cropland were flooded throughout April. Impacts include damaged roads, culverts, and bridges, and livestock, homes, and businesses were affected. Delayed planting resulted across all of the region as well. Cattle and calves were stressed by the cold and wet pattern, as the mud and cold caused some sickness with the livestock. Flooded roads made it difficult for many farmers or ranchers to get to their fields or livestock. The wet pattern along with the flooding continued into May, further delaying planting across the region. All counties declared emergencies/disasters in March and April due to the widespread flooding and March blizzard. Overall, damage estimates from the blizzards and floods for the state were at 43 million dollars.

- **June 2019** – Spring snowmelt and heavy rain flooding from March, April, and May continued into June. This combined with above normal June rainfall resulted in hundreds of thousands of acres of crops damaged or unplanted across central and northeast South Dakota. For the entire state of South Dakota, nearly 4 million acres of crops were left unplanted as a result of the flooding. Total damaged or unplanted crop loss estimates for central and northeast South Dakota were near 307 million dollars.

## HAIL

Table 4.8 indicates hail occurrences by location throughout the county. However, the information provided by the NOAA website was incomplete due to inconsistent reporting after such hazards occur. Obviously, with such a high number of occurrences it is reasonable to expect that at least some property or crop damage was sustained in the communities during some of the occurrences, 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 4.7: Codington County Ten-Year Hail History**

Location	Date	Time	Type	Magnitude
Wallace	05/02/2012	18:45	Hail	0.75in.
Waverly	05/02/2012	19:20	Hail	1.00in.
Watertown	05/05/2012	19:30; 19:31; 19:38	Hail	1.75in; 1.00in; 1.25in.
Florence	05/05/2012	20:00	Hail	1.25in.
Watertown Airport	06/17/2012	19:23	Hail	1.00in.
Kranzburg	06/17/2012	19:42; 19:43	Hail	1.75in; 1.00in.
Wallace	06/19/2012	02:00	Hail	1.50in.
Florence	08/28/2012	04:45	Hail	1.00in.
Wallace	06/16/2013	17:20	Hail	0.88in.
Henry	06/21/2013	13:08	Hail	1.00in.
Watertown Airport	06/21/2013	13:17	Hail	0.88in.
Waverly	05/07/2014	13:17	Hail	1.00in.
Grover	05/10/2015	14:31	Hail	1.25in.
South Shore	06/09/2015	14:47	Hail	1.25in.
Wallace	07/15/2015	19:29	Hail	1.75in.
Henry	07/15/2015	19:55	Hail	1.75in.
Foley	07/15/2015	20:33	Hail	1.00in.
Grover	08/06/2015	14:11	Hail	1.00in.
Watertown	07/05/2016	15:27	Hail	1.00in.

Location	Date	Time	Type	Magnitude
Kranzburg	07/05/2016	15:42	Hail	1.00in.
Rauville	08/28/2016	01:10	Hail	1.00in.
South Shore	08/28/2016	01:10	Hail	0.88in.
Watertown Airport	06/13/2017	06:13	Hail	1.00in.
Foley	07/11/2017	18:07	Hail	2.00in.
Watertown	07/11/2017	18:21; 18:42; 18:47; 18:48; 18:49; 18:51; 18:52	Hail	1.00in; 2.75in; 2.50in; 2.00in; 3.00in; 1.75in; 1.00in.
Appleby	07/11/2017	19:23	Hail	1.75in.
Rauville	08/09/2017	17:40	Hail	1.75in.
Waverly	08/09/2017	17:55	Hail	1.00in.
Watertown Airport	08/21/2017	06:38	Hail	1.75in.
Watertown Airport	08/03/2018	12:32; 12:34	Hail	1.00in; 0.75in
Kranzburg	08/03/2018	15:35	Hail	1.00in.
Watertown Airport	08/17/2019	18:10	Hail	1.50in.
Wallace	07/25/2021	20:02	Hail	3.75in.
Florence	07/25/2021	20:07	Hail	1.00in; 1.25in.
South Shore	09/16/2021	21:10	Hail	1.00in.

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

### Major Hail Occurrences:

- July 2017** – Severe thunderstorms developed along a surface cool frontal boundary extending across northeast South Dakota bringing very large hail greater than the size of baseballs. The baseball hail in Watertown left many parts of the town covered with tree debris with many cars covered in dents along with the siding and roofs damaged on several homes. Some windows were also broken and crops damaged.

### LIGHTNING

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 and structures all have the possibility of being struck by lightning. People who leave shelter during thunderstorms to watch or follow lightning also have the possibility of being struck by lightning. The lightning history for the past ten years did not have any occurrences reported; however, possibility exists that the information reported is incomplete. Because of this, lightning history occurring since 2000 was included in the table below.

**Table 4.8: Codington County Lightning History**

Location	Date	Time	Type	Property Damage
Watertown	06/09/2001	23:30	Lightning	50K

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

**Major Lightning Occurrences:**

- **June 2001** – A lightning strike splintered the base of a large maple tree in Watertown and downed a large tree branch. Pieces of wood damaged the sunroom of a house and broke out several windows in surrounding homes. The lightning strike also caused several water breaks and basement flooding in another home.

**TORNADO**

The annual risk for intense summer storms is very 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. However, tornadoes may occur with little or no warning. Between the years of 1950 and 2021, the County confirmed twenty-eight tornadoes. Table 4.10 includes the tornado history in the County since 2012.

**Table 4.9: Codington County Ten-Year Tornado History**

Location	Date	Time	Type	Magnitude	Injuries	Property Damage
Watertown Airport	09/09/2019	14:37	Tornado	EF0	0	0.00K

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

Codington County is considered to be in an F3 area, as is the rest of South Dakota. Wind speeds can get up to 206 mph at times during an F3 tornado. Tornadoes in South Dakota can reach F5, with wind speeds gusting up to 318 mph. Despite these facts, tornadoes are much less likely to occur in this area than other types of severe summer weather.

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 very difficult. A complete listing of all summer storms having occurred within the county is not possible due to inaccurate reporting. The National Weather Service reports online were the primary source for this information.

## EXTREME TEMPERATURES

Extreme temperatures in the County are common occurrences. It is expected that at least two times each year there will be extreme heat or extreme cold in the area. The following information was found on the NOAA website. 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. It is also possible that the information has only in recent years been tracked or reported. Table 4.11 identifies dates and times of temperature extremes within the County over the course of the past ten years. The “location” in table 4.11 is not specifically identified in the table by jurisdiction due to the vast area across Codington County, and further the State of South Dakota ,affected by extreme temperatures.

**Table 4.10: Codington County Ten-Year History of Extreme Temperatures**

Location	Date	Time	Type
Codington County	01/18/2012	21:00	Extreme Cold/Wind Chill
Codington County	01/20/2013	23:00	Extreme Cold/Wind Chill
Codington County	01/31/2013	02:00	Extreme Cold/Wind Chill
Codington County	12/07/2013	05:00	Extreme Cold/Wind Chill
Codington County	12/22/2013	23:00	Extreme Cold/Wind Chill
Codington County	12/29/2013	06:00	Extreme Cold/Wind Chill
Codington County	01/05/2014	13:00	Extreme Cold/Wind Chill
Codington County	01/23/2014	00:00	Extreme Cold/Wind Chill
Codington County	03/01/2014	21:00	Extreme Cold/Wind Chill
Codington County	03/12/2014	07:00	Extreme Cold/Wind Chill
Codington County	02/22/2015	08:00	Extreme Cold/Wind Chill
Codington County	01/17/2016	03:53	Extreme Cold/Wind Chill
Codington County	07/20/2016	12:00	Excessive Heat
Codington County	12/18/2016	03:00	Extreme Cold/Wind Chill
Codington County	12/30/2017	08:00	Extreme Cold/Wind Chill
Codington County	01/01/2018	00:00	Extreme Cold/Wind Chill
Codington County	01/15/2018	06:00	Extreme Cold/Wind Chill
Codington County	01/29/2019	09:00	Extreme Cold/Wind Chill
Codington County	02/08/2019	06:00	Extreme Cold/Wind Chill
Codington County	03/03/2019	02:00	Extreme Cold/Wind Chill
Codington County	02/12/2020	15:00	Extreme Cold/Wind Chill
Codington County	02/06/2021	00:00	Extreme Cold/Wind Chill

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

It is also important to note that while no damage was reported, temperature extremes are very common in all South Dakota counties. The most significant damages are described below.

### **Major Extreme Temperature Occurrences:**

- **July 2016** – The counterpart to extreme cold is extreme heat, which also has dangerous implications to humans, livestock, and critical structures and facilities when certain conditions are present. 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. 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: 106 degrees at Sisseton and Watertown, 108 degrees at Clark, and 111 degrees at Clear Lake.
- **January 2019** – Following in behind a high wind/blizzard event, bitter cold arctic air along with northwest winds brought extreme wind chills to north central and northeast South Dakota. The extreme wind chills began during the morning hours of the 29th and continued through the morning hours of the 31st. Many record lows and record low maximums were set mainly on the 30th. Highs were in the teens below zero on the 30th across the east. Some of the record low temperatures were: 31 degrees below zero at Sisseton and Webster; 33 degrees below zero at Watertown; and 38 degrees below zero at Summit. Most schools along with college campuses and businesses across the region had late starts or cancelled classes for two days. Mail service was also cancelled. Extreme wind chills from 35 degrees below to near 60 degrees below zero occurred. Some of the lowest wind chills include: 54 degrees below zero at Watertown and 59 degrees below zero at Sisseton.
- **February 2021** – A potent and persistent outbreak of Arctic air affected the entire region from February 6th through the 17th. 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. 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. Impacts from this extreme and persistent cold include 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.

## THUNDERSTORM/HIGH WIND

Thunderstorm and high wind occurrences in the County are also very common. According to the National Climatic Data Center Storm Events database, the County experienced 126 wind events from 1950-2021. Table 4.12 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 4.11: Codington County Ten-Year History for Thunderstorm/High Wind**

Location	Date	Time	Type	Mag	Property Damage
Codington County	04/15/2012	18:20	High Wind	52kts. MG	0.00K
Watertown Airport	06/19/2012	02:20; 02:24	Thunderstorm Wind	61kts. EG; 53kts. MG	0.00K
Watertown Airport	06/21/2013	15:05; 15:07; 15:10	Thunderstorm Wind	61kts. EG; 56kts. MG; 71kts. MG	574.00K
Wallace	06/19/2014	19:17	Thunderstorm Wind	56kts. EG	0.00K
Codington County	10/12/2015	06:30	High Wind	52kts. EG	0.00K
Codington County	11/18/2015	20:15	High Wind	52kts. EG	0.00K
Codington County	03/07/2017	14:00	High Wind	35kts. MS	0.00K
Watertown Airport	06/11/2017	04:40	Thunderstorm Wind	61kts. EG	0.00K
Wallace	06/13/2017	18:18	Thunderstorm Wind	65kts. EG	0.00K
Florence	06/13/2017	18:25	Thunderstorm Wind	52kts. EG	0.00K
Henry	07/21/2017	23:25	Thunderstorm Wind	52kts. EG	0.00K
Grover	07/21/2017	23:30	Thunderstorm Wind	70kts. EG	0.00K
Watertown Airport	06/06/2018	00:55	Thunderstorm Wind	52kts. EG	0.00K
Foley	07/04/2018	04:35	Thunderstorm Wind	61kts. EG	0.00K
Watertown	08/15/2019	17:11	Thunderstorm Wind	52kts. EG	0.00K
Codington County	10/21/2019	17:00	High Wind	55kts. MG	0.00K
Florence	06/04/2020	19:22	Thunderstorm Wind	65kts. EG	0.00K
Watertown Airport	06/04/2020	19:30; 19:44	Thunderstorm Wind	65kts. EG; 50kts. MG	0.00K
Grover	06/04/2020	19:38	Thunderstorm Wind	78kts. EG	0.00K
Codington County	06/15/2020	01:30; 01:40	High Wind	70kts. EG	0.00K
Watertown Airport	06/17/2020	23:43	Thunderstorm Wind	51kts. MG	0.00K
Watertown Airport	07/17/2020	23:26; 23:37	Thunderstorm Wind	65kts. EG; 66kts. MG	0.00K
Watertown Airport	07/26/2020	01:11	Thunderstorm Wind	53kts. MG	0.00K
Kranzburg	07/26/2020	01:25	Thunderstorm Wind	52kts. EG	0.00K

Location	Date	Time	Type	Mag	Property Damage
Codington County	11/08/2020	10:00	High Wind	50kts. MG	0.00K
Codington County	03/29/2021	23:34	High Wind	54kts. MG	0.00K
Watertown Airport	06/11/2021	04:28	Thunderstorm Wind	50kts. MG	0.00K
Florence	07/06/2021	01:20	Thunderstorm Wind	70kts. EG	0.00K
Watertown	08/26/2021	09:01; 09:02; 09:09	Thunderstorm Wind	65kts. MG; 65kts. EG; 65kts. EG	0.00K

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

### Major Wind Occurrences:

- June 2013** – A strong warm front along with very unstable air and strong deep layer winds brought several super cell thunderstorms along with a damaging line of thunderstorms/bow echo to parts of central and northeast South Dakota during the afternoon hours. Damaging winds up to 90 mph uprooted large trees and caused considerable structural and crop damage and loss of power to those in its path. The worst wind damage was located at Lake Poinsett, Watertown, and Milbank. A woman was killed, and her husband seriously injured on Lake Poinsett when their lake house was destroyed. Numerous trees were downed along with many structures damaged or destroyed. Many trees had fallen onto homes, cabins, and trailers. Thousands of people were also left without power. Four tornado touchdowns occurred along with hail up to the size of softballs. Isolated flash flooding also occurred. Codington, Hamlin, Grant, and Deuel counties were all declared in a Federal Disaster Declaration. Total damages estimated around 1,100,000 dollars.

## WILDFIRE

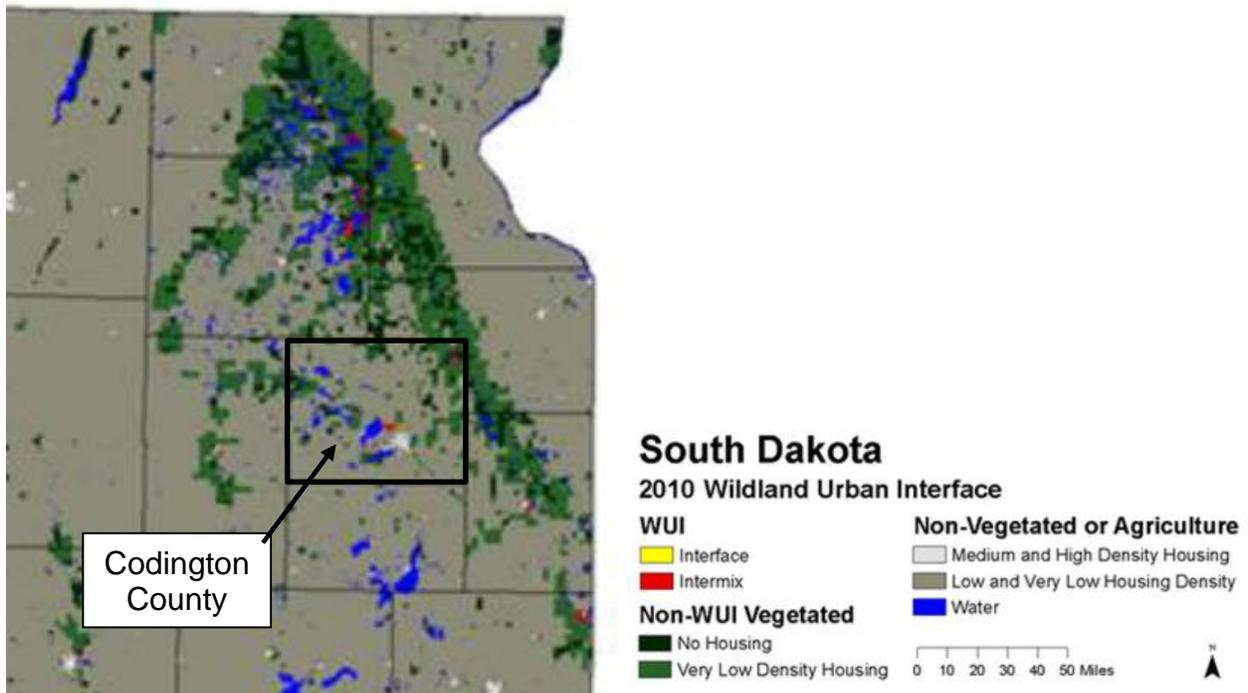
A strong possibility exists for simultaneous emergencies during droughts. Wildfires are the most common. While researching the hazard occurrences that have taken place in the County, it became evident that the information found on the NOAA website was incomplete. Therefore, other sources were contacted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

The SFMO information provided is derived from the reports submitted by the local fire departments who respond to the fires. Representatives from the SFMO explained that since many of the fire departments in the County are volunteer, many times wildfires are extinguished, and reports are never filed with the State. Thus, the information provided by the SFMO 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 in determining the likelihood of a wildfire hazard occurrence within the jurisdiction.

The information provided by the SFMO identifies 235 structure fire responses, 146 vehicle fire responses, and 400 outside fire responses reported from 2011 to 2020. The cause of the outside 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, one civilian and two firefighter injuries were reported from 2011 to 2020. During the same time period, three civilian and zero firefighter fatalities were reported.

Table 4.6 identifies the number of fire department responses to structural, vehicle, and outside fires that have been experienced within the county. It should be noted that the number of responses does not necessarily mean that there were 400 outside (wildfire) fires as some fires required multiple departments to respond. The data compiled by the SMFO is not discriminate enough to determine whether a fire can be classified as an urban or wildfire. The picture displayed on the following page is Codington County as described in the South Dakota Wildland Urban Interface (areas that experience wildfires) from the South Dakota State Hazard Mitigation Plan (page 3-85). This shows very little chance of a wildfire occurrence broadly over the entire county jurisdiction.

**Figure 4.1: Codington County Wildfire Vulnerability**



**Table 4.12: Codington County Ten-Year Structural, Vehicle, and Outside (Wildfire) Department Responses**

Year	Structural Fires	Vehicle Fires	Outside Fires
2011	28	17	57
2012	8	2	54
2013	6	1	16
2014	34	25	42
2015	22	23	57
2016	32	15	46
2017	26	20	40
2018	35	19	40
2019	37	13	29
2020	7	11	19
<b>Total</b>	<b>235</b>	<b>146</b>	<b>400</b>

*Data from 2021 was not available at the time of this update.*

SOURCE: South Dakota State Fire Marshall Office

## WINTER STORMS

Table 4.13 shows just how common 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 4.13 were considered to have occurred countywide. Due to the multiple occurrences of winter storms each year, an exhaustive compilation is not possible.

**Table 4.13: Codington County Ten-Year History of Snow and Ice Storms**

Location	Date	Time	Type	Property Damage
Codington County	02/28/2012	16:00	Winter Storm	0.00K
Codington County	12/08/2012	16:00	Winter Storm	0.00K
Codington County	12/09/2012	10:00	Blizzard	0.00K

<b>Location</b>	<b>Date</b>	<b>Time</b>	<b>Type</b>	<b>Property Damage</b>
Codington County	02/10/2013	12:00	Blizzard	0.00K
Codington County	02/18/2013	14:00	Blizzard	0.00K
Codington County	03/08/2013	19:00	Ice Storm	0.00K
Codington County	03/18/2013	08:00	Blizzard	0.00K
Codington County	04/10/2013	19:00	Winter Storm	0.00K
Codington County	04/14/2013	04:00	Ice Storm	0.00K
Codington County	01/03/2014	09:00	Blizzard	0.00K
Codington County	01/16/2014	10:00	Blizzard	0.00K
Codington County	01/18/2014	02:00	Blizzard	0.00K
Codington County	01/22/2014	05:00	Blizzard	0.00K
Codington County	01/25/2014	18:00	Blizzard	0.00K
Codington County	02/13/2014	09:00	Blizzard	0.00K
Codington County	03/31/2014	17:00	Blizzard	0.00K
Codington County	11/09/2014	22:00	Heavy Snow	0.00K
Codington County	12/15/2014	17:00	Blizzard	0.00K
Codington County	01/08/2015	12:30	Blizzard	0.00K
Codington County	03/03/2015	07:00	Blizzard	0.00K
Codington County	11/30/2015	09:00	Heavy Snow	0.00K
Codington County	12/01/2015	00:00	Heavy Snow	0.00K
Codington County	11/18/2016	06:00	Blizzard	0.00K
Codington County	12/10/2016	11:00	Heavy Snow	0.00K
Codington County	12/16/2016	11:00	Heavy Snow	0.00K
Codington County	12/25/2016	12:00	Ice Storm	295.00K
Codington County	12/26/2016	04:30	Blizzard	0.00K
Codington County	03/12/2017	09:00	Heavy Snow	0.00K
Codington County	12/04/2017	16:00	Blizzard	0.00K
Codington County	03/05/2018	06:00	Heavy Snow	0.00K
Codington County	03/23/2018	11:00	Heavy Snow	0.00K
Codington County	04/08/2018	09:00	Heavy Snow	0.00K
Codington County	04/13/2018	13:00	Blizzard	0.00K
Codington County	12/27/2018	15:00	Blizzard	0.00K
Codington County	12/31/2018	07:28	Blizzard	0.00K
Codington County	01/18/2019	04:30	Heavy Snow	0.00K
Codington County	01/27/2019	23:00	Blizzard	0.00K
Codington County	02/07/2019	10:00	Blizzard	0.00K
Codington County	02/19/2019	19:00	Heavy Snow	0.00K

Location	Date	Time	Type	Property Damage
Codington County	02/24/2019	04:40	Blizzard	0.00K
Codington County	03/09/2019	07:00	Heavy Snow	0.00K
Codington County	03/14/2019	09:30	Blizzard	0.00K
Codington County	04/11/2019	02:00	Blizzard	0.00K
Codington County	12/28/2019	03:00	Winter Storm	0.00K
Codington County	01/17/2020	10:30	Blizzard	0.00K
Codington County	02/08/2020	21:00	Heavy Snow	0.00K
Codington County	02/12/2020	09:00	Blizzard	0.00K
Codington County	10/20/2020	03:30	Heavy Snow	0.00K
Codington County	12/23/2020	08:30	Blizzard	0.00K
Codington County	01/14/2021	19:00	Blizzard	0.00K
Codington County	03/10/2021	10:00	Heavy Snow	0.00K

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

### Major Winter Storm Occurrences:

- December 2016** – Rare thunderstorms, more indicative of spring than winter, 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. 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. There was also a Presidential Disaster Declaration for damage to public property. The total estimated damage was near 8 million dollars for central and northeast South Dakota.

## Climate Change

Climate change is a global phenomenon. Human-related activities are releasing increasing quantities of carbon dioxide and other heat trapping gases into the Earth's atmosphere causing increases in temperatures worldwide. Dennis Todey, previously the SDSU Extension State Climatologist, predicts increased precipitation in the northern Great Plains with more heavy precipitation events and flooding. Warmer temperatures will lengthen the growing season and increase the number of frost-free days. Total snow fall accumulations will decrease. Overall, climate change will increase the number and intensity of weather hazards in the region.

### **ASSESSING VULNERABILITY: OVERVIEW**

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

*Requirement 201.6(c)(2)(i). Local Mitigation Plan Review Tool – B2.*

*Requirement 201.6(c)(2)(ii). Local Mitigation Plan Review Tool – B3.*

Hazards were also analyzed in terms of the level of the community or county's 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 above is an overall summary of 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	Codington County	Florence	Henry	Kranzburg	South Shore	Wallace	Watertown
Dam Failure	N	N	N	N	L	N	N
Drought	H	M	H	H	H	H	M
Earthquake	N	N	N	N	N	L	N
Extreme Cold	H	H	H	H	L	H	H
Extreme Heat	H	M	H	H	L	H	H
Flood	H	M	L	M	L	H	H
Freezing Rain/Sleet/Ice	H	H	H	H	H	H	H
Hail	H	H	H	H	M	H	H
Heavy Rain	M	H	H	H	L	H	M
Heavy Snow	H	H	H	H	M	H	M
Ice Jam	L	N	N	N	N	N	H
Landslide	N	N	N	N	N	N	N
Lightning	L	L	L	H	L	L	M
Rapid Snow Melt	H	M	L	H	L	H	M
Strong Winds	H	H	H	H	H	M	H
Subsidence	N	N	N	N	N	N	N
Thunderstorm	M	H	H	H	M	M	M
Tornado	M	H	H	H	M	H	L
Urban Fire	L	L	L	H	M	L	L
Wildfire	M	N	N	N	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).

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

**Blizzards** are characterized by high winds, blowing snow, cold temperatures, and low visibility. Blizzards 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 conditions to rescue them.

**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. A decrease in the amount of precipitation can adversely affect stream flows and reservoirs, lakes, and groundwater levels. Crops and other vegetation are harmed when moisture is not present within the soil.

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 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. 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. Roughly every fifty years a significant drought is experienced within the county, while less severe droughts have occurred as often as every three years.

**Earthquakes** occur in the area but have not had a great enough magnitude or intensity in the past ten years to be reported. The magnitude and intensity of an earthquake is measured by the Richter scale and the Mercalli scale. An earthquake of noteworthy magnitude has not occurred in the county for decades, but it would be reasonable to expect that a large earthquake would have comparative impact on the County as it would anywhere else. The County does not have skyscrapers or very many tall buildings, but it also does not have codes in place that require homes or buildings to be retrofitted.

**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 are unlikely to happen in masses.

**Extreme Heat** and severe heat waves have caused catastrophic crop damage, thousands of deaths from hyperthermia, and widespread power failures due to increased use of air conditioning. Loss of power and crop damage are the largest vulnerability 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.

**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.

The county is networked with a series of creeks and tributaries, which are part of the Big Sioux River watershed. This area receives several large thunderstorms per year that can cause intense rainfall for short periods of time, resulting in water feeding the Big Sioux River through its respective tributaries. In addition to flooding caused by rainfall, the area surrounding the Big Sioux River is subject to flood damage because of the possibility of extensive snowpack and subsequent spring snowmelt flooding.

There have also been past issues dealing with the maintenance and clearing of drainage channels in the area that have resulted in obstructions restricting the flow of water during a storm. Many residents live in the 100-year flood plain located in the Big Sioux River watershed. Conditions, at times, make response and evacuation operations, very 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 Appendix E.

**Freezing Rain** 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. The County and the local jurisdictions within are susceptible to these conditions due to the types of structures and surfaces that exist in the county that cannot be protected from freezing rain. Traffic on the roads and highways tend to be the biggest hazard during freezing rain 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.

**Hail** causes 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. Mitigating for hail is difficult and is usually found in the form of insurance policies for structures, vehicles, and crops.

**Heavy Rain** causes damage to property such as homes and roads. Often 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. Roads and bridges can be washed out, thus 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 for excessive or heavy rains.

**Ice Jams** cause damage to bridges, roads, and culverts due to water currents pushing large chunks of ice under or through small openings. There are nine bridges inside the city limits of Watertown, located on 1<sup>st</sup> Avenue Northeast, US Highway 212, 4<sup>th</sup> Avenue Southwest, Kemp Avenue West, 10<sup>th</sup> Avenue Northwest, 14<sup>th</sup> Avenue Northwest, 3<sup>rd</sup> Avenue Northwest, Willow Creek Drive, and 20<sup>th</sup> Avenue Southeast which are at risk for ice jams. There are also many other unspecified areas throughout the county that are vulnerable to ice jams.

**Landslides** have a low chance of occurring in the County due to the relatively flat topography.

**Lightning** often strikes the tallest objects within the area. In towns 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. In addition, many streetlights function with sensors. Since thunderstorms occur primarily during hours of darkness, lightning strikes close to censored lights cause the lights to go out, causing a potential hazard for drivers. Flickering lights and short blackouts are not at all uncommon in the county.

One of lightning's dangerous attributes includes the 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.

Most injuries from lightning occur 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, concluding lightning strikes catch them off guard.

**Severe Winter Storms** have a high risk of occurrence. Approximately five snowstorms each resulting in five to ten inches of snow occur in the County area annually. Heavy snow can immobilize transportation, down power lines and trees and cause the collapsing of weaker structures. Livestock and wildlife are also very vulnerable during periods of heavy snow. Most storms can be considered to have occurred countywide. Due to the multiple occurrences of winter storms each year, an exhaustive compilation is not possible.

Additionally, winter storms often result in some forms of utility mishaps. High voltage 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. Within the county, particularly within Watertown, there are fiber optics associated with phone transmissions that are the lifeline to communications. Any electrical complications bring associated risk of food spoilage, appliance burnout, loss of water, and potential harm for in-house life support users. 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 greatest danger during winter weather is traveling. Many individuals venture out in inclement weather. Reasons include the necessity of getting to work, going to school, going out just to see how the weather is, and to rescue stranded persons.

**Snow Drifts** are caused by wind blowing snow and cold temperatures. These drifts can be small finger drifts on roadways causing cautionary driving, or twenty-to-forty-foot-high drifts that block entire highways, roads, and farmyards for several days.

Populations at highest vulnerability for this type of hazard are rural homeowners, which account for approximately seventeen percent of the county, and the elderly. As with any weather event, those dependent upon healthcare supplies and other essentials will also bear the brunt of highway closures and slowed transportation due to snow and ice. Emergency services will also be delayed during winter storms.

Snow removal policies and emergency response is at excellent performance and no projects will be considered in this area. Generators provide back-up power to many critical facilities within the municipalities and in rural areas. However, some of the critical facilities that could be utilized in disaster situations do not have backup generators. Also, some facilities have generators that only power a portion of operations.

**Strong Winds** can be detrimental to the area. 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.

**Thunderstorms** cause lightening and sometimes large amounts of rain in a small timeframe. The entire county experiences thunderstorms on a regular basis and is only vulnerable when weather events outside the norm occur. Specific vulnerabilities are further identified in the paragraphs for “Lightening” and “Heavy Rains.”

**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. The annual risk for intense summer storms is very high. Often associated with summer storms are utility problems. High voltage electrical transmission lines run the length of the County. These lines are susceptible to breaking during high winds and hail. Tall trees located near electrical lines can be broken in wind or by lightning strikes and land on electrical lines, severing connections. Any electrical complications bring associated risk of food spoilage, appliance burnout, loss of water, and potential harm to in-house life support dependents. 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.

**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.

Since there are no remote forested regions in the 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 because property outside city limits is primarily agricultural land, thus, there are no urban interface areas of risk in the County. In addition, fire interference with traffic on highways is not a major concern. The most important factor in mitigating against wildfires continues to be common sense and adherence to burning regulations and suggestions disseminated by the County.

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.

Climate Change is a global issue. Climate change exacerbates many of the identified weather hazards such as drought, extreme temperatures, severe storms, flooding, tornadoes, and wildfires. Current climate conditions in the northern Great Plains already put a strain on communities and cause millions of dollars in damages. Climate change will only add to these problems.

**ASSESSING VULNERABILITY: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE**  
*Requirement 201.6(c)(3)(ii). Local Mitigation Plan Review Tool – C2.*

Codington County participates in the National Flood Insurance Program (NFIP). There are four communities located in the County that do not participate in NFIP. Those communities are: Henry, Kranzburg, South Shore, and Wallace. The Cities of Florence and Watertown have been mapped and participate in the NFIP. The County will continue to participate and ensure compliance of the participating local jurisdictions located within the flood plain. Table 4.15 shows County entities that participate in the NFIP.

**Table 4.15: Communities Participating in the National Flood Program**

Community Name	Community ID	Current Map Effective Date
Codington County	460260	1/16/2009
Florence	460306	1/16/2009
Henry	<b><i>Not Participating</i></b>	
Kranzburg	<b><i>Not Participating</i></b>	
South Shore	<b><i>Not Participating</i></b>	
Wallace	<b><i>Not Participating</i></b>	
Watertown	460016	1/16/2009

The Codington County Zoning Office maintains the flood zone maps and utilizes DFIRMS for all planning mechanism occurring in the unincorporated areas of the county; specifically, development of new structures. Each individual participating community has 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. The DFIRMS are used to determine where the natural drainage occurs and ensures that new development will not interrupt the natural drainage. The Codington County Zoning Office and City of Watertown Engineering Department have DFIRMS in electronic format and thus will utilize and maintain the maps in the electronic format.

**ADDRESSING VULNERABILITY: REPETITIVE LOSS PROPERTIES**

*Requirement 201.6(c)(2)(ii). Local Mitigation Plan Review Tool – B4.*

Due to various geomorphologic and topographical conditions, periodic flooding affects numerous areas in both incorporated and unincorporated areas of the County. High concentrations of residential development occurred adjacent to Lake Pelican and Lake Kampeska prior to the initial flood hazard boundaries being identified on January 24, 1978. As a result, numerous structures already existed at the time of adoption of the first map and continue to be lived in today. Further, the City of Watertown was established in 1879 in areas identified today as flood-prone and expanded significantly in areas now identified as flood hazard areas until the identification of the flood hazard boundaries in 1978.

As a result numerous structures with residential, commercial, public/quasi-public, and industrial uses associated with them are located within Flood Hazard Areas currently identified as Zone AE, AO, A, and C. Many structures located within the County have experienced flooding or are required to be insured against flood due to their proximity to special flood hazard areas.

The number of flood insurance policies has decreased by forty-seven (47) percent since the previous plan was approved. The County had a total of five hundred fifty-five (555) flood insurance policy holders in 2017, which was a decrease from nine hundred five (905) flood insurance policy holders in 2012; today, in total the County has two hundred ninety-four (294) flood insurance policies. The vast majority of those policies, two hundred seventy-four (274), still insure property within the City of Watertown.

**Table 4.16: Codington County National Flood Insurance Program Statistics**

<b>Community Name</b>	<b>Current NFIP Policies</b>	<b>Number of Claims Paid Since 1978</b>	<b>Total Value of Claims Paid</b>	<b>Flood Insurance Coverage</b>	<b>Repetitive Loss Properties</b>
City of Watertown	274	429	\$5,747,264.20	\$56,042,700	103
Town of Florence	1	0	\$0.00	\$350,000	
Unincorporated areas of Codington County	19	34	\$664,346.09	\$4,901,400	6
<b>Totals</b>	<b>294</b>	<b>463</b>	<b>\$6,411,610.29</b>	<b>\$100,837,400</b>	<b>109</b>

SOURCE: South Dakota State NFIP Coordinator

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. The County, more specifically the City of Watertown, has a large incidence of repetitive loss claims in comparison to other jurisdictions in South Dakota. 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 since 1978. A total of forty-one are classified as “repetitive loss properties.” As was previously mentioned 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 – B4.*

The Flood Insurance Reform Act of 2004 identified another category of repetitive loss, severe repetitive loss, and defined it as “a single family property (consisting of one-to-four residences) that is covered under flood insurance by the NFIP and has incurred flood-related damage for which four or more separate claims payments have been paid under flood insurance coverage with the amount of each claim payment exceeding \$5,000 and with cumulative amount of such claims payments exceeding \$20,000; or for which at least two separate claims payments have been made with the cumulative amount of such claims exceeding the reported value of the property.” Codington County has had fourteen (14) severe repetitive loss claims worth a total of \$234,271.

## **ASSESSING VULNERABILITY: IDENTIFYING STRUCTURES**

*Requirement 201.6(c)(2)(ii). Local Mitigation Plan Review Tool – B3.*

One of the primary purposes of this PDM is identifying critical facilities, emergency shelters, and summer storm shelters. Then equipping those facilities with the means to provide the necessary energy for access to sanitation and maintain important functions during a natural hazard occurrence. In the event of a disaster as a result of severe summer or winter storms, a terrorist attack, or a hazardous materials incident, the County and participating entities will have the ability to prevent further loss of life by generator powered critical facility shelters. The City of Watertown has many structures that are vital to emergency operations. Each jurisdiction was responsible for listing critical infrastructure within their communities. Table 4.16 is a list of critical facilities that would cause the greatest distress in the county if destruction occurred. The information provided in Table 4.16 was compiled via survey of the participating communities.

**Table 4.17: Critical Infrastructure in Codington County**

<b>Jurisdiction/ Entity</b>	<b>Location</b>	<b>Address</b>	<b>Sector</b>	<b>Sub Sector</b>	<b>Name</b>	<b>Owner Type</b>
Alltel/AT&T	Codington County	314 347 <sup>th</sup> Avenue	Non-Emergency Response Facility	Tele-communications	Cell Phone Tower	Private
Clark Rural Water	Rural Codington County	SE Quarter of Section 12-T119N-R55W	Utility	Water Supply	Northeast Booster	Private
Clark Rural Water	Rural Codington County	Section 9-T118N-R52W	Utility	Water Supply	Kampeska Water Treatment Plant	Private
Clark Rural Water	Rural Codington County	Section 20-T118N-R53W	Utility	Water Supply	Kampeska Booster	Private
Clark Rural Water	Rural Codington County	Section 6-T118N-R55W	Utility	Water Supply	Wallace Booster	Private
Clark Rural Water	Rural Codington County	SE Quarter of Section 7-T118N-R55W	Utility	Water Supply	Wallace Water Tank	Private
Codington-Clark Electric Coop	Rural Codington County	Phipps Township	Utility	Electric Supply	Power Lines (10 miles)	Public
Codington-Clark Electric Coop	Rural Codington County	Kranzburg Township	Utility	Electric Supply	Power Lines (1 mile)	Public
Codington-Clark Electric Coop	Rural Codington County	Fuller Township	Utility	Electric Supply	Power Lines (3 miles)	Public
Codington-Clark Electric Coop	Rural Codington County	Sheridan Township	Utility	Electric Supply	Power Lines (1 miles)	Public
Codington-Clark Electric Coop	Rural Codington County	Dexter Township	Utility	Electric Supply	Power Lines (15 miles)	Public
Codington-Clark Electric Coop	Rural Codington County	Leola Township	Utility	Electric Supply	Power Lines (1 miles)	Public
Codington-Clark Electric Coop	Rural Codington County	Elmira Township	Utility	Electric Supply	Power Lines (4 miles)	Public
Codington-Clark Electric Coop	Rural Codington County	Lake Township	Utility	Electric Supply	Power Lines (2 miles)	Public

Codington-Clark Electric Coop	Rural Codington County	Richland Township	Utility	Electric Supply	Power Lines (3 miles)	Public
Codington-Clark Electric Coop	Rural Codington County	Pelican Township	Utility	Electric Supply	Power Lines (1 miles)	Public
Codington-Clark Electric Coop	Rural Codington County	Eden Township	Utility	Electric Supply	Power Lines (2 miles)	Public
H-D Electric Coop	Rural Codington County	Kampeska Township	Utility	Electric Supply	Underground cable with transformers	Private
H-D Electric Coop	Rural Codington County	Kampeska Township	Utility	Electric Supply	Overhead power lines with transformers and poles	Private
H-D Electric Coop	Rural Codington County	Kranzburg (north) Township	Utility	Electric Supply	Underground cable with transformers	Private
Interstate Telecommunications Coop	Town of Henry	First Street	Non-Emergency Response Facility	Telecommunications Building	Fiber Optic and Phone Lines	Private
Interstate Telecommunications Coop	Town of South Shore	Main Street	Non-Emergency Response Facility	Telecommunications Building	Fiber Optic and Phone Lines	Private
Interstate Telecommunications Coop	Rural Codington County	1329 41 <sup>st</sup> St SE	Non-Emergency Response Facility	Telecommunications Building	Fiber Optic and Phone Lines	Private
Magellan Midstream Partners	City of Watertown	1000 17th St SE	Non-Emergency Response Facility	Petroleum Supply	Petroleum Pipeline	Private
Northern Border Pipeline	Rural Codington County	NW to SE from Graceland Township to Pelican Township	Non-Emergency Response Facility	Natural Gas Supply	Natural Gas Pipeline	Private
Northern Natural Gas	Rural Codington County	From Section 1-116-53 southwest toward Willow Lake, SD	Non-Emergency Response Facility	Natural Gas Supply	Natural Gas Pipeline	Private
North Sioux Conifer Road	Rural Codington County	Section 14-117-53	Non-Emergency Response Facility	Water Supply	Wells	Public
Northwestern Energy	Rural Codington County	North from South border of Pelican Township to City of Watertown	Non-Emergency Response Facility	Natural Gas Supply	Natural Gas Pipeline	Private
NBPL – TBS	Rural Codington County	45371 178 <sup>th</sup> St	Non-Emergency Response Facility	Natural Gas Supply	Natural Gas Pipeline	Public

Western Area Power Headquarters	Rural Codrington County	1330 41st St SE	Non-Emergency Response Facility	Electric Supply	Substations	Public
Florence	Town of Florence	308 Main Ave	Emergency Services	Fire Department	Florence Fire Department	Public
Florence	Town of Florence	308 Main Ave	Government Facility	Community Center	Florence Community Center	Public
Florence	Town of Florence	235 Main Ave	Government Facility	Non-Emergency Response Facility	USPS Post Office	Public
Florence	Town of Florence	909 5 <sup>th</sup> St	Non-Emergency Response Facility	Sanitary Sewer	Sewer Lagoon	Public
Florence	Town of Florence	471 Thorson Ave	Non-Emergency Response Facility	Sanitary Sewer	Lift Station	Public
Florence	Town of Florence	Intersection of Seever's Ave & 5 <sup>th</sup> St	Non-Emergency Response Facility	Water Distribution Point	Water System Pump House	Public
Florence	Town of Florence	515 Main Ave	Public Institution	School & Emergency Operations Center	Florence School	Public
Florence	Town of Florence	312 4 <sup>th</sup> St	Telecommunications	Switch/Router	Interstate Telecom (ITC)	Private
Henry	Town of Henry	210 Main St	Government Facility	Emergency Shelter	Community Center	Public
Henry	Town of Henry	210 Main St	Emergency Services	Emergency Operations Center	Henry Fire Department	Public
Henry	Town of Henry	Corner of Pine St & 1 <sup>st</sup> St	Non-Emergency Response Facility	Sanitary Sewer	Lift Station	Public
Henry	Town of Henry	200 Second St	Population to Protect	Low Income Housing	Westside Apartments	Private
Henry	Town of Henry	111 N Cedar St	Public Institution	School	Henry Elementary and Secondary School	Public
Kranzburg	Town of Kranzburg	103 St Peter St NE	Population to Protect	Building/ Emergency Shelter	Holy Rosary School	Private
Kranzburg	Town of Kranzburg	151 Dakota Ave N	Government Facility	Town Hall	Kranzburg Town Hall	Public
Kranzburg	Town of Kranzburg	East Hwy 212	Non-Emergency Response Facility	Sanitary Sewer Lagoon	Kranzburg Sewer Lagoon	Public
Kranzburg	Town of Kranzburg	316 St Mary St E	Population to Protect	Elderly Housing	Kranzburg Housing Inc.	Private
Kranzburg	Town of Kranzburg	46399 US Hwy 212	Population to Protect	Gas Station	Tip Top Tavern	Private
South Shore	Town of South Shore	102 N Main Street	Emergency Services	Building	South Shore Fire Department	Public

South Shore	Town of South Shore	102 N Main Street	Government Facility	Emergency Shelter	South Shore City Hall	Public
South Shore	Town of South Shore	W Lake Front Drive	Population to Protect	Campground	Punished Woman Lake Campground	Private
South Shore	Town of South Shore	203 Trailer Court Lane	Population to Protect	Manufactured Home Court	Private Residences	Private
South Shore	Town of South Shore	203 S School Street	Non-Emergency Response Facility	Building/ Emergency Shelter	South Shore School (Vacant)	Public
South Shore	Town of South Shore	Intersection of Lakeview Ave & School St	Utility	Sewer System	Main Lift Station	Public
South Shore	Town of South Shore	205 E Lakeview Ave	Utility	Sewer System	Satellite Lift Station	Public
South Shore	Town of South Shore	Between Railroad & W Lakeview Ave	Utility	Sewer System	Satellite Lift Station	Public
South Shore	Town of South Shore	East Side of Town – South of SD Hwy 20	Utility	Non-Emergency Response Facility	Sewer Lagoons	Public
South Shore	Town of South Shore	Intersection of Lakeview Ave & Main St	Utility	Non-Emergency Response Facility (Water System)	Wellhouse	Public
Wallace	Town of Wallace	611 Main Street	Emergency Services	Fire Department	Wallace Fire Department	Public
Wallace	Town of Wallace	611 Main Street	Government Facility	Emergency Operations Center	Wallace Fire Department	Public
Wallace	Town of Wallace	602 Main Street	Government Facility	Non-Emergency Response Facility	Post Office	Public
Wallace	Town of Wallace	643 Main Street	Government Facility	Emergency Shelter	Community Center	Public
Watertown	City of Watertown	222 9 <sup>th</sup> Ave SE	Communications	Telephone, Cable, & Internet Services	Mid-Continent	Private
Watertown	City of Watertown	22 2 <sup>nd</sup> St SE	Communications	Telephone, Cable, & Internet Services	Knology	Private
Watertown	City of Watertown	1511 9 <sup>th</sup> Ave SE	Communications	Telephone, Cable, & Internet Services	Swiftel Communications	Private
Watertown	City of Watertown	200 E Kemp Ave	Communications	Telephone, Cable, & Internet Services	Lake Area Communications	Private
Watertown	City of Watertown	1018 6 <sup>th</sup> ST	Communications	Telephone, Cable, & Internet Services	RC Technologies	Private
Watertown	City of Watertown	128 Maple St NE	Government Facility	Building	Watertown Police Station	Public

Watertown	City of Watertown	14 1st Ave SE	Government Facility	Building	Codington County Courthouse	Public
Watertown	City of Watertown	14 1st Ave SE	Government Facility	Building	Codington County Sheriff's Office	Public
Watertown	City of Watertown	129 1st Ave NW	Government Facility	Building	Watertown Fire Department	Public
Watertown	City of Watertown	500 Golf Course Road	Government Facility	Building	Watertown Fire Department	Public
Watertown	City of Watertown	1201 10th St NW	Government Facility	Emergency Fuel Facility	Codington County Highway Department	Public
Watertown	City of Watertown	730 Arrow Ave	Government Facility	Emergency Fuel Facility	Watertown Street Department	Public
Watertown	City of Watertown	119 S. Maple St	Government Facility	Emergency Power Facility	Watertown Detention Center	Public
Watertown	City of Watertown	125 S. Broadway St	Government Facility	Emergency Shelter	Watertown City Auditorium	Public
Watertown	City of Watertown	1910 W. Kemp Ave	Government Facility	Emergency Shelter	Codington County Extension Center	Public
Watertown	City of Watertown	200 9th St NE	Government Facility	Emergency Shelter	Watertown High School	Public
Watertown	City of Watertown	77 S Lake Dr	Government Facility	Emergency Shelter	Stokes-Thomas City Park, Lake Kampeska	Public
Watertown	City of Watertown	1200 N Lake Dr	Government Facility	Emergency Shelter	Memorial Park, Lake Kampeska	Public
Watertown	City of Watertown		Non-Emergency Response Facility	Railroad	Burlington Northern/Santé Fe	Private
Watertown	City of Watertown	1000 Golf Course Rd	Non-Emergency Response Facility	Water Supply – Pump House	Derby Downs Booster Station	Public
Watertown	City of Watertown	605 2nd St NW	Non-Emergency Response Facility	Water Supply – Pump House	Mellette School Booster Station	Public
Watertown	City of Watertown	300 14th St SE	Non-Emergency Response Facility	Water Supply – Pump House	Larson Booster Station	Public
Watertown	City of Watertown	405 14th Ave NW	Non-Emergency Response Facility	Water Supply - Storage Tanks	14th Ave NW Water Tower	Public
Watertown	City of Watertown	302 14th St SE	Non-Emergency Response Facility	Water Supply - Storage Tanks	Larson Water Tower	Public
Watertown	City of Watertown	1028 18th St NE	Non-Emergency Response Facility	Water Supply – Storage Tanks	19th St NE Water Tower	Public
Watertown	City of Watertown	16769 SD HWY 20	Non-Emergency Response Facility	Water Supply – Storage Tanks	North Lake Drive Tower	Public
Watertown	City of Watertown	955 S. Lake Dr.	Non-Emergency Response Facility	Water Supply – Storage Tanks	South Lake Drive Water Tower	Public

Watertown	City of Watertown	1415 6 <sup>th</sup> Ave NW	Non-Emergency Response Facility	Water Supply	Water Treatment Plant	Public
Watertown	City of Watertown	119 S Maple St	Non-Emergency Response Facility	Government Facility	Detention Center	Public
Watertown	City of Watertown	123 4 <sup>th</sup> St NE	Non-Emergency Response Facility	Electrical Supply	Generation Power Plant	Private
Watertown	City of Watertown	1330 41 <sup>st</sup> SE	Non-Emergency Response Facility	Electrical Supply	WAPA Electrical Substation	Federal
Watertown	City of Watertown	311 1 <sup>st</sup> Ave NE	Non-Emergency Response Facility	Electrical Supply	Uptown Substation	Public
Watertown	City of Watertown	Fish Road SW	Non-Emergency Response Facility	Electrical Supply	Pelican Substation	Public
Watertown	City of Watertown	300 14 <sup>th</sup> St SE	Non-Emergency Response Facility	Electrical Supply	East Substation	Public
Watertown	City of Watertown	3225 9 <sup>th</sup> Ave SW	Non-Emergency Response Facility	Electrical Supply	West Substation	Public
Watertown	City of Watertown	2707 15 <sup>th</sup> Ave SE	Non-Emergency Response Facility	Electrical Supply	15 <sup>th</sup> Ave Substation	Public
Watertown	City of Watertown	901 4 <sup>th</sup> Ave SW	Non-Emergency Response Facility	Electrical Supply	Watertown Municipal Utilities (Main Location)	Public
Watertown	City of Watertown	Loop around Watertown	Non-Emergency Response Facility	Electrical Supply	Transmission Line and Fiber Ring	Public
Watertown	City of Watertown	701 20 <sup>th</sup> Ave SW	Non-Emergency Response Facility	Natural Gas Supply	Peak Shaving Plant	Public
Watertown	City of Watertown	704 20 <sup>th</sup> Ave SW	Non-Emergency Response Facility	Natural Gas Supply	NNG - TBS	Public
Watertown	Rural Hamlin & Codington County	Southwest of Watertown (45371 178 <sup>th</sup> St)	Non-Emergency Response Facility	Natural Gas Supply	NBPL Tap	Public
Watertown	City of Watertown	2707 15 <sup>th</sup> Ave SE	Non-Emergency Response Facility	Natural Gas Supply	Walmart TBS	Public
Watertown	Rural Codington County		Non-Emergency Response Facility	Water Supply – Transmission Lines	Rauville Well Transmission Lines	Public
Watertown	Rural Codington County	45453 165 <sup>th</sup> St	Non-Emergency Response Facility	Water Supply – Wells	Rauville Wells	Public

Watertown	Rural Codington County	3000 38 <sup>th</sup> Ave NW	Non-Emergency Response Facility	Water Supply – Wells	Sioux Conifer Wells	Public
Watertown	City of Watertown	1227 3 <sup>rd</sup> Ave NW	Non-Emergency Response Facility	Water Supply – Well	Town Well #10	Public
Watertown	City of Watertown	411 13 <sup>th</sup> St NW	Non-Emergency Response Facility	Water Supply – Well	Town Well #3A	Public
Watertown	City of Watertown	1415 6 <sup>th</sup> Ave NW	Non-Emergency Response Facility	Water Supply – Well	Town Wells	Public
Watertown	City of Watertown	1300 11st SE	Non-Emergency Response Facility	Sanitary Sewer Supply	Wastewater Facility	Public
Watertown	City of Watertown	600 Block, 4th Ave SW	Transportation	Bridge on Evacuation Route	4th Ave SW	Public
Watertown	City of Watertown	300 Block 9th Ave SW and 2200 Block 9th Ave SE	Transportation	Bridge on Evacuation Route	US Hwy 212	Public
Watertown	City of Watertown	100 Block First Ave NE	Transportation	Bridge on Evacuation Route	1st Ave NE	Public
Watertown	City of Watertown	1100 Block 20th Ave SE	Transportation	Bridge on Evacuation Route	20th Ave SE	Public
Watertown	City of Watertown	800 Block, 14th Avenue NW	Transportation	Bridges on Evacuation Route	14th Ave NW	Public
Watertown	City of Watertown	2300 Block First Ave NE	Transportation	Bridges on Evacuation Route	Willow Creek Dr	Public
Watertown	City of Watertown	600 Block, 10th Avenue NW	Transportation	Bridges on Evacuation Route	10th Ave NW	Public
Watertown	City of Watertown	600 Block, 3rd Avenue NW	Transportation	Bridges on Evacuation Route	3rd Ave NW	Public
Watertown	City of Watertown	601 Block, Kemp Ave West	Transportation	Bridges on Evacuation Route	Kemp Ave W	Public
Watertown	City of Watertown	400 20 <sup>th</sup> Ave SW	Transportation	Culverts on Evacuation Route	20 <sup>th</sup> Ave SW	Public
Watertown	City of Watertown		Transportation	Evacuation Route	Highway 212	Public

Watertown	City of Watertown		Transportation	Evacuation Route	Interstate 29	Public
Watertown	City of Watertown		Transportation	Evacuation Route	Highway 81	Public
Watertown	City of Watertown		Transportation	Evacuation Route	Highway 20	Public
Watertown	City of Watertown	5 12th Street SW	Non-Emergency Response	Population to Protect	McKinley Elementary	Public
Watertown	City of Watertown	619 2nd Street W	Non-Emergency Response	Population to Protect	Mellette Elementary	Public
Watertown	City of Watertown	1701 N Maple	Non-Emergency Response	Population to Protect	Jefferson Elementary	Public
Watertown	City of Watertown	1100 13th Street NE	Non-Emergency Response	Population to Protect	Lincoln Elementary	Public
Watertown	City of Watertown	412 2nd Street SE	Non-Emergency Response	Population to Protect	Roosevelt Elementary	Public
Watertown	City of Watertown	216 10th Street SE	Non-Emergency Response	Population to Protect	Garfield School	Public
Watertown	City of Watertown	1000 3rd Avenue NE	Non-Emergency Response	Population to Protect	Boys and Girls Club	Private
Watertown	City of Watertown	1700 11th Street NE	Non-Emergency Response	Population to Protect	Watertown Middle School	Public
Watertown	City of Watertown	601 11th Street NE	Non-Emergency Response	Population to Protect	Watertown Intermediate School	Public
Watertown	City of Watertown	200 9th Street NE	Non-Emergency Response	Population to Protect	Watertown High School	Public
Watertown	City of Watertown	109 3rd Street SE	Non-Emergency Response	Population to Protect	Immaculate Conception School	Private
Watertown	City of Watertown	15 12th Avenue NE	Non-Emergency Response	Population to Protect	Watertown Christian School	Private
Watertown	City of Watertown	1200 Luther Ln NE	Non-Emergency Response	Population to Protect	Great Plains Lutheran School	Private
Watertown	City of Watertown	120 2 <sup>nd</sup> St NE	Non-Emergency Response	Population to Protect	Saint Martin's Lutheran School	Private
Watertown	City of Watertown	1201 Arrow Ave NE	Non-Emergency Response	Population to Protect	Lake Area Technical College	Public
Watertown	City of Watertown	1712 17th Street SE	Non-Emergency Response	Population to Protect	Anza Soccer Field	Public
Watertown	City of Watertown	112 21st Street NW	Non-Emergency Response	Population to Protect	Koch Complex	Public
Watertown	City of Watertown	1801 3rd Avenue NW	Non-Emergency Response	Population to Protect	Foundation Fields	Public
Watertown	City of Watertown	1701 17th Street SE	Non-Emergency Response	Population to Protect	Premier Softball Complex	Public
Watertown	City of Watertown	112 21st Street NW	Non-Emergency Response	Population to Protect	Watertown Skate Park	Public

Watertown	City of Watertown	2 16th Street W	Non-Emergency Response	Population to Protect	Watertown Stadium	Public
Watertown	City of Watertown	1515 15th Street NE	Non-Emergency Response	Population to Protect	Prairie Lakes Wellness Center	Public
Watertown	City Watertown	415 4th Ave NE	Non-Emergency Response	Population to Protect	Avantara Senior Housing	Private
Watertown	City Watertown	225 S Maple	Non-Emergency Response	Population to Protect	Cedar View Assisted Living	Private
Watertown	City Watertown	26 1 <sup>st</sup> Ave SW	Non-Emergency Response	Population to Protect	Generations Senior Center	Private
Watertown	City Watertown	215 S Maple & 220 S Maple	Non-Emergency Response	Population to Protect	Jenkins Living Center	Private
Watertown	City Watertown	500 16th Ave NE	Non-Emergency Response	Population to Protect	Stoneybrook Suites	Private
Watertown	City Watertown	424 9th St SE	Non-Emergency Response	Population to Protect	Prairie Crossing	Private
Watertown	City Watertown	420 9th St SE	Non-Emergency Response	Population to Protect	Edgewood Vista	Private
Watertown	City Watertown	901 14th AVE NE	Non-Emergency Response	Population to Protect	The Commons	Private
Watertown	City Watertown	17444 Meadow Lake	Non-Emergency Response	Population to Protect	Meadow Lake Acres	Private
Watertown	City of Watertown	901 4th St NE	Medical	Population to Protect	Prairie Lakes Hospital	Private
Watertown	City of Watertown	506 1 <sup>st</sup> Ave SE	Medical	Population to Protect	Brown Clinic	Private
Watertown	City of Watertown	511 14 <sup>th</sup> Ave NE	Medical	Population to Protect	Northridge Clinic	Private
Watertown	City of Watertown	12 19 <sup>th</sup> St NE	Medical	Population to Protect	Veterans Clinic	Private

## **ASSESSING VULNERABILITY: COMMUNITY CAPABILITIES**

*Requirement 201.6(c)(3). Local Mitigation Plan Review Tool – C1.*

Each community has a unique set of capabilities, including authorities, policies, programs, staff, funding, and other resources for accomplishing mitigation. One important step in assessing the vulnerability of a given community is to objectively review the capabilities to implement mitigation strategies and to identify limiting factors. Each community reviewed existing administrative documents, procedures, and policies. This helped the communities and planning team to evaluate how existing capabilities contribute to the vulnerability by reducing or exacerbating disaster impacts. Table 4.18 identifies whether each community has the specified administrative and technical capabilities, and who serves in such capacity. Table 4.19 encapsulates the efficacy of the specified planning mechanisms with regard to disaster mitigation and to identify potential deficiencies in the specified plans.

**Table 4.18: Administrative and Technical Capabilities**

Administrative/Staff Composition	Local Jurisdiction						
	<i>Florence</i>	<i>Henry</i>	<i>Kranzburg</i>	<i>South Shore</i>	<i>Wallace</i>	<i>Watertown</i>	<i>Codington County</i>
<b>Board of Adjustment</b>	Appointed	Elected Officials	Elected Officials	Elected Officials	NA	Appointed	Appointed
<b>Building Official</b>	Finance Officer	Finance Officer	Finance Officer	Finance Officer	NA	Appointed	Zoning Officer
<b>Community Planner</b>	NA	NA	NA	NA	NA	Urban Planner	NA
<b>Elected Officials</b>	Trustee	Trustee	Trustee	Trustee	Trustee	Aldermanic	Commission
<b>Emergency Manager</b>	NA	NA	NA	NA	NA	NA	Appointed
<b>Engineer/Highway Superintendent</b>	NA	NA	NA	NA	NA	Appointed	Appointed
<b>Floodplain Administrator</b>	Finance Officer	Finance Officer	Finance Officer	Finance Officer	NA	City Engineer	Zoning Officer
<b>GIS Coordinator</b>	NA	NA	NA	NA	NA	NA	NA
<b>Planning Commission</b>	Appointed	Elected Officials	Elected Officials	Elected Officials	NA	Appointed	Appointed
<b>Zoning Officer</b>	Finance Officer	Finance Officer	Finance Officer	Finance Officer	NA	Appointed	Appointed
<b>Grant Writing Capability</b>	Yes*	Yes*	Yes*	Yes*	Yes*	Yes*	Yes*
<b>Non-profit organizations focused on environmental protection.</b>	Yes**	Yes**	Yes**	Yes**	Yes**	Yes*	Yes**
<b>Public-Private partnership initiatives addressing disaster-related issues.</b>	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.*

*\*\*Services provided by East Dakota Watershed Development District.*

**Table 4.19: Capabilities of Growth Guidance Instruments**

<b>Capabilities of Community Planning Mechanisms</b>	<b>Florence</b>	<b>Henry</b>	<b>Kranzburg</b>	<b>South Shore</b>	<b>Wallace</b>	<b>Watertown</b>	<b>Codington County</b>
Does the Future Land-Use Map identify natural hazard areas?	Y	Y	Y	Y	NA	Y	Y
Do the land-use policies discourage development or redevelopment within natural hazard areas?	Y	Y	Y	Y	NA	Y	Y
Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	Y	Y	Y	Y	NA	Y	Y
Does the transportation plan limit access to hazard areas?	N	N	N	N	NA	N	N
Is transportation policy used to guide growth in safe locations?	Y	Y	Y	Y	NA	Y	Y
Are movement systems designed to function under disaster conditions (e.g. evacuation)?	Y	Y	Y	Y	NA	Y	Y
Are environmental systems that protect development from hazards identified and mapped?	N	N	N	N	NA	N	N
Do environmental policies provide incentives to development that is located outside protective ecosystems?	N	N	N	N	NA	N	N
Do environmental policies maintain and restore protective ecosystems?	N	N	N	N	NA	N	N
Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	N	N	N	N	NA	N	N
Is safety explicitly included in the plan's growth and development policies?	Y	Y	Y	Y	NA	Y	Y
Does the monitoring and implementation section of the plan cover safe growth objectives?	N	N	N	N	NA	N	N
Does the Zoning Ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	Y	Y	Y	Y	NA	Y	Y

Capabilities of Community Planning Mechanisms	Florence	Henry	Kranzburg	South Shore	Wallace	Watertown	Codington County
Does the zoning ordinance contain natural hazard overlay zones that set conditions for land use within such zones?	Y	Y	Y	Y	NA	Y	Y
Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	Y	Y	Y	Y	NA	Y	Y
Does the zoning ordinance restrict development within, or filling of, wetlands, floodways, and floodplains?	Y	Y	Y	Y	NA	Y	Y
Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	Y	Y	Y	Y	NA	Y	Y
Do the subdivision regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?	N	N	N	N	NA	N	N
Do the subdivision regulations allow density transfers where Hazard areas exist?	Y	Y	Y	Y	NA	Y	Y

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.*

*Requirement 201.6(c)(2)(ii). Local Mitigation Plan Review Tool – B3.*

*Requirement 201.6(d)(3). Local Mitigation Plan Review Tool – D1.*

The information provided in the following tables was collected from the Codington County Director of Equalization. Inconsistencies and missing information result from lack of existing mechanisms, plans, and technical documents available.

The assessor’s office provided the assessed valuation of total structures on each property within the incorporated and rural areas of the county. The data provides a total value for structures of a certain use on each property. It was not possible to discern the value of each structure on a 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 flood hazard area (Zone “A”) boundaries provided by FEMA in 2022. 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 4.20 through 4.25. 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. The following tables also do not address information regarding religious, governmental, or utility structures. Although not included in Tables 4.20 through 4.25, the State of South Dakota Hazard Mitigation Plan incorporated HAZUS analysis accounting for potential losses to those structures within Codington County.

**Table 4.20: Codington 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	1,917	46	2.4	\$319,915,635	\$8,050,587	2.52	4,634	124	2.68
Commercial/Industrial	78	8	10.26	\$16,558,541	\$820,589	5.0			
Agricultural	952	11	11.55	\$37,603,300	\$805,911	2.14			
Mobile Homes	219	8	3.65	\$5,054,664	\$365,416	7.23	Included in “Residential”		
<b>Total</b>	<b>3,166</b>	<b>73</b>	<b>2.31</b>	<b>\$379,132,140</b>	<b>\$10,042,503</b>	<b>2.65</b>	<b>4,634</b>	<b>127</b>	<b>2.69</b>

**Table 4.21: Florence 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	141	0	0	\$11,197,350	0	0	337	0	0
Commercial/Industrial	18	0	0	\$2,487,702	0	0			
Agricultural	1	0	0	\$29,945	0	0			
Manufactured Home	26	0	0	\$1,303,277	0	0			
<b>Total</b>	<b>186</b>	<b>0</b>	<b>0</b>	<b>\$15,018,274</b>	<b>0</b>	<b>0</b>	<b>337</b>	<b>0</b>	<b>0</b>

**Table 4.22: Henry 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	113	0	0	\$6,230,340	0	0	256	0	0
Commercial/Industrial	16	0	0	\$1,907,098	0	0			
Agricultural	0	0	0	\$0	0	0			
Manufactured Home	30	0	0	\$1,051,023	0	0			
<b>Total</b>	<b>159</b>	<b>0</b>	<b>0</b>	<b>\$9,188,461</b>	<b>0</b>	<b>0</b>	<b>256</b>	<b>0</b>	<b>0</b>

**Table 4.23: Kranzburg 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	69	0	0	\$7,461,233	0	0	163	0	0
Commercial/Industrial	15	0	0	\$558,145	0	0			
Agricultural	2	0	0	\$214,506	0	0			
Manufactured Home	6	0	0	\$323,746	0	0			
<b>Total</b>	<b>92</b>	<b>0</b>	<b>0</b>	<b>\$8,557,630</b>	<b>0</b>	<b>0</b>	<b>163</b>	<b>0</b>	<b>0</b>

**Table 4.24: South Shore 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	118	0	0	\$5,135,819	0	0	189	0	0
Commercial/Industrial	26	0	0	\$1,305,214					
Agricultural	0	0	0	\$0					
Manufactured Home	14	0	0	\$262,506					
<b>Total</b>	<b>158</b>	<b>0</b>	<b>0</b>	<b>\$6,703,539</b>	<b>0</b>	<b>0</b>	<b>189</b>	<b>0</b>	<b>0</b>

**Table 4.25: Wallace 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	55	0	0	\$1,733,044	0	0	91	0	0
Commercial/Industrial	7	0	0	\$2,083,438	0	0			
Agricultural	0	0	0	\$0	0	0			
Manufactured Home	2	0	0	\$43,480	0	0			
<b>Total</b>	<b>64</b>	<b>0</b>	<b>0</b>	<b>\$3,859,962</b>	<b>0</b>	<b>0</b>	<b>91</b>	<b>0</b>	<b>0</b>

**Table 4.26: Watertown 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	7,263	995*	13.7	\$1,195,377,851	\$97,851,460	8.19	22,655	2,832	12.5
Commercial/Industrial	1,143	201	17.59	\$520,171,884	\$66,303,355	12.75			
Agricultural	20	0	0	\$139,943	\$0	0			
Manufactured Home	98**	41(209)	41.84	\$3,169,912	\$2,865,841	90.41	Included in "Residential"		
<b>Total</b>	<b>8,524</b>	<b>1,237</b>	<b>14.51</b>	<b>\$1,718,859,590</b>	<b>\$167,020,656</b>	<b>9.72</b>	<b>22,655</b>	<b>2,832</b>	<b>12.5</b>

NOTE: \*995 residential structures include: 900 single family dwelling units, 95 units in multiple family dwellings.

\*\*This number represents the number of parcels with manufactured homes. The number in the Hazard Area represents the total number of parcels and (manufactured homes) in that area. Numerous parcels include more than one manufactured home on a parcel (ie. manufactured home courts).

**Table 4.27: Codington County 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 County	# in HA	% in HA
Residential	9,676	1,041	10.76	\$1,547,051,272	\$105,902,047	6.85	28,325	2,956	10.44
Commercial/Industrial	1,303	209	16.04	\$545,072,022	\$67,123,944	12.31			
Agricultural	975	11	1.13	\$37,987,694	\$805,911	2.12			
Manufactured Homes	395	49	12.41	\$11,208,608	\$3,231,257	28.83	Included in "Residential"		
<b>Total</b>	<b>12,349</b>	<b>1,310</b>	<b>10.61</b>	<b>\$2,141,319,596</b>	<b>\$177,063,159</b>	<b>8.27</b>	<b>28,325</b>	<b>2,956</b>	<b>10.44</b>

**Table 4.28: Utilities Estimated Potential Dollar Losses to Vulnerable Structures**

Type of Structure	Utility Provider	Total Number of Structures	Total Value of Structures*	HAZARDS			
				Flood	Strong Winds	Tornado	Winter Storms
Kampeska Water Treatment Plant, Generator, and Tank	Clark Rural Water	1	\$2,000,000	No	Yes	Yes	No
Boosters with Generators and Tanks	Clark Rural Water	3	\$1,750,000	No	Yes	Yes	No
Poles	Codington-Clark Electric Coop.	1220	\$1,830,000	Yes	Yes	Yes	Yes
Overhead Transformers	Codington-Clark Electric Coop.	142	\$142,000	Yes	Yes	Yes	Yes
Underground Transformers	Codington-Clark Electric Coop.	1452	\$1,742,000	Yes	No	Yes	No

Type of Structure	Utility Provider	Total Number of Structures	Total Value of Structures*	Flood	Strong Winds	Tornado	Winter Storms
Underground Cabinets	Codington-Clark Electric Coop.	581	\$581,000	Yes	No	Yes	No
Underground Pedestals	Codington-Clark Electric Coop.	1743	\$1,743,000	Yes	No	Yes	No
Miles of Underground Line	Codington-Clark Electric Coop.	581	\$23,240,000	No	No	No	No
Miles of Overhead Line	Codington-Clark Electric Coop.	61	\$1,830,000	Yes	Yes	Yes	Yes
Poles	H-D Electric	16	\$40,000	Yes	Yes	Yes	Yes
Pad Mount Transformers	H-D Electric	5	\$25,000	Yes	No	Yes	No

\*Projected Replacement Values

SOURCE: Clark Rural Water, Codington-Clark Electrical Cooperative, and H-D Electric Cooperative.

**Notes:**

**# in HA:** Number of structures in hazard area was determined using aerial photography and DFIRM boundaries provided by FEMA. 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 Codington 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).

As part of the State of South Dakota Hazard Mitigation Plan, data was prepared for specific hazard types. Although the data is not current, the modeling used in the plan would be difficult to replicate or improve upon. The following sections describing vulnerability to flooding and tornadoes is based largely on the corresponding sections in the State of South Dakota Hazard Mitigation Plan.

**Flooding**

All of Codington County is in the Big Sioux River Watershed, therefore Codington County was included within the Big Sioux Region in the State of South Dakota Hazard Mitigation Plan. Based on its history of flood problems, the County was deemed a high priority jurisdiction in South Dakota's Plan. For that reason HAZUS-MH analysis was performed in conjunction with the completion of the State's Plan. The results were based on flooding with a one percent chance of occurrence or commonly referred to as a "100-year flood" and display the potential base flood losses to the County. The full results of HAZUS-MH analysis for the County are displayed in Table 4.29.

**Table 4.29: HAZUS-MH Base Flood (1 Percent Chance) Loss Estimation Results (2016)**

Building Damage Loss	Loss Ratio*	Contents Damage and Inventory Loss	Total Economic Building Loss	Number of Displaced People	People Needing Shelter
\$28,917,000	1.7%	\$48,403,000	\$81,843,000	3,027	2,301

\* Loss ratio is the percent of the total building inventory value that could be damaged from flooding in any given year.  
 SOURCE: State of South Dakota Hazard Mitigation Plan. p 3-147; Table 3-45. South Dakota Office of Emergency Management. 2019.

## Tornado

As part of the State of South Dakota Hazard Mitigation Plan HAZUS-MH analysis was performed calculating potential building exposure to tornadoes in the state. Total value of structures lost due to tornadoes from 1950 – 2016 was calculated, inflated to current (2016) dollars. A loss ratio was then calculated by dividing the total damage by the total building exposure. Table 4.30 identifies data specific to the annualized losses from tornadoes for the county as identified in the State of South Dakota Hazard Mitigation Plan.

To provide additional insight into potential losses caused by tornadoes, historic loss data were also analyzed on a statewide scale. According to the National Climatic Data Center Storm Events database, there were 1,711 tornadoes in South Dakota between January 1950 and December 2016, of which 636 were an F1 event or higher. Total property damage for these events is estimated at \$726 million. This suggests that South Dakota experiences 25 tornado events and \$11 million in losses each year. There were 18 deaths and 475 injuries in this time period, which averages out to approximately seven injuries each year. Of these storms, five resulted in major disaster declarations, with a total relief cost estimated at \$148,686,613 in 2008 dollars. This averages out to \$2.124 million (also in 2008 dollars) per major disaster. Based on the frequency of events, South Dakota averages one major disaster level tornado every 318 events or approximately every 14 years. The total historic losses and annualized losses by county are presented.

**Table 4.30: Codington County Annualized Losses from Tornadoes**

Total Events 1950-2016	Total Property Damage (inflated) 1950-2016	Annualized Losses	Total Building Exposure	Loss Ratio
29	\$21,871,786	\$331,391	\$3,141,546	6.96

SOURCE: State of South Dakota Hazard Mitigation Plan. Appendix 3D-8; Table 10. South Dakota Office of Emergency Management, 2019.

## ASSESSING VULNERABILITY: ANALYZING DEVELOPMENT TRENDS

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

Requirement 201.6(c)(3). *Local Mitigation Plan Review Tool – C1.*

Requirement 201.6(d)(3). *Local Mitigation Plan Review Tool – D1.*

Requirement 201.6(d)(3). *Local Mitigation Plan Review Tool – D2.*

The land use and development trends for each jurisdiction were identified by the representatives from each of the jurisdictions. Five of the county’s six communities as well as the county itself have comprehensive land use plans that identify future areas for development. In addition to Codrington County, the cities of Florence, Henry, Kranzburg, South Shore, and Watertown all have adopted Comprehensive Land Use Plans with Future Land Use Maps.

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. Though not yet formally adopted by the communities, FEMA provided updated Flood Hazard Boundaries on February 22, 2022. Those boundaries will become effective last this year. The digital version of that data was used to determine the amount of available, undeveloped land by use type in identified hazard areas. Tables 4.31 – 4.36 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 F.

**Table 4.31: Codrington County (Unincorporated Area)  
Potential Floodplain Development – By Land Use Type**

Land Use Category	Community Totals		Flood Hazard Area			
	Projected Development Density (Acres/Unit)	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
<i>Ag – Residential*</i>	35	N/A	N/A	N/A	N/A	N/A
<i>Lake - Residential</i>	2	N/A	N/A	N/A	0	2
<i>Commercial</i>	.25	N/A	N/A	N/A	0	0
<i>Industrial</i>	.5	N/A	N/A	N/A	0	0

*\* Minimum lot area is 35 acres in the Agricultural District, and not more than one residence is allowed per quarter-quarter section based upon the United States Public Land Survey. Construction of a residence in a flood plain in the Ag District is highly unlikely due to minimum lot area constraints.*

*N/A: Most of the rural area is planned to remain agricultural in use with varying degree of land use restrictions.*

**Table 4.32: Town of Florence  
Potential Floodplain Development – By Land Use Type**

Land Use Category	Community Totals		Flood Hazard Area			
	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
Residential	2.5	90	0.4	0.4	1	0
Commercial	1	4	0.0	0.0	0	0
Industrial	0.25	4	0.0	0.0	0	0

**Table 4.33: Town of Henry  
Potential Floodplain Development – By Land Use Type**

Land Use Category	Community Totals		Flood Hazard Area			
	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
Residential	2.5	15	0.0	0.0	0	0
Commercial	1	5	0.0	0.0	0	0
Industrial	0.25	13	0.0	0.0	0	0

**Table 4.34: Town of Kranzburg  
Potential Floodplain Development – By Land Use Type**

Land Use Category	Community Totals		Flood Hazard Area			
	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
<i>Residential</i>	2.5	24	1.0	4.2	3	0
<i>Commercial</i>	1	0.5	0.0	0.0	0.0	0
<i>Industrial</i>	0.25	2.5	0.0	0.0	0.0	0

**Table 4.35: Town of South Shore  
Potential Floodplain Development – By Land Use Type**

Land Use Category	Community Totals		Flood Hazard Area			
	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
<i>Residential</i>	2.5	20	0	0	0	0
<i>Commercial</i>	1	3	0	0	0	0
<i>Industrial</i>	0.25	4	0.0	0.0	0	0

**Table 4.36: City of Watertown  
Potential Floodplain Development – By Land Use Type**

Land Use Category	Community Totals		Flood Hazard Area			
	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
<i>Residential</i>	2.5	3,087	45	1.5	112	317
<i>Commercial</i>	1	1,458	48	3.3	48	52
<i>Industrial</i>	0.25	3,250	362	11.1	90	81

**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 – B3.*
- Requirement 201.6(d)(3). Local Mitigation Plan Review Tool – D1.*

Vulnerability to all-natural hazards was considered by each community and by the Planning Team. In community meetings, each community rated its vulnerability to certain natural hazards. Specific information regarding the vulnerability of structures to flood and tornado was available. A detailed description of the county’s communities’ vulnerability to flooding within the 100-year floodplain is identified above. Information compiled and utilized by the State of South Dakota in its State of South Dakota Hazard Mitigation Plan (2019) was included in the plan to describe the vulnerability of the county and its communities to tornadoes. Less quantitative data is available regarding the potential impact of other natural hazards. Anecdotal information gathered from the meetings was used to generally assess the communities’ vulnerability to certain hazards.

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, with the exception of Watertown because of its size, 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 Codington County PDM.

On the following pages, a hazard vulnerability map is shown for each of the jurisdictions participating in this PDM (see Figures 4.1 – 4.7). The overall mitigation strategy and its goals are intended to minimize loss of life and injury; in addition to ensuring essential public services and the availability of emergency shelter in the event of natural hazards. The maps identify critical infrastructure and one-hundred-year floodplain. Since the other major hazards facing the county are not geographically based. Winter storms and severe summer storms are about as likely to occur in one part of the county as another. Similarly, wildfires can occur almost anywhere in the county, although they are more likely to occur in areas with extensive grassland cover or shrubs. 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.

Figure 4.2: Codington County Hazard Vulnerability Map

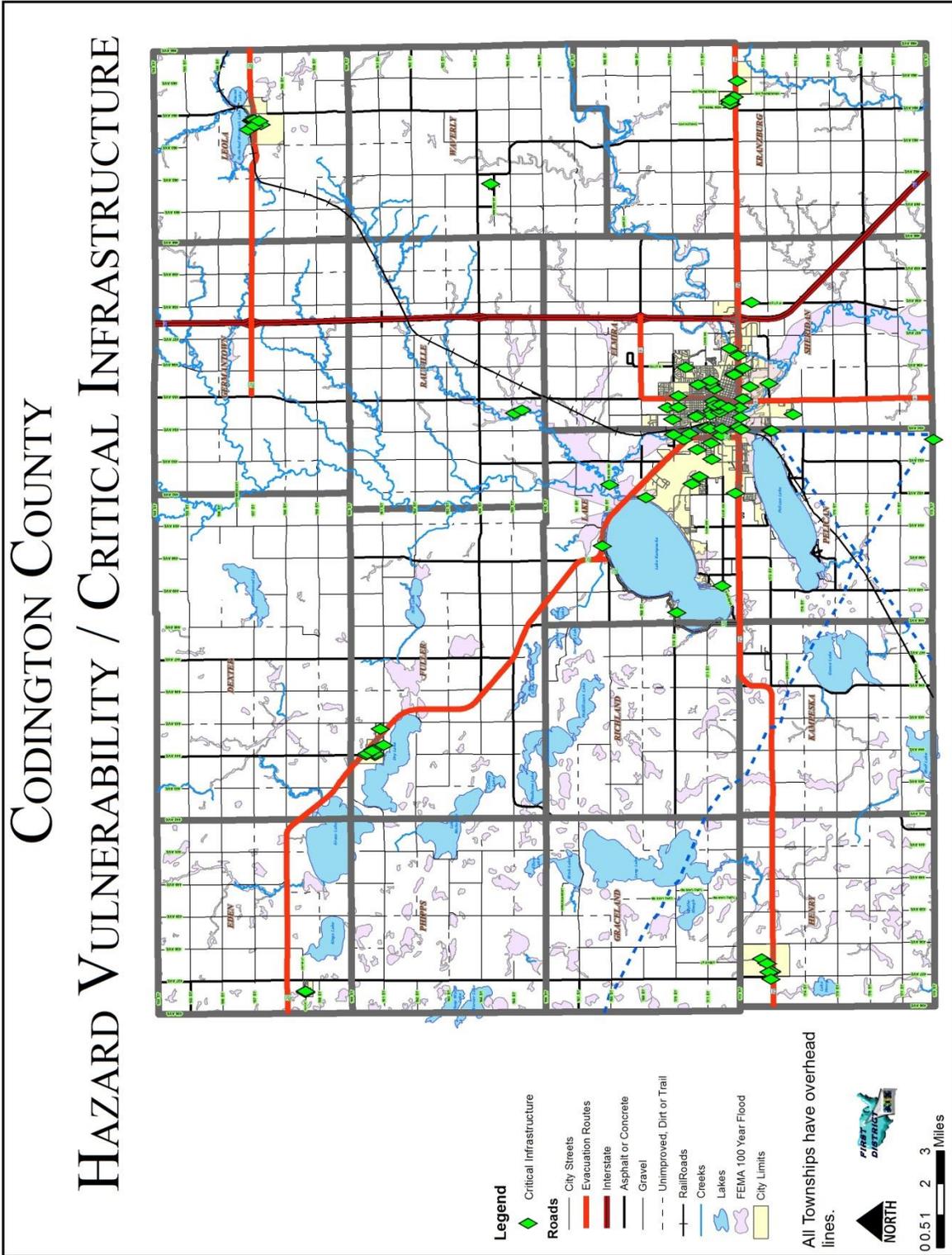


Figure 4.3: Town of Florence Hazard Vulnerability Map

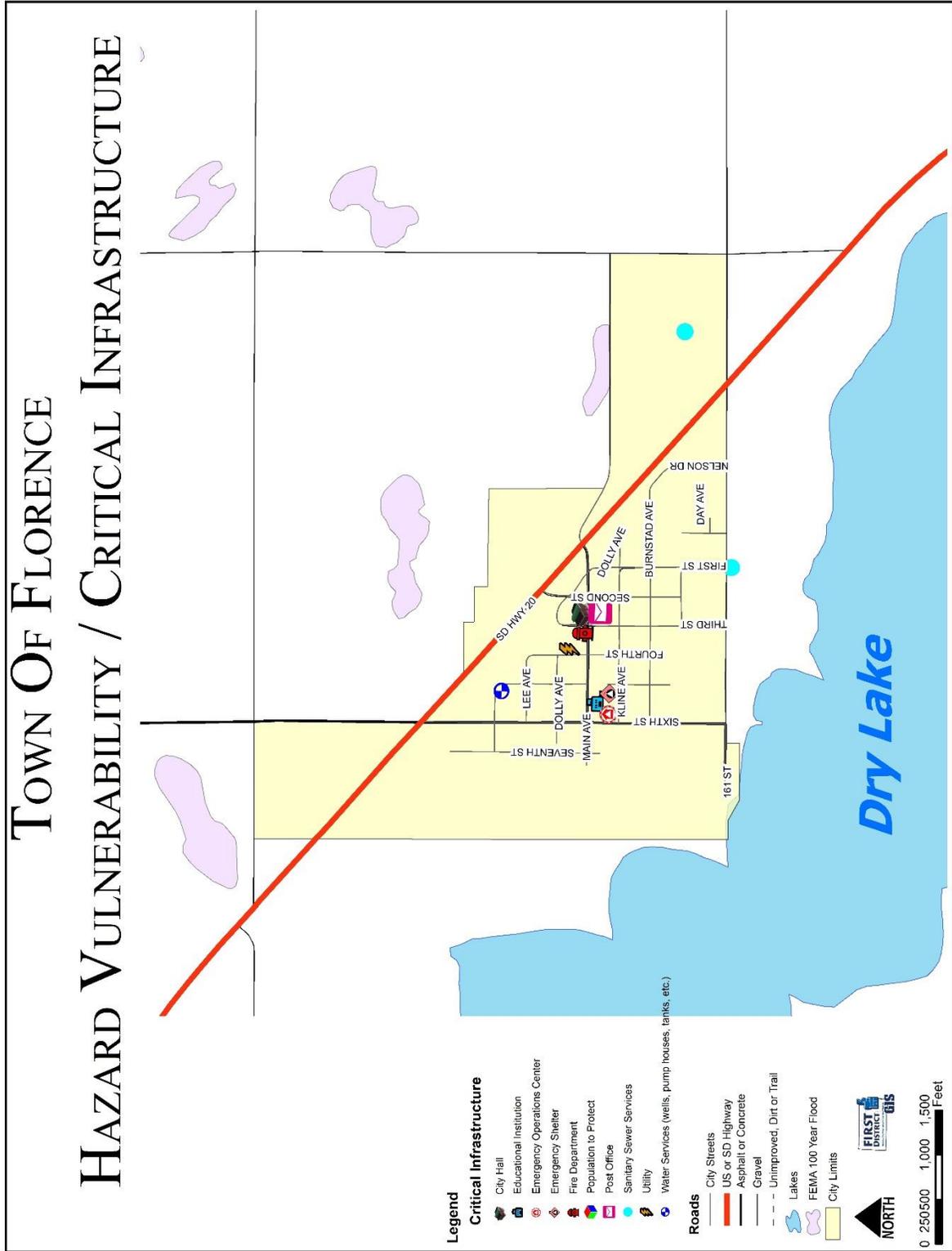


Figure 4.4: Town of Henry Hazard Vulnerability Map

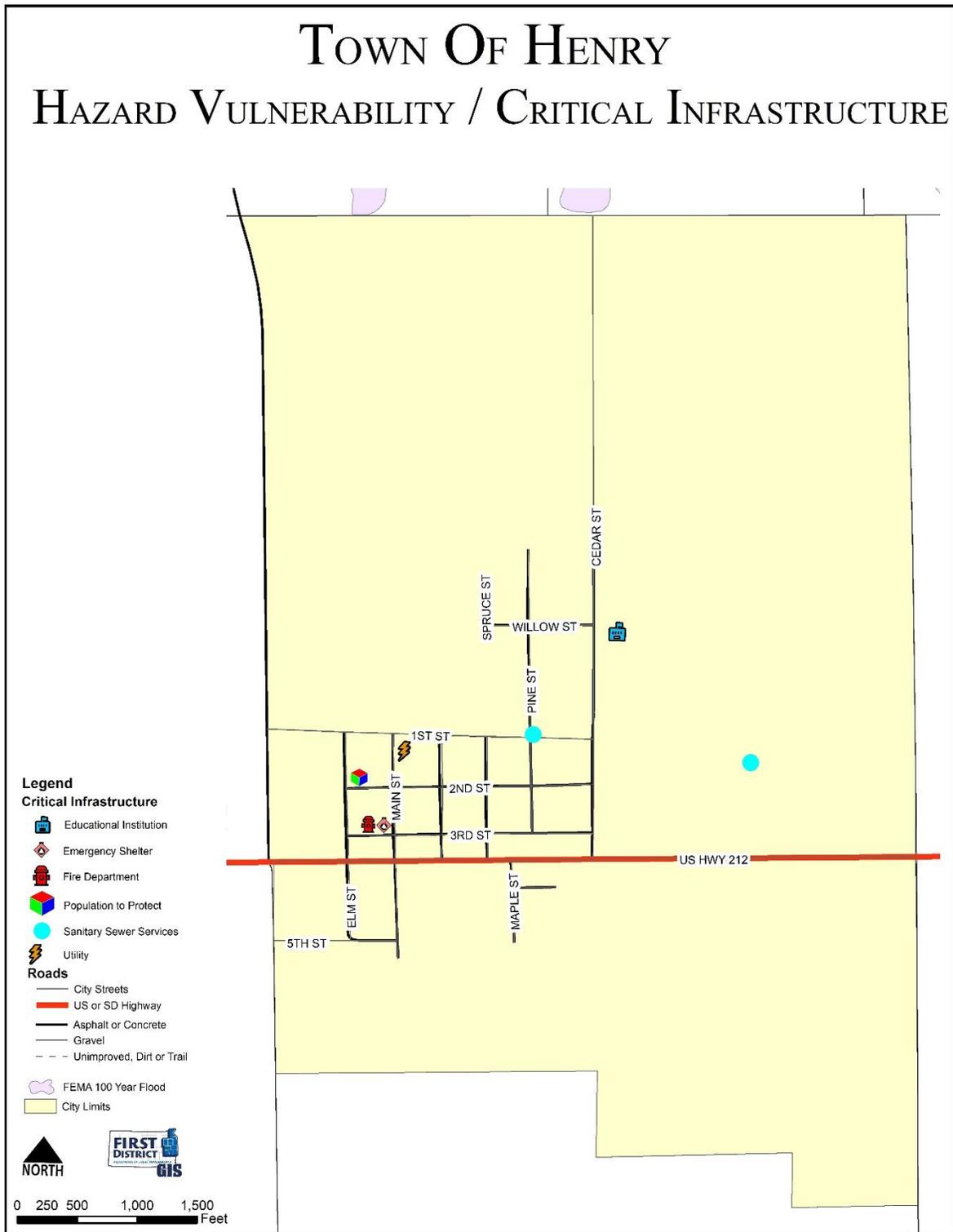


Figure 4.5: Town of Kranzburg Hazard Vulnerability Map

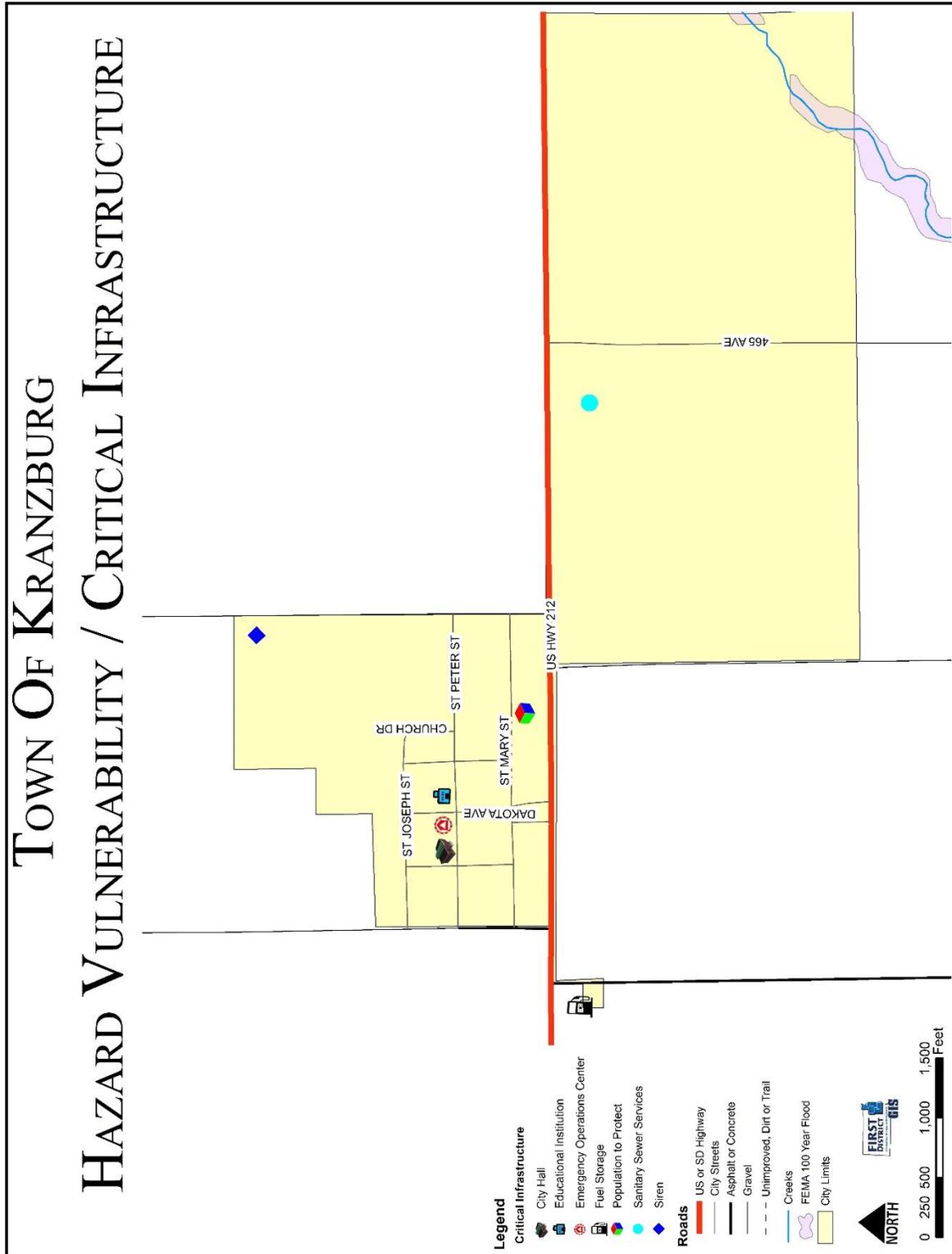


Figure 4.6: Town of South Shore Hazard Vulnerability Map

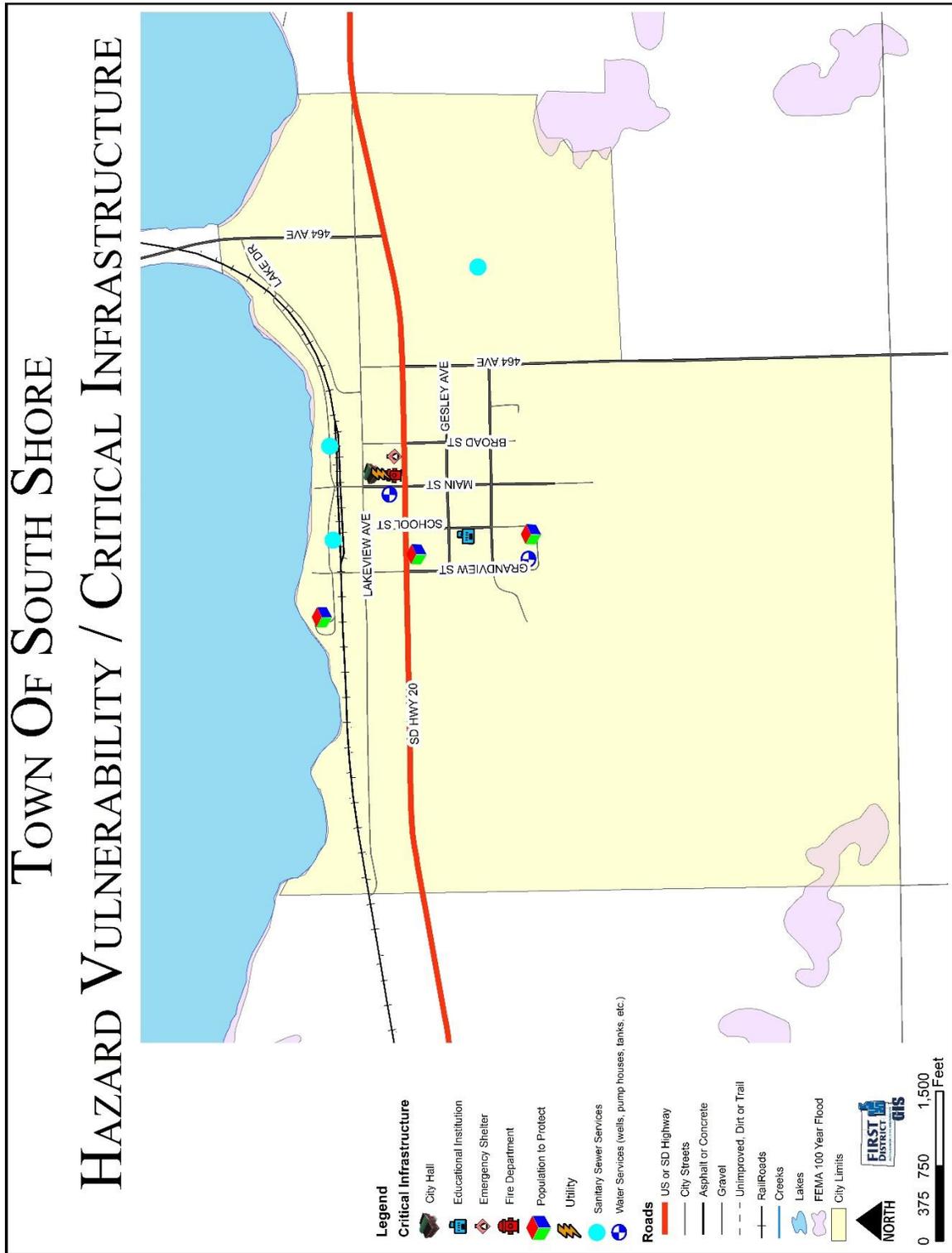


Figure 4.7: Town of Wallace Hazard Vulnerability Map

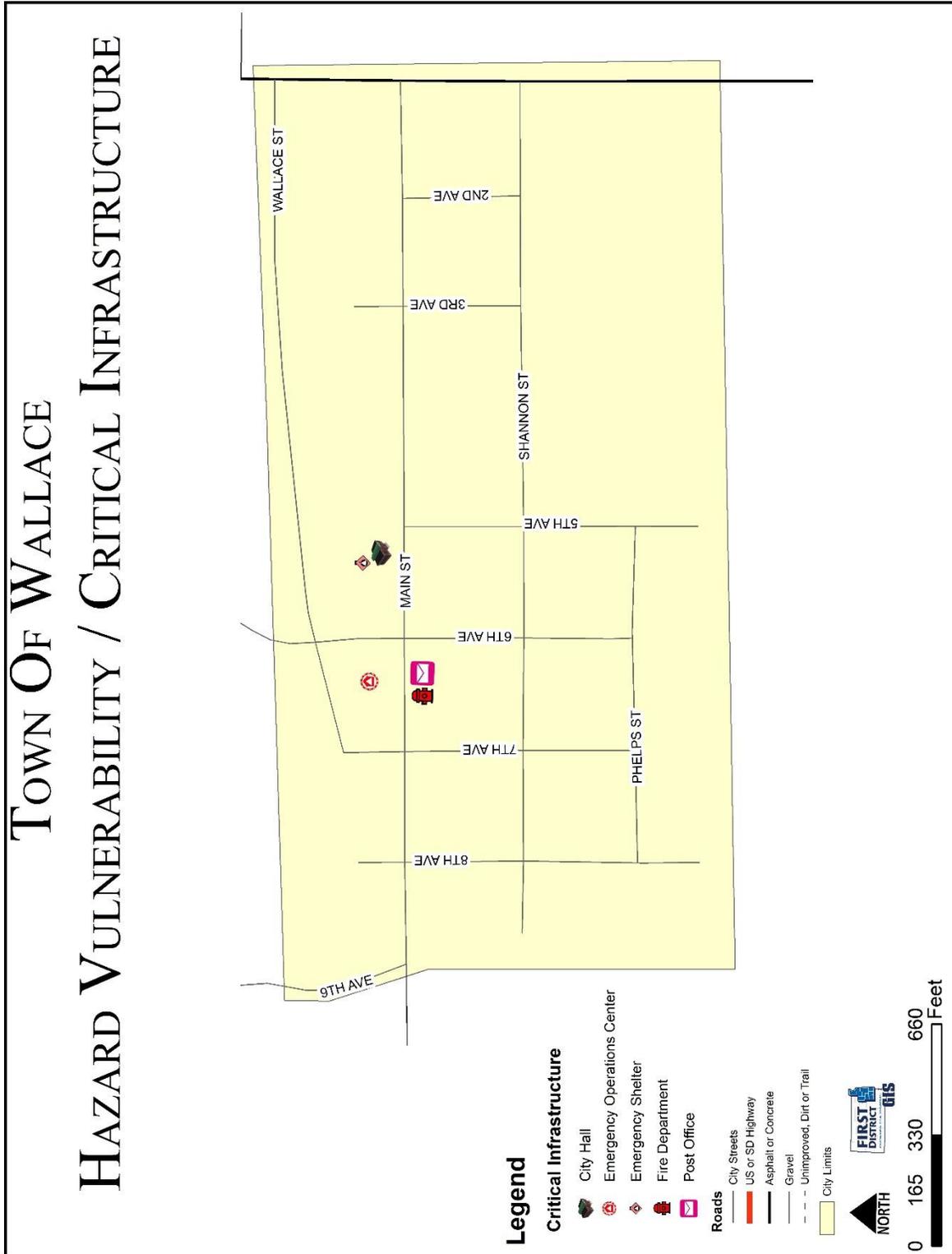
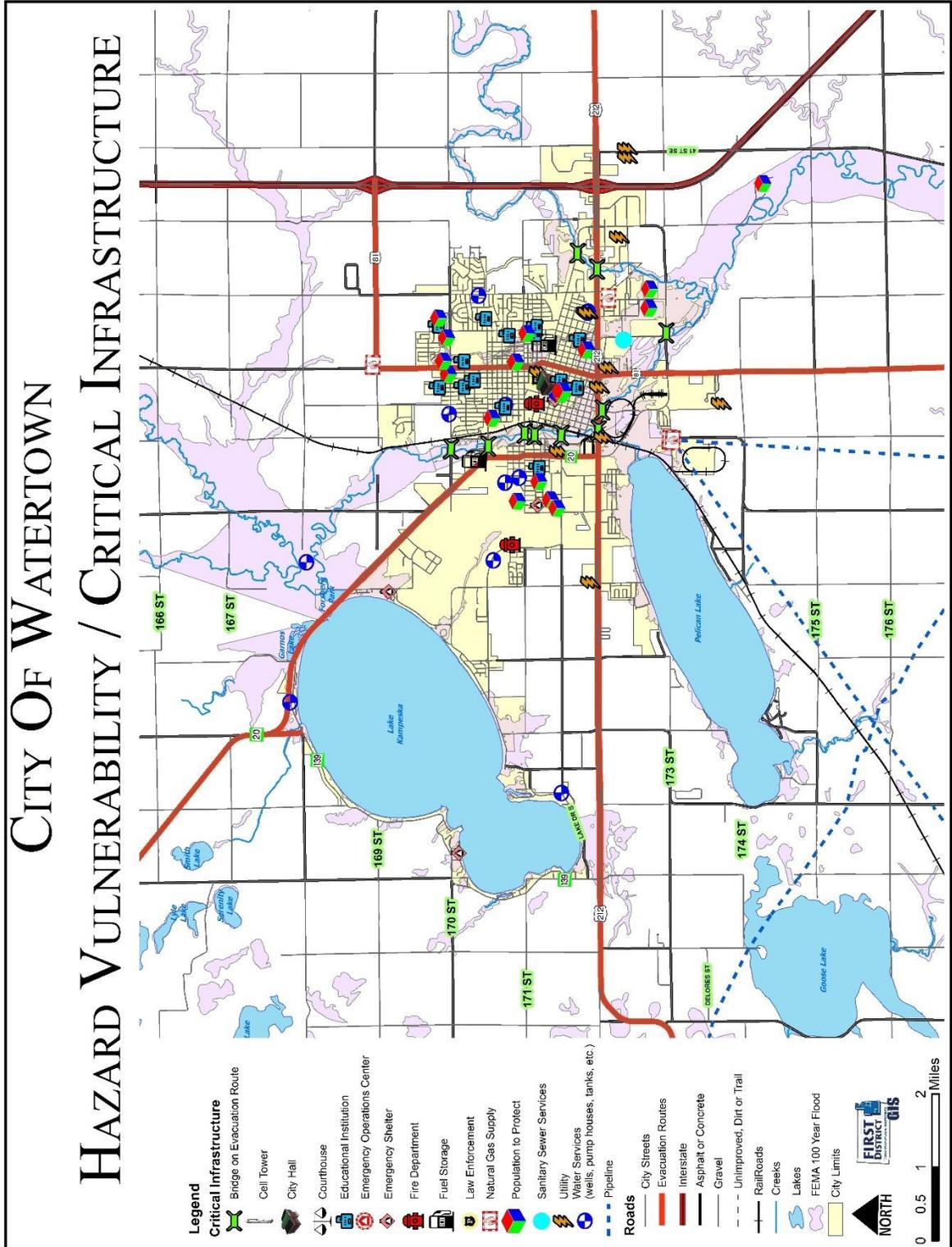


Figure 4.8: City of Watertown Hazard Vulnerability Map





## CHAPTER 5 | MITIGATION STRATEGY

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### MITIGATION OVERVIEW

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

*Requirement 201.6(c)(3)(ii). Local Mitigation Plan Review Tool – C4.*

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

*Requirement 201.6(d)(3). Local Mitigation Plan Review Tool – D3.*

The State Hazard Mitigation Plan addresses several mitigation categories including warning and forecasting, community planning, and infrastructure reinforcement. The County and participating entities' greatest needs are mitigating flood hazards, backup generators for critical infrastructure, construction of storm shelters, and public awareness.

After the completion of the risk assessment (identification of hazards, probability of hazards, and vulnerability to hazards), it was the mutual consensus of the PDM Planning Team that mitigation strategies of the PDM should focus on the following hazards: winter storms, severe summer storms, flooding, and wildfires (urban/rural).

The PDM Planning Team first reviewed the goals, objectives, and priorities of the previous Plan. The goals and objectives of the previous plan were incorporated into the goals of this plan. The PDM Planning Team completed the goal identification process by considering the county's and participating jurisdictions' vulnerability to each identified hazard, and the severity of the threat posed by each hazard. Much of the discussion focused on damage caused by past events, and what could be done to ensure that future damage will be lessened or eliminated. By reviewing each jurisdiction's Comprehensive Land Use Plan (if available), the participants also considered how future development might affect the county's and participating jurisdictions' vulnerability to the hazards they face.

When identifying goals, numerous activities and projects were identified with broadly defined benefits to numerous jurisdictions within the County. Numerous actions were agreed by the PDM Planning Team to have broad reaching benefits but due to scope or varying levels of importance to individual jurisdictions no specific cost, timeframe, or priority was assigned. Likewise many infrastructure projects and policies throughout all communities would mitigate hazards but were not located in the most vulnerable areas. For example, all communities benefit from flood-proofing lift stations or burying above ground electric utility lines. Specific projects are listed in Table 5.1 and represented in Figures 5.1 through 5.7).

All communities reviewed the activities/policies and corresponding problem statements to identify whether they applied to their respective jurisdiction. The results of the community review of those general activities/policies are displayed in Tables 5.1 – 5.12. Specific projects for each community are listed in Table 5.13. Those projects intended to mitigate problems at a specific location are represented in Figures 5.1 to 5.9.

## 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 Codington County from flooding.

**Goal #2:** Educate and inform Codington County residents regarding flooding safety.

**Goal #3:** Reduce the extent to which utility interruptions affect areas during flooding events.

- **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 weather issues.

**Goal #2:** Improve public safety during severe weather.

**Goal #3:** Reduce the extent to which utility interruptions affect areas during severe weather situations.

**Goal #4:** Reduce crippling effects of winter storms, especially regarding smaller communities.

- **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**

<b>Problem Statements</b>	<b>Actions</b>	<i>Florence</i>	<i>Henry</i>	<i>Kranzburg</i>	<i>South Shore</i>	<i>Wallace</i>	<i>Watertown</i>	<i>Codington County</i>
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 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 flood plain management ordinance.	✓		✓	✓		✓	✓
Jurisdiction is unaware of opportunities to participate 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 has little legal mechanism to regulate drainage.	Developing a county/city drainage ordinance.	✓	✓	✓	✓	✓		

<b>Problem Statements</b>	<b>Actions</b>	<i>Florence</i>	<i>Henry</i>	<i>Kranzburg</i>	<i>South Shore</i>	<i>Wallace</i>	<i>Watertown</i>	<i>Codington County</i>
Need to continue to regulate minimum land use and development standards.	Continue enforcement of zoning and subdivision ordinances.	✓	✓	✓	✓		✓	✓
Need to continue to regulate minimum construction standards.	Continue enforcement of building codes.						✓	
No 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.						✓	✓

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

<b>Problem Statements</b>	<b>Actions</b>	<i>Florence</i>	<i>Henry</i>	<i>Kranzburg</i>	<i>South Shore</i>	<i>Wallace</i>	<i>Watertown</i>	<i>Codington County</i>
Portions of storm sewer system is not designed to 100-year flood event.	Install or upgrade storm sewer piping.	✓	✓	✓	✓	✓	✓	✓
Flooding impacts have become more severe along lakes, creeks, and streams.	Install or upgrade dam structures to increase flood control and store water.						✓	✓
Drainage patterns have changed; culverts are inadequate for conveyance of water.	Install or enlarge drainage culverts.	✓	✓	✓	✓	✓	✓	✓
	Install drain tile.							✓
	Install or enlarge detention/retention ponds.	✓	✓	✓	✓	✓	✓	✓

<b>Problem Statements</b>	<b>Actions</b>	<i>Florence</i>	<i>Henry</i>	<i>Kranzburg</i>	<i>South Shore</i>	<i>Wallace</i>	<i>Watertown</i>	<i>Codington County</i>
Certain streets have substandard or no curb and gutter.	Curbing and guttering of city streets to improve stormwater flow.	✓	✓	✓	✓	✓	✓	✓
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 additional stream gages along rivers within the County.							✓
	Install riprap along creek shorelines.				✓		✓	✓
Sanitary and/or storm sewer are vulnerable to back-up in flood event.	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**

<b>Problem Statements</b>	<b>Actions</b>	<i>Florence</i>	<i>Henry</i>	<i>Kranzburg</i>	<i>South Shore</i>	<i>Wallace</i>	<i>Watertown</i>	<i>Codington County</i>
Many roads and bridges were built prior to identification of flood hazard areas.	Replace and raise bridges.	✓	✓	✓	✓	✓	✓	✓
	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.	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**

<b>Problem Statements</b>	<b>Actions</b>	<i>Florence</i>	<i>Henry</i>	<i>Kranzburg</i>	<i>South Shore</i>	<i>Wallace</i>	<i>Watertown</i>	<i>Codington County</i>
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 within the information would include: safety issues on downed power lines, electrical and fire dangers, the necessity for generators and advice on using them, protecting property, survival strategies during storms, and purchasing of back-up power for various household and farming operations.	✓	✓	✓	✓	✓	✓	✓
Lack of data regarding vulnerability to severe storms.	Gather data to create a more precise loss estimate for winter storms.	✓	✓	✓	✓	✓	✓	✓
	Gather data to create a more precise loss estimate for summer storms.	✓	✓	✓	✓	✓	✓	✓

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

<b>Problem Statements</b>	<b>Actions</b>	<i>Florence</i>	<i>Henry</i>	<i>Kranzburg</i>	<i>South Shore</i>	<i>Wallace</i>	<i>Watertown</i>	<i>Codington County</i>
Certain areas and populations are not served by storm shelters.	Construct tornado safe rooms or community shelters.	✓	✓	✓	✓	✓	✓	✓
	Construct storm shelters at manufactured home and RV parks.						✓	✓
Critical facilities are vulnerable to power failure.	Install backup generators.	✓	✓	✓	✓	✓	✓	✓
Certain areas are susceptible to snow drifting.	Survey areas in need of snow shelterbelts and plant trees accordingly.							✓
	Install or plant living snow fences.							✓
Certain areas of town cannot hear storm sirens and other emergency warning systems.	Construct new warning systems.	✓	✓	✓	✓	✓	✓	✓
Storm sirens and other emergency warning systems are outdated.	Replace or upgrade existing warning systems.	✓	✓	✓	✓		✓	
Lack of emergency preparedness supplies and equipment.	Ensure emergency shelters are stocked with adequate supplies.	✓	✓	✓	✓	✓	✓	✓

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

<b>Problem Statements</b>	<b>Actions</b>	<i>Florence</i>	<i>Henry</i>	<i>Kranzburg</i>	<i>South Shore</i>	<i>Wallace</i>	<i>Watertown</i>	<i>Codington County</i>
Utility lines and structures are subject to failure in high wind, heavy rain, and ice events.	Upgrading of utility lines.	✓	✓	✓	✓	✓	✓	✓
	Burial of utility lines when needed.	✓	✓	✓	✓	✓	✓	✓
	Require upgrading of overhead lines when age or disasters provide an opportunity.	✓	✓	✓	✓	✓	✓	✓
	Removal of trees near power lines.	✓	✓	✓	✓	✓	✓	✓
	Attachment of guy wires to dead-end poles.	✓	✓	✓	✓	✓	✓	✓
	Testing integrity of poles.	✓	✓	✓	✓	✓	✓	✓
	Usage of anti-galloping devices.	✓	✓	✓	✓	✓	✓	✓
	Making structural retrofits to facilities.	✓	✓	✓	✓	✓	✓	✓

## **Mitigation Activities for Fire and Drought Hazards**

**Goal #1:** Increase firefighting capabilities.

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

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

- **Actions/Projects to Reduce Fire and Drought Risk through Policy Implementation (See Table 5.7)**
- **Actions/Projects to Reduce Loss Potential of Infrastructure to Fire and Drought Hazards (See Table 5.8)**
- **Actions/Projects to Change the Characteristics or Impacts of Fire and Drought Hazards (See Table 5.9)**

## **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**

<b>Problem Statements</b>	<b>Actions</b>	<b>Florence</b>	<b>Henry</b>	<b>Kranzburg</b>	<b>South Shore</b>	<b>Wallace</b>	<b>Watertown</b>	<b>Codington County</b>
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 benefits of conserving water.	Educate residents on 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**

<b>Problem Statements</b>	<b>Actions</b>	<b>Florence</b>	<b>Henry</b>	<b>Kranzburg</b>	<b>South Shore</b>	<b>Wallace</b>	<b>Watertown</b>	<b>Codington County</b>
Firefighting equipment becomes out of date quickly.	Ensure that fire departments are adequately equipped to respond to wildfires.	✓	✓	✓	✓	✓	✓	✓
Fire hydrants become unusable.	Have rural fire departments locate dry fire hydrants.	✓	✓	✓	✓	✓	✓	✓
Fire protection capabilities are limited.	Construct additional water supply and improve existing infrastructure to allow hydrant hook-ups.			✓			✓	✓
	Construct additional fire station.						✓	

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

<b>Problem Statements</b>	<b>Actions</b>	<i>Florence</i>	<i>Henry</i>	<i>Kranzburg</i>	<i>South Shore</i>	<i>Wallace</i>	<i>Watertown</i>	<i>Codington County</i>
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 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**

<b>Problem Statements</b>	<b>Actions</b>	<i>Florence</i>	<i>Henry</i>	<i>Kranzburg</i>	<i>South Shore</i>	<i>Wallace</i>	<i>Watertown</i>	<i>Codington County</i>
Current data and software can become obsolete or out of date	Continue utilizing a working computer aided mapping project for the County. This includes using overlays of GIS data, HazMat, 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**

<b>Problem Statements</b>	<b>Actions</b>	<b>Florence</b>	<b>Henry</b>	<b>Kranzburg</b>	<b>South Shore</b>	<b>Wallace</b>	<b>Watertown</b>	<b>Codington County</b>
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. Specifically, 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**

<b>Problem Statements</b>	<b>Actions</b>	<i>Florence</i>	<i>Henry</i>	<i>Kranzburg</i>	<i>South Shore</i>	<i>Wallace</i>	<i>Watertown</i>	<i>Codington County</i>
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 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 meetings with the local jurisdictions and opportunities for public input, a series of mitigation goals were devised to best aid the County in reducing and lessening the effects of hazards. Projects previously identified in the 2017 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. These projects were evaluated based on a cost/benefit ratio and priority. Although this PDM focuses on disaster mitigation rather than disaster preparedness, some communities discussed 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 currently are not well served.

Most of the mitigation actions proposed by the jurisdictions were identified by city council or town board members, public works personnel, or PDM Planning Team members from the jurisdictions. 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 third PDM Planning Team meeting, the actions were reviewed, and a final opportunity was given for the jurisdictions to add any additional actions.

Although in some cases additional data will be necessary, 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, County, communities, townships, and utility providers. 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 (discussed in the next section).
- The timeframe 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, and “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 - estimates for many of the actions were obtained from knowledgeable sources based on current information. Estimates are subject to change due to specific details of specific projects.
- 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 wide ranging implications to them include townships and most utility providers (responses for Watertown Municipal Utilities were gathered with other departments of the City of Watertown Staff). 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 was the burying of overhead powerlines and burying deeper water lines in rural areas of the county.

In addition, townships were mailed maps showing mitigation sites and were offered the opportunity to update projects within their jurisdiction. Each individual township provided maps in varying detail regarding potential mitigation activities. Primarily these activities included replacing culverts with larger culverts, elevating or rip-rapping roads, and reconstructing roads. Appendix E includes maps of vulnerable sites and potential mitigation actions proposed by the townships in the County.

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 realistically cannot 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 Building Resilient Infrastructure and Communities Grant, Pre-Disaster Mitigation grant program, and Flood Mitigation Assistance grant programs. Other possible sources of funding include:

#### Grant and Loan Programs/Sources

- Community Development Block Grant program
- Building Resilient Infrastructure and Communities
- 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**

<b>CODINGTON COUNTY PROBLEM STATEMENTS</b>	<b>CODINGTON COUNTY ACTIONS</b>	<b>RATING</b>	<b>TIMEFRAME</b>	<b>CONTACT</b>	<b>COST</b>	<b>FUNDING SOURCE</b>	<b>HAZARD</b>	<b>GOAL</b>
Drainage patterns have changed; culverts are inadequate for conveyance of water.	Install 12" to 18" tile or dig trench to move water away from 442nd Ave between 166 and 167th St.	High	Short	Codington County Highway Superintendent	\$10,000.00	HMGP/BRIC/FMA	Flooding	Protect Specific Areas of Codington County from floods.
Portions of storm sewer system is not designed to 100-year flood event.	Rip Rap Shoreline at Memorial Park	Medium	Medium	Codington County Maintenance Supervisor	\$200,000.00	HMGP/BRIC/FMA/DENR	Flooding	Protect Specific Areas of Codington County from floods.
Residential areas of Codington County cannot hear storm sirens.	Construct additional storm siren on south side of the City of Watertown (west of SD Highway 81).	High	Short	Codington County Emergency Manager/Watertown Fire & Rescue	\$50,000	HMGP/BRIC/OEM/Local	Severe Weather Hazards (Summer and Winter)	Improve public safety during severe weather.
<b>FLORENCE PROBLEM STATEMENTS</b>	<b>FLORENCE ACTIONS</b>	<b>RATING</b>	<b>TIMEFRAME</b>	<b>CONTACT</b>	<b>COST</b>	<b>FUNDING SOURCE</b>	<b>HAZARD</b>	<b>GOAL</b>
Critical facilities are vulnerable to power failure.	Purchase of back-up generator for emergency shelter.	High	Short	(Florence) Finance Officer	\$50,000	HMGP/BRIC/OEM/Local	Severe Weather Hazards (Summer and Winter)	Reduce the extent to which utility mishaps affect areas during severe weather situations.

Lack of emergency preparedness supplies and equipment.	Supplies for emergency shelter (cots, blankets, first aid, etc.)	High	Short	(Florence) Finance Officer	\$5,000	HMGP/BRIC/OEM/Local	Severe Weather Hazards (Summer and Winter)	Improve public safety during severe weather.
Certain areas and populations are not served by storm shelters.	Construction of Tornado Shelter.	Medium	Short	(Florence) Finance Officer	\$200,000	HMGP/BRIC	Tornado	Improve public safety during severe weather.
Many roads and bridges were built prior to identification of flood hazard areas.	Elevate roads in flood-prone areas.	High	Medium	(Florence) Finance Officer	\$550,000	HMGP/BRIC/FMA/DOT	Flooding	Protect Specific Areas of Codrington County from floods.
Many roads and bridges were built prior to identification of flood hazard areas.	Pave evacuation and emergency services routes through town.	High	Long	(Florence) Finance Officer	\$1,000,000	HMGP/BRIC/FMA/DOT	Flooding	Protect Specific Areas of Codrington County from floods.
Town lacks storm sewer system to handle flood events.	Install storm sewer piping.	Medium	Long	(Florence) Finance Officer	\$1,000,000	HMGP/BRIC/FMA	Flooding	Protect Specific Areas of Codrington County from floods.
Storm sirens and other emergency warning systems are outdated.	Upgrade or replace existing storm sirens.	High	Short	(Florence) Finance Officer	\$30,000	HMGP/BRIC/OEM	Severe Weather Hazards	Improve public safety during severe weather.

HENRY PROBLEM STATEMENTS	HENRY ACTIONS	RATING	TIMEFRAME	CONTACT	COST	FUNDING SOURCE	HAZARD	GOAL
Capacity of retention areas is decreased due to accumulation of debris.	Clean out debris in drainage areas to improve water flow.	High	Short	Town Finance Officer	\$25,000	HMGP/FMA/OEM/USDA/Local	Flooding	Protect Specific Areas of Codington County from floods.
Certain areas and populations are not served by storm shelters.	Construction of Tornado Shelter by park.	High	Long	Town Finance Officer	\$50,000	HMGP/BRIC/OEM/USDA/Local	Severe Weather Hazards (Tornado)	Improve public safety during severe weather.
Sanitary sewer is vulnerable to back-up in flood event.	Install riprap around sanitary sewer lagoons (secondary cells).	Medium	Medium	Town Finance Officer	\$65,000	HMGP/BRIC/OEM/DANR/FMA/USDA/Local	Flooding	Protect Specific Areas of Codington County from floods.
Firefighting equipment becomes out of date quickly.	Purchase additional PPE supplies for fire department.	High	Short	Henry Fire Dept.	\$10,000	HMGP/OEM/Local/USDA	Fire	Increase firefighting capabilities.
Utility lines are subject to failure in high wind, heavy rain, and ice events.	Burial of utility lines when needed.	Low	Long	Northwestern Energy/Interstate Telecommunications Coop	\$500,000	HMGP/BRIC/OEM/USDA/Local	Severe Weather Hazards (Summer and Winter)	Reduce the extent to which utility interruptions affect areas during severe weather situations.

<b>KRANZBURG PROBLEM STATEMENTS</b>	<b>KRANZBURG ACTIONS</b>	<b>RATING</b>	<b>TIMEFRAME</b>	<b>CONTACT</b>	<b>COST</b>	<b>FUNDING SOURCE</b>	<b>HAZARD</b>	<b>GOAL</b>
Certain areas of town cannot hear storm sirens and other emergency warning systems.	Construct new additional warning system.	Low	Medium	Town Board President	\$30,000	HMGP/BRIC/OEM	Severe Weather Hazards (Summer and Winter)	Improve public safety during severe weather.
Drainage patterns have changed; culverts are inadequate for conveyance of water.	Install drainage tile in center of community near ballpark.	Medium	Short	Town Board President	\$50,000	HMGP/BRIC/FMA	Flooding	Protect Specific Areas of Codington County from floods.
City does not have designated emergency or storm shelters.	Construct Tornado Shelter.	High	Short	Town Board President	\$50,000	HMGP/BRIC/OEM/USDA/Local	Tornado	Improve public safety during severe weather.
Sanitary and/or storm sewer are vulnerable to back-up in flood event.	Install riprap around sewer pond and implement upgrades.	Medium	Medium	Town Board President	\$50,000	HMGP/BRIC/OEM/DANR/FMA/USDA/Local	Flooding	Protect Specific Areas of Codington County from floods.
Jurisdiction has little legal mechanism to regulate drainage.	Update zoning ordinance by adopting drainage regulations.	Medium	Short	Town Board President	\$3,000	FMA/Local	Flooding	Improve public safety during severe weather.

Fire protection capabilities are non-existent in the community.	Construct fire hydrant to provide water supply hook-ups during an emergency.	High	Short	Town Board President	\$50,000	HMGP/BRIC/OEM/USDA/Local	Fire	Increase firefighting capabilities.
<b>SOUTH SHORE PROBLEM STATEMENTS</b>	<b>SOUTH SHORE ACTIONS</b>	<b>RATING</b>	<b>TIMEFRAME</b>	<b>CONTACT</b>	<b>COST</b>	<b>FUNDING SOURCE</b>	<b>HAZARD</b>	<b>GOAL</b>
Sanitary sewer is vulnerable to back-up in flood event.	Educate & encourage purchase of backflow prevention for private residences.	Medium	Medium	Town Board President	\$20,000	HMGP/BRIC/Local	Flooding	Reduce the extent to which utility mishaps affect areas during severe weather situations.
Some utility structures are located in areas vulnerable to flooding.	Improve and upgrade Water System.	High	Short	Town Board President	\$7,000,000	DENR/HMGP/BRIC	Flooding	Protect Specific Areas of Codington County from floods.
City does not have designated emergency or storm shelters.	Construct Tornado Shelter.	Medium	Medium	Town Board President	\$50,000	HMGP/BRIC/OEM/USDA/Local	Tornado	Improve public safety during severe weather.
Lack of emergency preparedness supplies and equipment.	Ensure emergency shelters are stocked with adequate supplies.	Medium	Short	Town Board President	\$10,000	Local/HMGP	Severe Weather Hazards (Summer and Winter)	Improve public safety during severe weather.

Fire protection capabilities are limited.	Construct additional ground storage for water supply.	High	Short	Town Board President	\$2,000,000	HMGP/Fire/OEM/BRIC	Fire	Increase firefighting capabilities.
<b>WALLACE PROBLEM STATEMENTS</b>	<b>WALLACE ACTIONS</b>	<b>RATING</b>	<b>TIMEFRAME</b>	<b>CONTACT</b>	<b>COST</b>	<b>FUNDING SOURCE</b>	<b>HAZARD</b>	<b>GOAL</b>
Many roads and bridges were built prior to identification of flood hazard areas.	Reconstruct and raise Phelps St. improve drainage associated with it.	Medium	Medium	(Wallace) Town Board	\$15,000	HMGP/DENR/FMA/BRIC	Flooding	Protect Specific Areas of Codington County from floods.
Critical facilities are vulnerable to power failure.	Purchase of back-up generator for Fire Hall.	High	Short	(Wallace) Town Board	\$50,000	HMGP/OEM/BRIC	Severe Weather Hazards (Summer & Winter)	Reduce the extent to which utility mishaps affect areas during severe weather situations.
Certain areas and populations are not served by storm shelters.	Construction of tornado shelter.	Medium	Long	(Wallace) Town Board	\$50,000	HMGP/OEM/BRIC/USDA	Tornado	Improve public safety during severe weather.
Utility lines and structures are subject to failure during high wind or ice events.	Burial of utility lines when needed.	Low	Long	Town Board/ NorthWestern Energy	Dependent on type of line and construction method.	HMGP/BRIC/OEM/USDA	Severe Weather Hazards (Summer & Winter)	Reduce the extent to which utility mishaps affect areas during severe weather situations.

<b>WATERTOWN PROBLEM STATEMENTS</b>	<b>WATERTOWN ACTIONS</b>	<b>RATING</b>	<b>TIMEFRAME</b>	<b>CONTACT</b>	<b>COST</b>	<b>FUNDING SOURCE</b>	<b>HAZARD</b>	<b>GOAL</b>
Flooding impacts have become more severe along lakes, creeks, and streams.	Construct dam on Big Sioux Fiver south of Mahoney Creek tributary.	High	Long	City Engineer	\$40,000,000	USACE/FMA/BRIC/HMGP	Flooding	Protect Specific Areas of Codington County from floods.
Portions of storm sewer system is not designed to 100-year flood event.	Replace or upgrade storm sewer on 11th St East.	High	Medium	City Engineer	\$1,200,000	DOT/HMGP/BRIC/FMA	Flooding	Protect Specific Areas of Codington County from floods.
Capacity of rivers, streams, and retention areas is decreased due to accumulation of debris.	Implement drainage improvements, such as bank stabilization, detention areas, and clean out plans for Roby Creek.	Medium	Medium	City Engineer	\$500,000	DENR/HMGP/FMA	Flooding	Protect Specific Areas of Codington County from floods.
Many roads and bridges were built prior to identification of flood hazard areas.	Replace bridge on 3rd Ave.	High	Medium	City Engineer	\$500,000	DOT/HMGP/BRIC/FMA	Flooding	Protect Specific Areas of Codington County from floods.
Some utility structures are located in areas vulnerable to flooding.	Construct berms to floodproof lift stations around Lake Kampeska (5 locations at Sandy Shores & Memorial Park).	High	Medium	Watertown Municipal Utilities	\$250,000	HMGP/BRIC/FMA	Flooding	Reduce the extent to which utility mishaps affect areas during flooding events.

Some utility structures are located in areas vulnerable to flooding.	Storm sewer isolation structures need general improvements/berming.	High	Medium	Watertown Municipal Utilities	\$500,000	HMGP/BRIC/DENR/FMA	Flooding	Reduce the extent to which utility mishaps affect areas during flooding events.
Certain areas and populations are not served by storm shelters.	Construct a Tornado Shelter near the City's mobile home parks.	High	Medium	Fire Department	\$40,000	HMGP/OEM/BRIC/USDA/Local	Severe Weather Hazards (Summer & Winter)	Improve public safety during severe weather.
Certain areas and populations are not served by storm shelters.	Construct a Tornado Shelter near the City's mobile home parks.	High	Medium	Fire Department	\$50,000	HMGP/OEM/BRIC/USDA/Local	Severe Weather Hazards (Summer & Winter)	Improve public safety during severe weather.
Structures constructed in the floodplain prior to identification of flood hazard areas.	Mitigation of repetitive loss residences through elevation, buyout, or relocation.	Low	Long	City Engineer	\$2,250,000 (\$30,000 per site).	HMGP/FMA/Local	Flooding	Reduce the extent to which utility mishaps affect areas during flooding events.
Portions of storm sewer system is not designed to 100-year flood event.	Improve drainage on Jensen Avenue.	Medium	Medium	City Engineer	\$800,000	Local/DOT/HMGP/BRIC	Flooding	Protect Specific Areas of Codington County from Flooding.
Critical facilities are vulnerable to power failure.	Portable Generator for lift stations (3).	Low	Medium	Wastewater Superintendent	\$200,000	HMGP/OEM/BRIC	Severe Weather Hazards (Summer & Winter)	Reduce the extent to which utility mishaps affect areas during flooding events.

Portions of storm sewer system is not designed to 100-year flood event.	Improve drainage south at approximate 7 <sup>th</sup> Street location.	Medium	Medium	City Engineer	Unknown	HMGP/BRIC/ FMA/DOT/ Local	Flooding	Protect Specific Areas of Codington County from Flooding.
Drainage patterns have changed; existing systems are inadequate for conveyance of water.	Improve Highland Park drainage from intersection of Karen St and 4 <sup>th</sup> Street SW to Highland Park.	Medium	Short	City Engineer	Unknown	HMGP/BRIC/ FMA/DOT/ Local	Flooding	Protect Specific Areas of Codington County from Flooding.
Drainage patterns have changed; existing systems are inadequate for conveyance of water.	Implement drainage improvements around Nelson Park area, especially on South Broadway.	Medium	Medium	City Engineer	Unknown	HMGP/BRIC/ FMA/DOT/ Local	Flooding	Protect Specific Areas of Codington County from Flooding.
Critical facilities are vulnerable to power failure.	Upgrade back-up generator for uptown fire station.	Medium	Short	Fire Department	\$50,000	HMGP/OEM/ BRIC	Severe Weather Hazards (Summer & Winter)	Reduce the extent to which utility mishaps affect areas during severe weather situations.
Certain areas of town cannot hear storm sirens and other emergency warning systems.	Construct additional weather sirens at 800 33 <sup>rd</sup> St SE and 400 20 <sup>th</sup> Ave SW.	Medium	Medium	Fire Department	\$100,000	HMGP/OEM/ BRIC	Severe Weather Hazards (Summer & Winter)	Improve public safety during severe weather.

Certain streets have substandard or no curb and gutter.	Install curb and gutter, culverts, and other road improvements on 1 mile of 31 <sup>st</sup> St NE (collector route).	High	Short	City Engineer	\$1,000,000	DOT/HMGP/BRIC/County/Township	Flooding	Protect Specific Areas of Codington County from Flooding.
Fire protection capabilities are limited.	Construct new fire station at 2300 3 <sup>rd</sup> Ave NE & 22 <sup>nd</sup> St.	High	Long	Fire Department	\$2,000,000	HMGP/BRIC/Fire/OEM/Local	Fire & Drought	Increase firefighting capabilities.
Fire protection capabilities are limited.	Implement street improvements by new fire station, increase water mainline size, & other utility improvements.	High	Long	Fire Department	\$1,000,000	Local/HMGP/Fire/DOT/OEM/BRIC	Fire & Drought	Increase firefighting capabilities.
<b>CODINGTON-CLARK ELECTRIC PROBLEM STATEMENTS</b>	<b>CODINGTON-CLARK ELECTRIC ACTIONS</b>	<b>RATING</b>	<b>TIMEFRAME</b>	<b>CONTACT</b>	<b>COST</b>	<b>FUNDING SOURCE</b>	<b>HAZARD</b>	<b>GOAL</b>
Utility lines and structures are subject to failure in high wind, heavy rain, and ice events.	Burial of Overhead Lines (Line S).	High	Short	Codington-Clark Electric	\$175,000	HMGP/USDA BRIC/Local	Severe Weather Hazards (winter)	Reduce the extent to which utility mishaps affect areas during severe weather situations.
Utility lines and structures are subject to failure in high wind, heavy rain, and ice events.	Burial of Overhead Lines (Line in Sections 15 and 16 of Dexter Township).	Medium	Medium	Codington-Clark Electric	\$100,000	HMGP/USDA BRIC/Local	Severe Weather Hazards (winter)	Reduce the extent to which utility mishaps affect areas during severe weather situations.

Utility lines and structures are subject to failure in high wind, heavy rain, and ice events.	Burial of Overhead Lines (Line in Sections 14 and 23 Dexter Township).	Medium	Medium	Codington-Clark Electric	\$100,000	HMGP/USDA BRIC/Local	Severe Weather Hazards (winter)	Reduce the extent to which utility mishaps affect areas during severe weather situations.
Utility lines and structures are subject to failure in high wind, heavy rain, and ice events.	Burial of remaining overhead lines (typically serving 1 customer per mile).	Low	Medium	Codington-Clark Electric	Dependent on number of miles.	HMGP/USDA BRIC/Local	Severe Weather Hazards (winter)	Reduce the extent to which utility mishaps affect areas during flooding events
<b>H-D ELETRIC PROBLEM STATEMENTS</b>	<b>H-D ELECTRIC ACTIONS</b>	<b>RATING</b>	<b>TIMEFRAME</b>	<b>CONTACT</b>	<b>COST</b>	<b>FUNDING SOURCE</b>	<b>HAZARD</b>	<b>GOAL</b>
Utility lines and structures are subject to failure in high wind, heavy rain, and ice events.	Burial of Overhead Lines.	High	Short	Roger Cutshaw, Engineer, H-D Electric Cooperative	\$100,000	HMGP/USDA BRIC/Local	Severe Weather Hazards (Winter)	Reduce the extent to which utility mishaps affect areas during severe weather situations.
Underground utility structures are subject to failure in flooding events.	Raising of above-ground structures in flood-prone areas.	Low	Medium	Roger Cutshaw, Engineer, H-D Electric Cooperative	\$30,000	HMGP/USDA BRIC/Local	Flooding	Reduce the extent to which utility mishaps affect areas during flooding.

CLARK RURAL WATER PROBLEM STATEMENTS	CLARK RURAL WATER ACTIONS	RATING	TIMEFRAME	CONTACT	COST	FUNDING SOURCE	HAZARD	GOAL
Main lines subject to freezing due to lower temperatures.	Bury identified water mains deeper in the ground.	Medium	Medium	Clark Rural Water	\$50,000	HMGP/USDA BRIC/Local	Severe Weather Hazards (Winter)	Reduce the extent to which utility mishaps affect areas during severe weather situations.

Figure 5.1: Codington County Potential Mitigation Project Map

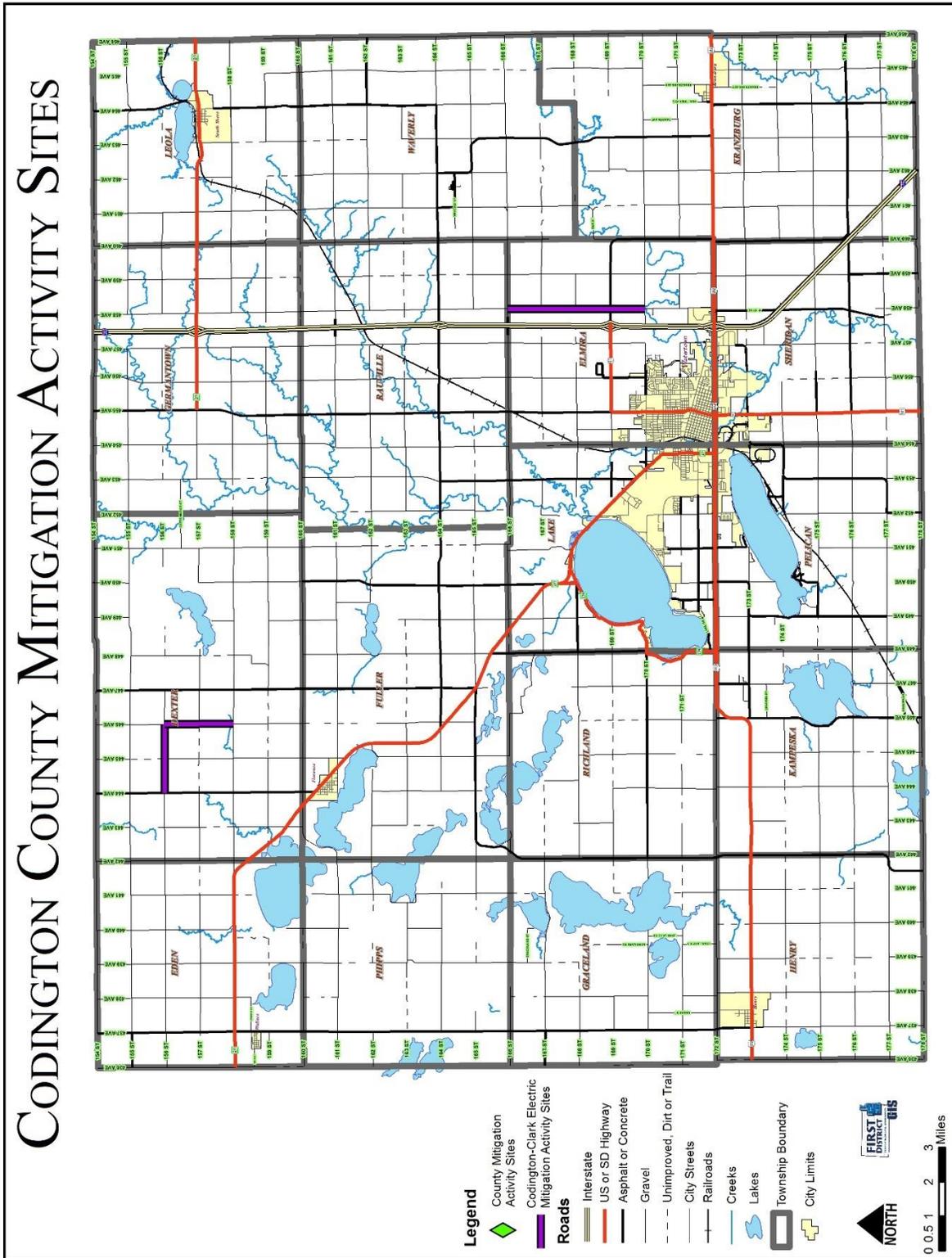


Figure 5.2: Town of Florence Potential Mitigation Project Map

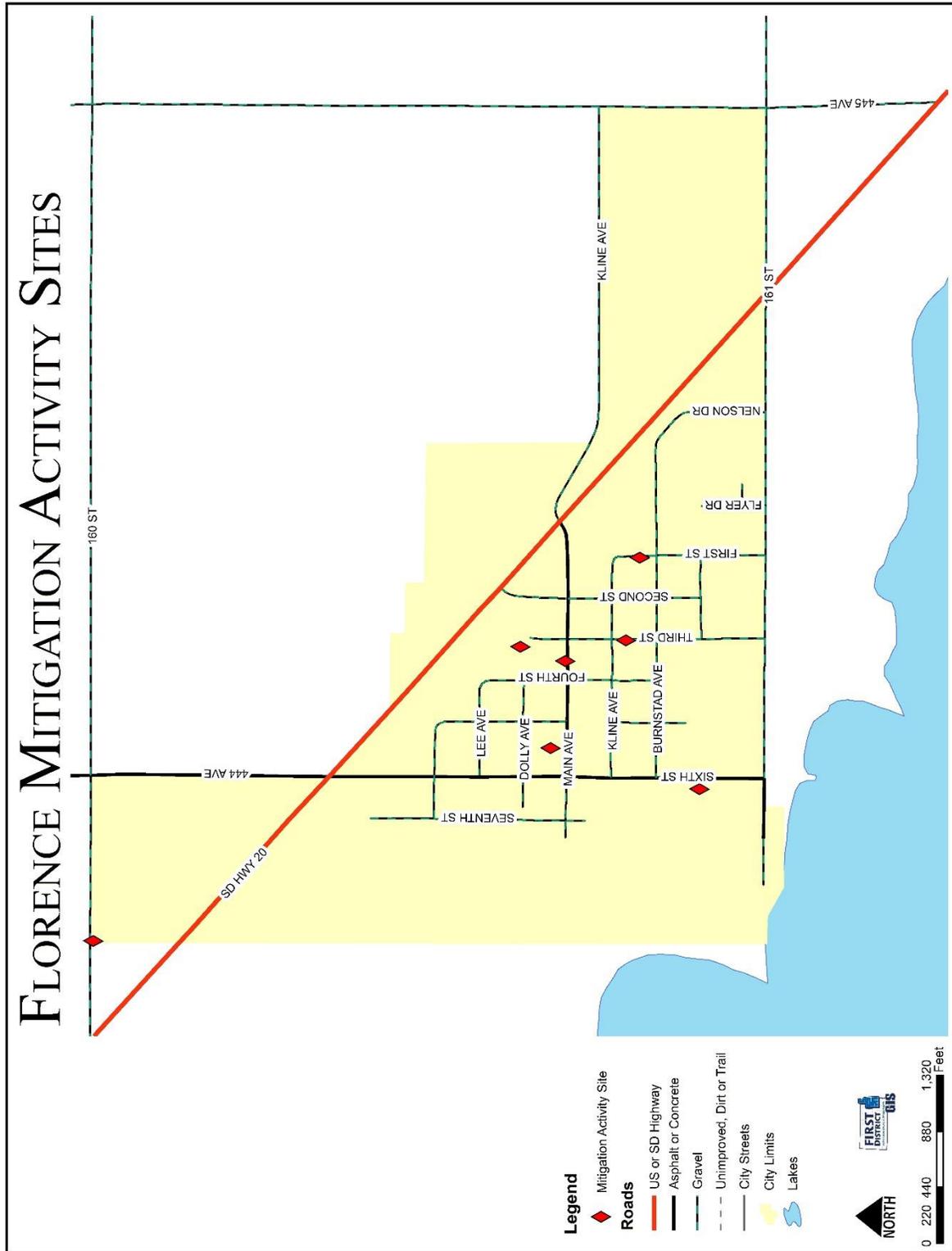


Figure 5.3: Town of Henry Potential Mitigation Project Map

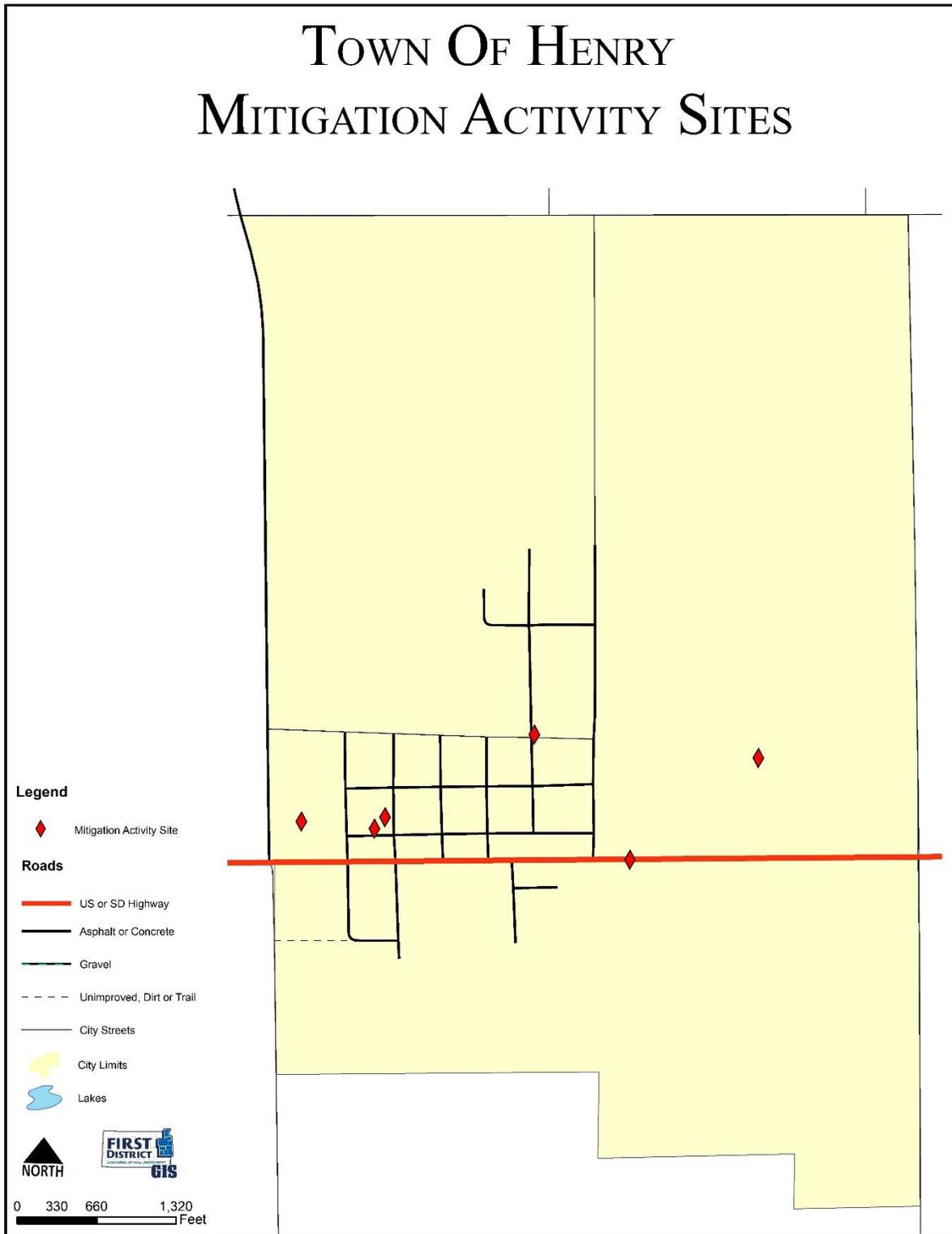


Figure 5.4: Town of Kranzburg Potential Mitigation Project Map

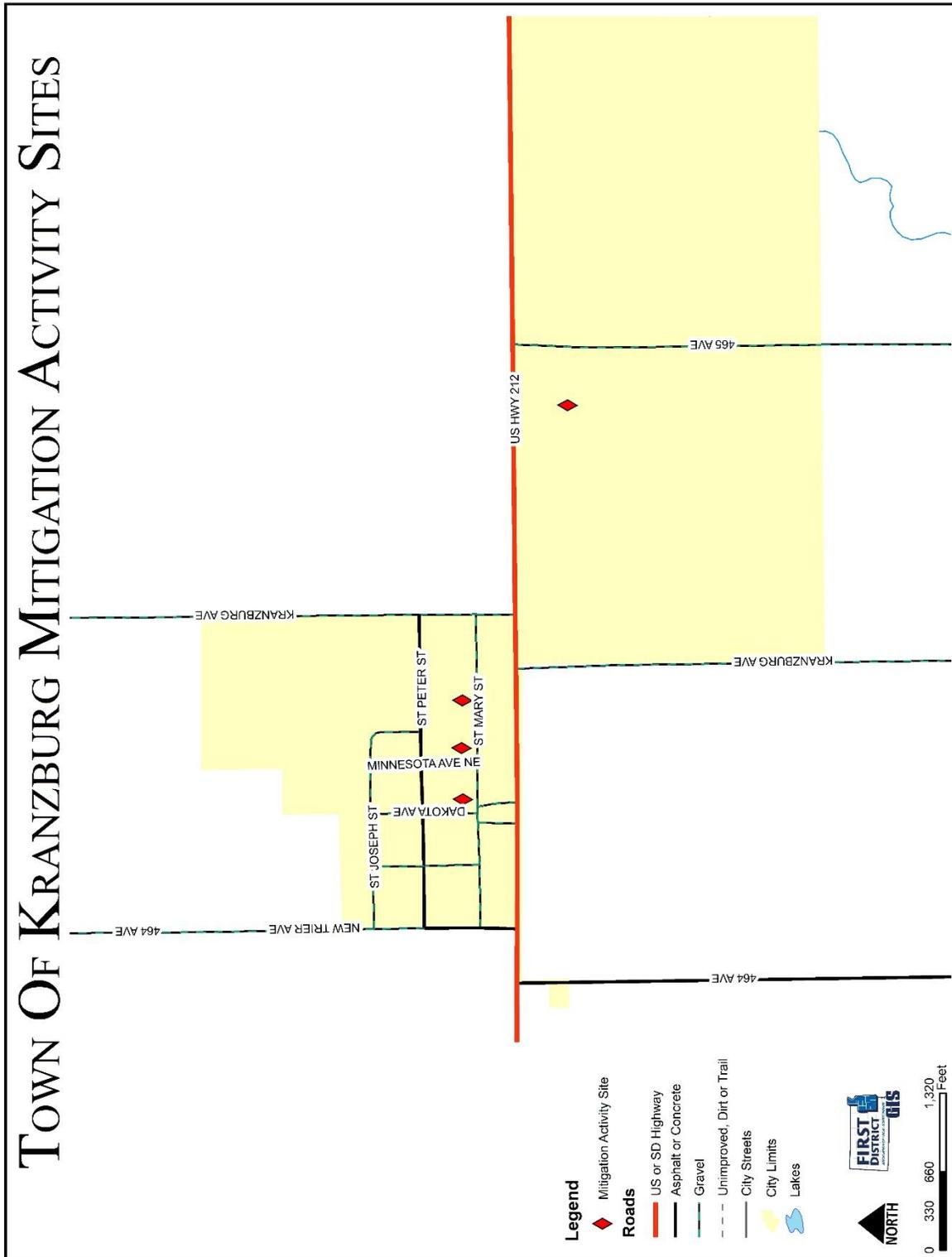


Figure 5.5: Town of South Shore Potential Mitigation Project Map

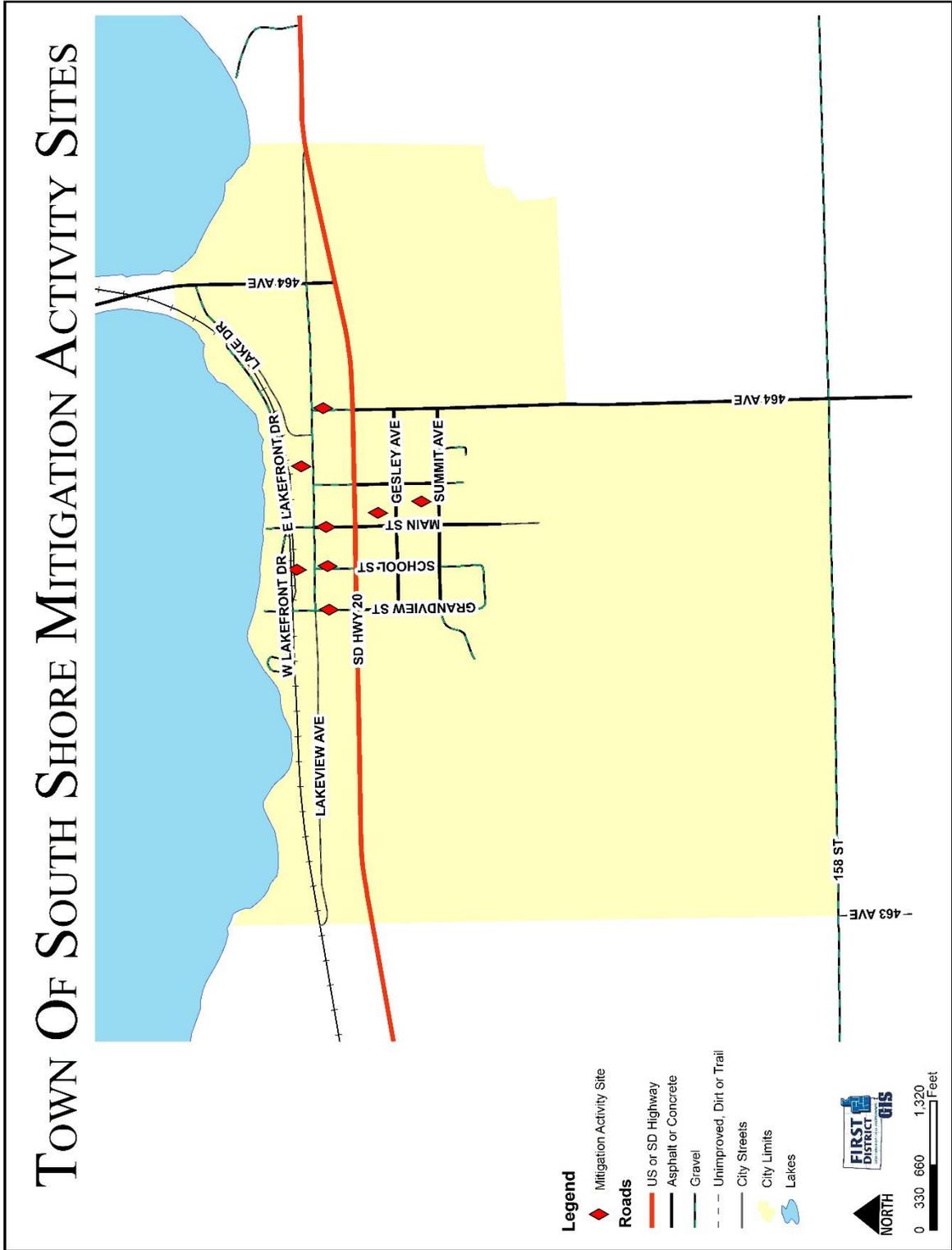


Figure 5.6: Town of Wallace Potential Mitigation Project Map

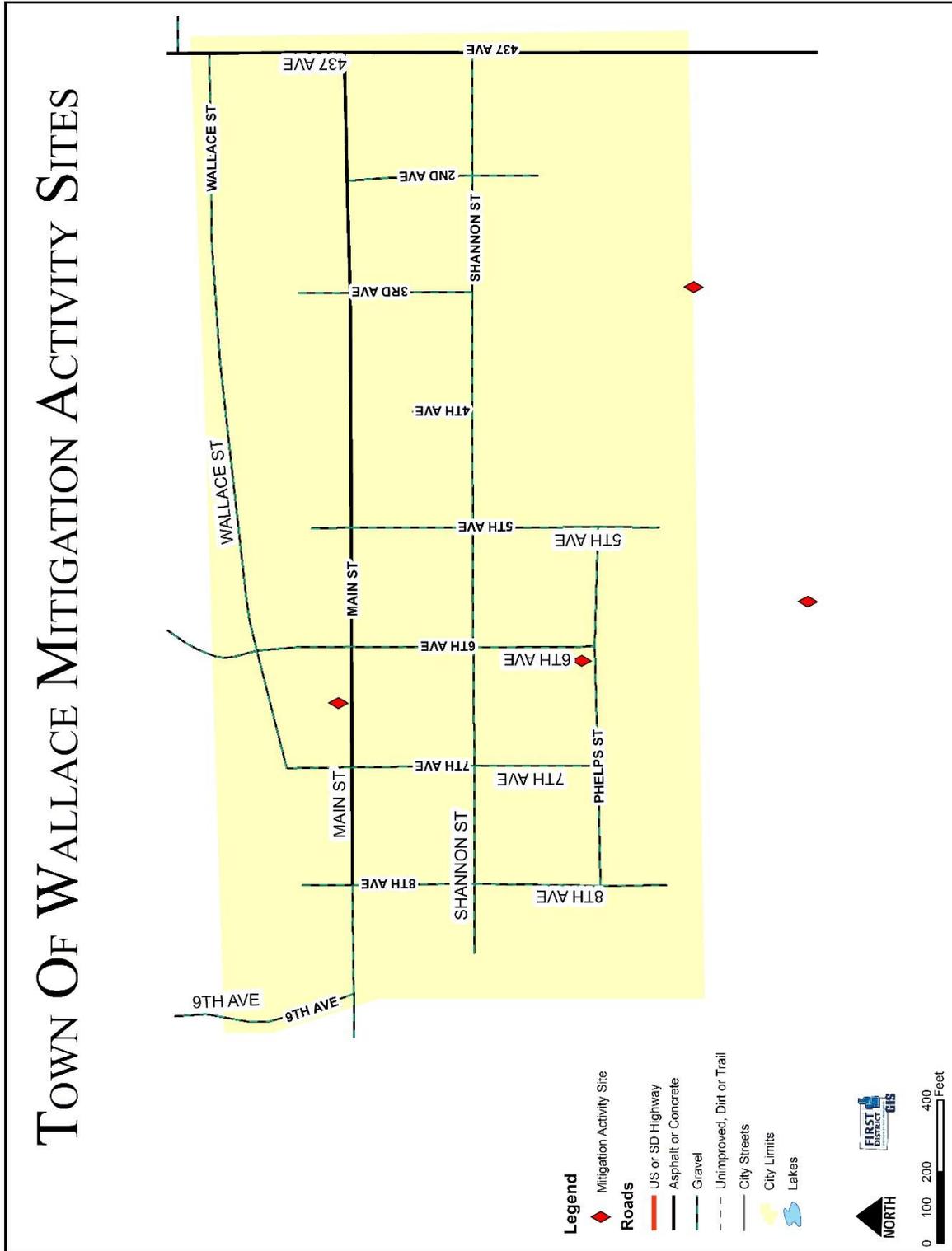
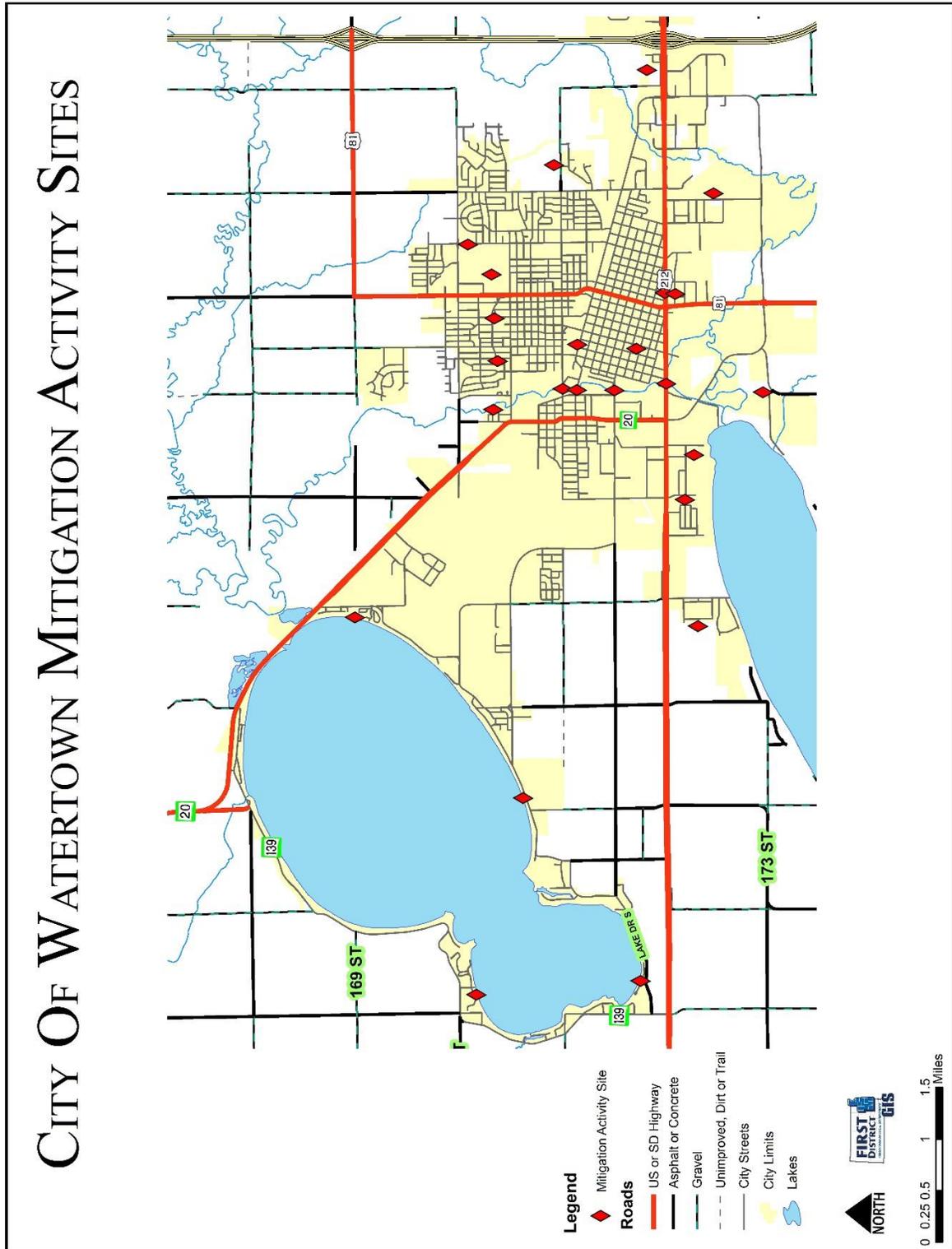


Figure 5.7: City of Watertown Potential Mitigation Project Map



## **IMPLEMENTATION OF MITIGATION ACTIONS**

*Requirement 201.6(c)(4)(ii). Local Mitigation Plan Review Tool – C6.*

*Requirement 201.6(d)(3). Local Mitigation Plan Review Tool – D3.*

Upon adoption of the updated Codington 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. The City of Watertown had several mitigation projects and thus, will prioritize those projects in a manner that will ensure benefit is maximized to the greatest extent possible. A benefit cost analysis will be conducted on an individual basis after the decision is made to move forward with a project.



## CHAPTER 6 | PLAN MAINTENANCE

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### **MONITORING, EVALUATING, AND UPDATING THE PLAN**

*Requirement 201.6(c)(4)(ii). Local Mitigation Plan Review Tool – C6.*

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 Codrington County Emergency Management Director. Communities should adopt a schedule which corresponds with the annual report of the Emergency Management Director to the County Commissioners in November of each year.

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 – A5.*

*Requirement 201.6(c)(4)(ii). Local Mitigation Plan Review Tool – C6.*

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 Codrington County Emergency Management Office located in the Codrington County Courthouse and the First District Association of Local Governments office. The PDM will also be available for review on the web at the Codrington County website ([www.codrington.org](http://www.codrington.org)) and at the First District Association of Local Governments homepage ([www.1stdistrict.org](http://www.1stdistrict.org)). Comments will always be received whether orally, handwritten, or 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)(ii). Local Mitigation Plan Review Tool – C6.*

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 Codington County Emergency Management Director will 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; 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 – A6.*

*Requirement 201.6(c)(4)(ii). Local Mitigation Plan Review Tool – C6.*

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**

*Requirement 201.6(c)(4)(ii). Local Mitigation Plan Review Tool – C6.*

PDM amendments will be considered by the Codington 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.*

All municipalities in the County, with the exception of the Town of Wallace, have a comprehensive and/or capital improvements plan. The Watertown mitigation projects will be considered and prioritized in conjunction with non-mitigation projects, such as water and wastewater infrastructure improvements, new construction of schools, libraries, parks, emergency services, etc. All other 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 Town of Wallace, 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 the small tax base and small population most of the 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:

<b>Title: Pre-Disaster Mitigation Program</b>
Agency: Federal Emergency Management Agency
Through the Disaster Mitigation Act of 2000, Congress approved the creation of a national program to provide a funding mechanism that is not dependent on a Presidential Disaster Declaration. The Pre-Disaster Mitigation (PDM) program provides funding to states and communities for cost-effective hazard mitigation activities that complement a comprehensive mitigation program and reduce injuries, loss of life, and damage and destruction of property.
The funding is based upon a 75% Federal and 25% non-Federal share. The non-Federal match can be fully in-kind or cash, or a combination. Special accommodations will be made for "small and impoverished communities," who will be eligible for 90% Federal/10% non-Federal share.
FEMA provides PDM grants to states that, in turn, can provide sub-grants to local governments for accomplishing the following eligible mitigation activities: State and local hazard mitigation planning, Technical assistance (e.g. risk assessments, project development), Mitigation Projects, Acquisition or relocation of vulnerable properties, Hazard retrofits, Minor structural hazard control or protection projects.
Community outreach and education (up to 10% of State allocation).

<b>Title: Building Resilient Infrastructure and Communities Program</b>
Agency: Federal Emergency Management Agency
Building Resilient Infrastructure and Communities (BRIC) will support states, local communities, tribes, and territories as they undertake hazard mitigation projects, reducing the risks they face from disasters and natural hazards. The BRIC program guiding principles are supporting communities through capability- and capacity-building; encouraging and enabling innovation; promoting partnerships; enabling large projects; maintaining flexibility; and providing consistency.
The Building Resilient Infrastructure and Communities program aims to categorically shift the federal focus away from reactive disaster spending and toward research-supported, proactive investment in community resilience. Examples of BRIC projects are ones that demonstrate innovative approaches to partnerships, such as shared funding mechanisms, and/or project design.
Building Resilient Infrastructure and Communities (BRIC) funds may be used for:
<ul style="list-style-type: none"><li>*Capability and Capacity Building (C&amp;CB) Activities</li><li>*Mitigation Projects</li><li>*Management Costs</li><li>*Existing project types detailed in the Hazard Mitigation Assistance Guidance for the Pre-Disaster Mitigation grant program are eligible under the new BRIC program.</li></ul>

**Title: Flood Mitigation Assistance Program**

Agency: Federal Emergency Management Agency

FEMA's Flood Mitigation Assistance program (FMA) 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 a pre-disaster grant program and is available to states on an annual basis. This funding is available for mitigation planning and implementation of mitigation measures only and is based upon a 75% Federal share/25% non-Federal share. States administer the FMA program and are responsible for selecting projects for funding from the applications submitted by all communities within the state. 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: Hazard Mitigation Grant Program**

Agency: Federal Emergency Management Agency

The Hazard Mitigation Grant Program (HMGP) was created in November 1988 through Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The HMGP assists states and local communities in implementing long-term mitigation measures following a Presidential disaster declaration.

To meet these objectives, FEMA can fund up to 75% of the eligible costs of each project. 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 that may be funded include the acquisition or relocation of structures from hazard-prone areas, the retrofitting of existing structures to protect them from future damages; and the development of state or local standards designed to protect buildings from future damages.

Eligibility for funding under the HMGP is limited to state and local governments, certain private nonprofit organizations or institutions that serve a public function, Indian tribes and authorized tribal organizations. These organizations must apply for HMPG project funding on behalf of their citizens. In turn, applicants must work through their state since the state is responsible for setting priorities for funding and administering the program.

**Title: Repetitive Flood Claims Program**

Agency: Federal Emergency Management Agency

FEMA's Repetitive Flood Claims (RFC) grant program was authorized by the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004 (P.L. 108-264), which amended the National Flood Insurance Act (NFIA) of 1968 (42 U.S.C. 4001, et al).

Up to \$10 million is available annually for FEMA to provide RFC funds to assist States and communities reduce flood damages to insured properties that have had one or more claims to the National Flood Insurance Program (NFIP).

FEMA may contribute up to 100 percent of the total amount approved under the RFC grant award to implement approved activities, if the Applicant has demonstrated that the proposed activities cannot be funded under the Flood Mitigation Assistance (FMA) program.

**Title: Public Assistance (Infrastructure) Program, Section 406**

Agency: Federal Emergency Management Agency

FEMA's Public Assistance Program, through Section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, provides 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 and local governments, Indian tribes or authorized tribal organizations and include:

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

Private nonprofit 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: SBA Disaster Assistance Program**

Agency: US Small Business Administration

The SBA Disaster Assistance Program provides low-interest loans to businesses following a Presidential disaster declaration. The loans target businesses to repair or replace uninsured disaster damages to property owned by the business, including real estate, machinery and equipment, inventory, and supplies. Businesses of any size are eligible; along with non-profit organizations. SBA loans can be utilized by their recipients to incorporate mitigation techniques into the repair and restoration of their business.

**Title: Community Development Block Grants**

Agency: US 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 people. The CDBG program also provides grants for post-disaster hazard mitigation and recovery following a Presidential disaster declaration. Funds can be used for activities such as acquisition, rehabilitation or reconstruction of damaged properties and facilities and for the redevelopment of disaster areas.

**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 and regular 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

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**Appendix A – Resolution of Adoption by Jurisdiction**

**Appendix B – PDM Planning Team Meeting Materials**

**Appendix C – Community Meeting Materials**

**Appendix D – Hazard Identification/Vulnerability Worksheets**

**Appendix E – Township Vulnerable and Potential Mitigation Project Site Maps**

**Appendix F – Comprehensive Land Use Maps**

**Appendix G – Review of 2017 PDM Mitigation Project Implementation**

**Appendix H – References**

**Appendix A**  
**Resolution of Adoption by Jurisdiction**

## Codington County

## Town of Florence

## Town of Henry

## Town of Kranzburg

## Town of South Shore

## Town of Wallace

**City of Watertown**

**Appendix B**  
**PDM Planning Team Meeting Materials**

**Codington County**  
**Pre-disaster Mitigation Planning Team Kickoff Meeting**  
**1:00 p.m. March 3rd, 2022**  
**Station 1 Training Room at Watertown Fire Department**  
**129 1<sup>st</sup> Ave NW, Watertown, South Dakota**

**Public Notice**

**Public Notice** ×

Published in Watertown Public Opinion on February 21, 2022

**Location**

Codington County, South Dakota

**Notice Text**

Codington County

Pre-disaster Mitigation Plan Meeting

Codington County will begin the process of updating the Codington 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 Codington County Pre-disaster Mitigation Planning Team will meet at 1:00 p.m. on Thursday, March 3rd, 2022 in the Station 1 Training Room at Watertown Fire Department 129 1st Ave NW, Watertown, South Dakota. The public is welcome to attend. Questions or comments may be directed to Codington County Emergency Management Director, Andrew Delgado @ (605) 882-6272. Feb. 21, 2022 #6934913

**Agenda**

- Introduction of PDM Team Members
- What is Mitigation Planning?
- Why is Codington County updating the Pre-Disaster Mitigation Plan?
- Review plan components
- Review timeline/scope

**CODINGTON COUNTY PRE-DISASTER MITIGATION PLANNING TEAM MEETING**

**KICKOFF MEETING**

**MARCH 3<sup>RD</sup>, 2022**

Name	Organization	Email*
Jim PEARSON	SWU	jimp@SWU-RUSA.gov
Rick Hartley	Codington Co Hwy	echighwaydept@vustbb.net
Lynn Solberg	Codington County Hwy	lsolberg@vustbb.net
Adam Blain	Watertown Fire Rescue	ablain@watertownfirerescue.com
Gary Langerack	Watertown Fire Rescue	glangerack@watertownfirerescue.com
Brent Lindner	Prairie Lakes Healthcare	brent.lindner@prairie.lakes.com
PATRICK CALLAN	TOWN OF FLORENCE	PATCALLAN@HOTMAIL.COM
Todd Kuefler	Grant-Robert RWS	kueflertodd@gmail.com
Braed Howell	Codington County Sheriff	BHowell@codington.org
Cheri Howell	Codington Co EM	chowell@codington.org
<del>Codington Luke Miller</del>	<del>Cod-Light CO</del>	
Dave Eide	Codington - Clark Electric	dave@ccelectric.coop
Troy Vandusen	Watertown Police 911	TVandusen@watertownpa.com
Sheila Mannix	DC EM	Smannix@itel.com
David Lewis	Clark Co EM	clarkEM@itel.com
Brenda Brunton	Cod. Co. Comm.	brunton@codington.org
KEVIN SCHUEKE	CLARK COUNTY EM	KEVIN.SCHUEKE@CLARKCOUNTYEM.COM
LIHAD STAHL	WATER TOWN POLICE DEPT	lstaahl@water-townpa.com
Ryan Remmers	WATER TOWN POLICE DEPT	rremmers@water-townpa.com
Michelle Kakacek	Watertown Development Company	michelle@water-townpa.com
Andrew Delgado	Codington Co. EM	adelgado@codington.org
Payton Corda	First District	

**Codington County  
Pre-disaster Mitigation Planning Team Kickoff Meeting  
1:00 p.m. March 3rd, 2022  
Station 1 Training Room at Watertown Fire Department  
129 1<sup>st</sup> Ave NW, Watertown, South Dakota**

**Minutes**

22 individuals were in attendance:

<b>Last</b>	<b>First</b>	<b>Organization</b>
Bloom	Adam	Watertown Fire & Rescue
Callan	Patrick	Town of Florence
Carda	Payton	First District Assoc of Local Govts
Delgado	Andrew	Codington Co EM
Eide	Dave	Codington-Clark Electric Coop
Hansen	Brenda	Codington Co Commissioner
Hartley	Rick	Codington Co Highway Dept
Howell	Brad	Codington Co Sheriff
Howell	Cheri	Codington Co EM Office
Kakacek	Michelle	Watertown Development Company
Kuefler	Todd	Grant-Roberts Rural Water System
Langerock	Gary	Watertown Fire & Rescue
Lewis	David	Clark Co EM
Lindner	Brent	Prairie Lakes Healthcare
Monnier	Sheila	Deuel Co EM
Muller	Luke	Codington Co Zoning
Pearson	Jim	Sisseton Wahpeton Oyate EM
Remmers	Ryan	Watertown Police Dept
Schuelke	Kevin	Grant Co EM
Solberg	Lynn	Codington Co Highway Dept
Stahl	Chad	Watertown Police Dept
Vandusen	Troy	Watertown Police & 911

Codington County Emergency Manager, Andrew Delgado, welcomed those in attendance and had the Team Members introduce themselves and what entity they represent. Delgado then introduced Payton Carda of First District Association of Local Governments.

Carda provided an overview of what is mitigation planning and why the county is required to update their Pre-Disaster Mitigation (PDM) Plan. Carda 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.

Lastly, Carda lead the Planning Team representatives through a review of the risk assessment worksheets. The representatives identified hazards and rated Codington County's vulnerability to those hazards.

Meeting adjourned at 1:45 p.m. Date and time for the next meeting to be scheduled later.

Minutes recorded by Payton Carda

**Codington County**  
**Pre-disaster Mitigation Planning Team Second Meeting**  
**1:00 p.m. July 7th, 2022**  
**Station 1 Training Room at Watertown Fire Department**  
**129 1st Ave NW, Watertown, South Dakota**

**Public Notice** ✕

Published in Watertown Public Opinion on June 25, 2022

**Location**

Codington County,

**Notice Text**

**CODINGTON COUNTY**

**Notice of Pre-Disaster Mitigation Plan Meeting**

Codington County Pre-disaster Mitigation Plan Meeting. As Codington County continues the process of updating the Codington County Pre-disaster Mitigation Plan, the Codington County Pre-disaster Mitigation Planning Team will meet at 1 PM on Thursday, July 7th, 2022, in the Station 1 Training Room at the Watertown Fire Department 129 1st Ave NW, Watertown, South Dakota.

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 public is welcome to attend and participate in the discussion. Questions or comments may be directed to Codington County Emergency Management Director, Andrew Delgado at (605) 882-6272.

Codington County does not discriminate on the basis of color, national origin, sex, religion, age, or disability in employment or the provision of services.

Published once at the total approximate cost of \$18.16

June 25, 2022 #7453900

## Agenda

- Introduction
- Review of Previous Meetings and Plan Development History
- Review of PDM Preliminary Draft
  - Plan Authority and Purpose
  - Community Profile
  - Plan Process
  - Risk Assessment/Critical Infrastructure
  - Review of Goals and Objectives
  - Project Identification (county-wide and entity-specific)
  - Plan Maintenance
- Questions
- Next Steps in PDM Draft Process

**Codington County  
Pre-disaster Mitigation Planning Team Meeting 2  
1:00 p.m. July 7th, 2022  
Station 1 Training Room at Watertown Fire Department  
129 1<sup>st</sup> Ave NW, Watertown, South Dakota**

**Minutes**

10 individuals were in attendance:

<b>Last</b>	<b>First</b>	<b>Organization</b>
Barrios	Derek	Watertown Schools
Bloom	Adam	Watertown Fire & Rescue/Fire Marshal
Callan	Patrick	Town of Florence
Carda	Payton	First District Assoc of Local Govts
Delgado	Andrew	Codington Co EM
Hanten	Brenda	Codington Co Commissioner
Hartley	Rick	Codington Co Highway Dept
Langerock	Gary	Watertown Fire & Rescue
Solberg	Lynn	Codington Co Highway Dept
Terhark	Jared	Codington-Clark Electric Co.

First District Association of Local Governments Planner Payton Carda welcomed those in attendance and had new Team Members introduce themselves and the entity they represent.

Carda provided a summary and review of the draft Codington County Pre-Disaster Mitigation Plan. She discussed plan authority and purpose. Then provided an overview of the community profile information and information sources. Carda covered the multi-jurisdictional plan and plan participation requirements. The plan development process was discussed in more detail.

Carda further provided an in-depth discussion of risk assessment and vulnerability in Codington County. She covered the risk assessments conducted with each community and utility providers. Carda discussed vulnerabilities, potential losses, and administrative and technical capabilities within Codington County. She addressed the goals and objectives for the county. Lastly, Carda explained the plan maintenance required in the next five years.

After the summary, project identification and mitigation strategies at a county-wide level were reviewed and discussed. Adam Bloom brought up the issue that there is a lack of storm warning sirens on the south end of the City of Watertown/outside of city limits, especially as residential construction is rapidly increasing in this area. This was added as a mitigation project under the City of Watertown and Codington County. Pat Callan also mentioned problems with the storm sirens in Florence and added a project to have them updated.

Meeting adjourned at 1:30 p.m. Date and time for the next meeting to be scheduled later this fall.

Minutes recorded by Payton Carda.



**Codington County**  
**Pre-disaster Mitigation Planning Team Meeting 3**  
**1:00 p.m. December 5th, 2022**  
**Station 1 Training Room at Watertown Fire Department**  
**129 1<sup>st</sup> Ave NW, Watertown, South Dakota**

**Agenda**

- Final Review of PDM Plan
  
- Last Call for Questions/Comments/Revisions
  
- Recommendation of Approval and Submission to FEMA

**Codington County**  
**Pre-disaster Mitigation Planning Team Meeting 3**  
**1:00 p.m. December 5th, 2022**  
**Station 1 Training Room at Watertown Fire Department**  
**129 1<sup>st</sup> Ave NW, Watertown, South Dakota**

**Minutes**

9 individuals were in attendance:

<b>Last</b>	<b>First</b>	<b>Organization</b>
Bloom	Adam	Watertown Fire & Rescue/Fire Marshal
Callan	Patrick	Town of Florence
Carda	Payton	First District Assoc of Local Govts
Delgado	Andrew	Codington Co EM
Hanten	Brenda	Codington Co Commissioner
Hartley	Rick	Codington Co Highway Dept
Howell	Cheri	Codington Co EM Office
Terhark	Jared	Codington-Clark Electric Co.
VanDusen	Troy	Codington Co Commissioner/911

Payton Carda of First District welcomed all Team Members and provided an overview of the few changes made to the Pre-disaster Mitigation Plan since the last meeting. The draft plan was posted on the First District website on October 21<sup>st</sup>, 2022. Plan discussion and revisions were received from those in attendance.

Motion by VanDusen, seconded by Hartley to approve the final draft of the plan as amended with the revisions provided and submit to FEMA for their review. Motion passed unanimously.

Carda reviewed the timeline for the community and county adoption process once approval is received from FEMA.

Meeting adjourned at 1:15 p.m.

Minutes recorded by Payton Carda.



## **Appendix C Community Meeting Materials**

Appendix C includes Agendas, Sign-in Sheets, and Minutes from the meetings held at the community level for the Codington County Pre-Disaster Mitigation Plan. Meetings were held at the regular monthly meetings for the following cities/towns:

<b>Entity</b>	<b>Date</b>
Florence	May 9, 2022
Henry	March 7, 2022
Kranzburg	April 4, 2022
South Shore	April 12, 2022
Wallace	May 2, 2022
Watertown (City Staff)	April 7, 2022
Watertown (City Council)	June 6, 2022
Codington County Townships	May 2022

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 Town Board was asked to identify critical infrastructure within the community. All master sheets and infrastructure lists compiled at those meetings can be found in Appendix D.

The City of Watertown gathered numerous department heads in a meeting to identify hazards and critical infrastructure at the city office on April 7, 2022. Some departments completed the above-described exercises prior to the meeting. Information from individual departments was compiled into a master list during the meeting. As with the data gathered from the smaller towns, all responses gathered at that meeting are included within Appendix D.

Codington County Townships were contacted by letter to request updated information for this plan. Each individual township provided hazard updates they experienced since the last plan update and identified areas most vulnerable to these hazards (on a map) and returned them to First District. Those maps are included in Appendix E.

Agenda, attendance sign-in sheets, minutes, and public meeting from each of the above-described meetings are included below.

## Town of Florence

AGENDA FOR THE TOWN BOARD  
TOWN OF FLORENCE  
May 9th , 2022  
6:30 p.m. at Town Office

CALL MEETING TO ORDER

ROLL CALL

APPROVE AGENDA

READING OF MINUTES

OLD BUSINESS

- Dig Grygiel's Water/Sewer
- Nehlich Curb Stop
- S Stevens Curb Stop
- Hendrickson House Sewer Line
- Medical & Recreational Marijuana
- Summer Mowing

NEW BUSINESS

- Arin Walker - Alley
- Dog at Large
- Aj Hanson - ATM
- First District

TRUSTEES REPORT

MAINTENANCE REPORT

FINANCE REPORT

FINANCE OFFICER REPORT

CLAIMS

SCHEDULE NEXT MEETING

ADJOURN

PUBLIC COMMENTS ARE WELCOMED BUT NO ACTION CAN BE TAKEN BY THE COUNCIL ON COMMENTS RECEIVED AT THE MEETING. ANYONE WISHING TO HAVE THE COUNCIL VOTE ON AN ITEM WILL NEED TO FILL OUT AN AGENDA ITEM REQUEST FORM FOR THE ITEM TO BE CONSIDERED ON THE NEXT COUNCIL AGENDA.

**CODINGTON COUNTY PRE-DISASTER MITIGATION PLANNING MEETING**

**TOWN OF FLORENCE**

**May 9th, 2022**

Name	Organization	Email*
Arin Walker		arinwalker05@gmail.com
Karon Walker		kwalker3@vastbb.com
Janel Raymer		Janemuscha08@live.com
Corey Raymer		Corey.Raymer1@icloud.com
Melissa Tschakert	Finance Officer	melissa_tschakert@yahoo.com
Chris Fischer	Board Member	fischerpallets@gmail.com
JEFF CARVER		jeffc2r58@gmail.com
Danny Bloom	Board Member	dannybloom23@yahoo.com
PAT CALLAN	Board President	PATCALLAN@HOTMAIL.COM
Andrew Delgado	Codington Co EMT	
Payton Carda	First District	payton@1stdistrict.org

# Minutes

## Public Notice



Published in Watertown Public Opinion on May 19, 2022

### Location

Codington County, South Dakota

### Notice Text

The town council for the Town of Florence met May 9th 2022 at 6:30pm. Present were President Callan, Trustees Fischer & Bloom, FO Tschakert along with Corey & Janel Raymer, Arin Walker, Aaron Delgado with Emergency Management, Payton Cardo with First District, Jeff Cariveau and Marissa Rislov.

The agenda was approved by Fischer and second by Bloom. All Aye.

Reading of the minutes, Fischer approved and Bloom second. All Aye.

Old business: All water/sewer projects will be completed this summer. For summer mowing, interviews will be set up by Trustee Fischer. Old business was approved by Fischer and second by Bloom. All Aye.

New Business: There have been reports of dogs barking as well as residents being attacked. A copy of the ordinance will be given to the owners of the animals. Payton with First District was at the meeting to make any modifications the council wanted to make. All new business was approved by Fischer and Bloom second. All Aye.

Trustee Report: It was reported that the roads have been graded.

Maintenance Report: Bloom reported that he will get the park cleaned up and also that the mowers will be serviced.

Finance Officer Report: Melissa will work on setting up a Facebook page for the City of Florence. Fischer approved and Bloom second. All Aye.

Finance Report: approved by Fischer and second by Bloom. All Aye. General Fund 101,840.22; Town CD 16,922.00; Water/Sewer checking 209,663.31; Sewer CD 6,372.53; Water CD 6,373.15; Sewer Construction 73,470.25; Water Construction 57,384.10; Sewer Reserve 30,818.10 for a total of 502,843.66. Receipts from the session were Property Taxes 6,693.30; MV License 356.62; County Wheel Tax 15.67; Metered Water 2,545.50; Surcharge 3,312.00; O&M 1,008.00; Sewer Charge 1,818.21; Surcharge 4,380.00; Sanitation 2,030.00.

The following claims were presented for payment Clark Rural Water 3808.00; Public Health Lab 15.00; Northwestern Energy 1874.10; Florence Sewer & Water 120.00; ITC 272.15; Pearl Paulson 35.00; Minnwest Bank 300.00; Menards 57.23; US Treasury 1324.02; P Lindahl 1041.12; M Tschakert 812.68; George s Sanitation 2030.00; Gatehouse Media 101.20; Elan 38.32. All claims approved by Fischer and second by Bloom. All Aye.

The annual report was presented. Fischer approved and Bloom second. All Aye.

Next meeting will be June 6th 2022 at 6:30pm.

With no further business the meeting was adjourned at 8:40pm by motion from Fischer and second by Bloom. All Aye.

Respectfully submitted by Melissa Tschakert, Finance Officer.

May 19, 2022 7304095

## **Town of Florence Public Comment**

- Several roads are susceptible to washing out during the spring snow melt and heavy rains. We need better maintenance or paving, especially on the main routes through town. – Arin & Karen Walker, Town Citizens.
- I am really tired of the town's lack of stormwater sewer. With high water springs like this, I have to constantly worry about my basement backing up with water again. We need to upgrade the stormwater system. – Marissa Rislov, Town Citizen.

## Town of Henry

### AGENDA March 7th, 2022 7:00 PM

1. Call to order Board of Trustee meeting
2. Adopt agenda
3. Public Comment (Limit to 10 people in hall at one time(including Trustee members), if on the Agenda, one spokesperson on behalf allowed in meeting, all in regards to COVID 19 concerns)
4. Approve Minutes: 2/7/2022 Board of Trustee Meeting Minutes
5. Review and approve Claims

#### AGENDA

6. Old Business:
  - a. Helms and Associates-Project Engineering
    - i. Facility Plan Studies
    - ii. SCGP applications
  - b. Code Enforcement
    - i. Notice and Order filed
    - ii. Courtesy Letter
  - c. Code of Conduct
7. New Business:
  - a. Pre-Disaster Mitigation Plan Team (1<sup>st</sup> District Representative)
  - b. School Board Representative
    - i. 2022 LWCF Grants
  - c. Fire Dept. Training
  - d. Election Status
  - e. Appoint Election Officials
  - f. Clean up day
  - g. Events Budget
  - h. Equalization Assessment
  - i. Animal Nuisance Complaint
  - j. State Water Plan Application Signature
8. Fire Department Report
  - a. Monthly Meeting
  - b. Bank Statements
  - c. Inventory
9. City Maintenance Report
  - a. Lift Station
  - b. Culverts cleared and flushed
  - c. Cedar street grass area going to lagoons burned off for sewer grate access
  - d. Gravel
  - e. Rubble on City Lot

10. Finance Report
  - a. Funds Transfers
  - b. CLFRF Supplemental Relief Fund
  - c. Paint South Dakota
  - d. EPA Cybersecurity Alert
  - e. SDDOT Public Road Inventory
  - f. SCORP Public Survey
  
11. Community Events where Quorum may be present:
  - a. Music Night at School March 7<sup>th</sup>
  - b. St. Patrick's Day Parade March 12<sup>th</sup>
  
12. Building Permits:
  - a. Cattail Estates 102 Elm St. Lot # 3
  
13. Executive Session:
  
14. Next Meeting
  - a. Monday April 4<sup>th</sup> 2022 at 7pm
  
15. Adjourn
16. Work Session
17. Zoning

**CODINGTON COUNTY PRE-DISASTER MITIGATION PLANNING MEETING**

**TOWN OF HENRY**

**March 7th, 2022**

Name	Organization	Email*
Payton Carda	First District	
Charles Henstess		chenstess@henrytnc.com
Jennifer Boyer		
Tierra Phoebe		
MONTY MONTGOMERY		
Tony Fuller		
John Birnell	FIRE DEPT	JBIRNELL@HOTMAIL.COM
Don Larson	Trustee	
Shannon Pester	Trustee	
Dorene Foster	Trustee/Pres	dorenefoster64@gmail.com
Shelly Fuller	Finance Officer	townofhenry@tnc.com
Andrew Delgado	Codington EM	

## Minutes

### OFFICIAL PROCEEDINGS TOWN OF HENRY

The monthly meeting was held Monday March 7th, 2022 at 7:00 P.M. in the Town hall. Attending: President Foster, Trustee Pester, Trustee Larson, Tony Fuller, Monty Montgomery, John Birnell, Dave Fuller, Tierra Rhody, Jennifer Boyce, Charles Heustess, Andrew Delgado, Payton Carda, Todd Obele and Finance Officer Shelly Fuller. President Foster called the meeting to order. Foster asked for the agenda to be amended to accommodate guests and to add summer T-Ball/coach pitch to the agenda, motion of Larson and seconded of Pester to amend, motion carried. Motion of Pester and seconded of Larson to adopt the agenda as amended, motion carried. There was no Public Comment. The February 7th meeting minutes were read and approved of motion of Pester and seconded of Larson, motion carried.

**Liquor fees reported:**

Double Barrel-450.00  
Halfway Inc.-450.00  
212 One Stop-0.00 (Paid Through March)

**Lottery reported:**

Double Barrel-529.06 (Feb/March Reporting)  
212 One Stop-0.00

Motion was made by Pester and seconded of Larson to pay the following claims:

**Sewer:**

Northwestern Energy-287.88 lift station  
Tony Fuller-554.10 Feb. Salary  
Helms and Associates-12,500.00 Wastewater Study

**General:**

Northwestern Energy-1055.08 Feb. Service  
Dacotah Bank-203.27 Check Re-Order  
Watertown Public Opinion-76.12 Feb.Legals  
Northwestern Energy-16.42 Ball Park lights  
Office Peeps-104.46 Office Supplies  
ITC-100.60 Feb. Services  
Dependable Sanitation-1128.00 Feb. Services  
Clark Rural Water-3669.80 Feb. Services  
Tony Fuller-554.10 Feb. Salary  
Shelly Fuller-1200.55 Feb. Salary  
Foley & Foley Law Office-540.00 General matters/ Enforcement  
Public Health Lab-15.00 Jan. Test  
Menards-46.97 Shop Supplies  
Helms and Associates-10,000.00 Water Study

**Old Business:**

Helms and Associates have completed the studies for both water/wastewaters. The State has approved the grant application for the studies and will issue funds once requested. Board to continue to look over studies and present any questions or concerns at next meeting.

Code Enforcement was discussed. FO to post courtesy notice for the public. Foster reported that a Notice of Order was sent out for a property to come into compliance by April 1st 2022. Code Of Conduct-no update.

**City Maintenance Report items discussed:**

Lift station, culverts, Cedar street, gravel and rubble on city lot. Fuller advised of the issue on Maple Street and Larson will contact County to fix.

**Fire Department Report items discussed:**

Meetings, new members, bank statements and inventory

**Finance Officer Report items discussed:**

Funds transfers were discussed with the following actions taken, motion of Pester and seconded of Larson to transfer \$72.00 from General to Sewer, motion carried. Motion of Larson and seconded of Pester to transfer \$275.40 from General to Sewer, motion carried.

Equalization meeting reminder, will be held at 7pm on March 21<sup>st</sup> at the Henry Community Center located on Main Street Henry.

CLFRF Supplemental relief funds

Paint South Dakota

EPA Cybersecurity

SCORP Public Survey

SD DOT Public Road Inventory

**New Business:**

Pre-Disaster mitigation with 1<sup>st</sup> District Rep. Payton Carda and EMS Andrew Delgado was presented to the Town Board for risk assessment overview, board members are encouraged to reach out to the representatives if anything changes from the assessment presented.

Henry School Superintendent Todd Obele was present for discussion on grant opportunities for the Community, Finance Officer will visit and work with school for application prep.

Fire Dept. Training was discussed with the following action taken, motion of Pester and seconded of Larson to have the Town set up a policy to sponsor 4 members of the Fire Dept. for training, motion carried.

The Town of Henry will be holding a Municipal Election on Tuesday April 12<sup>th</sup> for the position of Trustee for a 2-year term, candidates are as follows; Charles Heustess, Don Larson and Hanna Owen. Motion of Pester and seconded of Larson to appoint the following for precinct election board members: Dianne Easthouse-Precinct Superintendent, Loydeen VanSickle-Precinct Deputy and Rose McElroy-Precinct Deputy, motion carried.

Clean up day for the Town of Henry will be May 14<sup>th</sup> 8am to 12pm. Flyers will be posted.

Volunteer group asking for the town to supply trophies for the St. Patrick's Day parade was discussed, board had no issues with donating the trophies upon submittal of bill. Events budget was discussed and tabled until further information is gathered.

Equalization assessments are available for Board members' review.

Animal nuisance complaint was presented to the Board and Larson will contact Codington County Sheriff's Department in regards to the complaints filed by patron to see if the protocol has changed on enforcement.

Motion of Pester and seconded of Larson to allow Town Board President, Dorene Foster, be the signature for the State Water Plan Application, motion carried.

Motion of Pester and seconded of Larson to hire Troy Watson for the T-Ball/Coach Pitch Baseball coach for the 2022 season, motion carried.

Building permits approved; Permit # 306 for 102 Elm St. Lot # 3, Permit # 307 for 202 Oak Street

Community Events where there may be quorum present and no Town Business to be discussed, Henry School Music Night March 7<sup>th</sup> at 7pm. St. Patrick's Day parade March 12<sup>th</sup> in Henry. School Board meeting March 14<sup>th</sup> at 5:30pm

The next board meeting will be held Monday, April 4<sup>th</sup>, 2022 at 7:00p.m. at the Town Hall. There being no further business, motion was made by Larson and seconded by Pester to adjourn. Motion carried.

Shelly Fuller  
Finance Officer

Published once at the approximate cost of \_\_\_\_\_

### **Town of Henry Public Comment**

- The most vulnerable citizens in town (during a tornado or summer storm event) are those in the apartments or mobile homes. We need to construct a tornado shelter near the park to service these populations. – Dorene Foster, Board President.
- A generator was purchased for the sanitary sewer lift station a few years ago, but improvements are still needed for the lagoons to prevent groundwater from being affected. – Tony Fuller & Monty Montgomery, Town Citizens.
- The fire department was able to purchase five sets of PPE two years ago, but we are still short on equipment and need additional supplies. – John Birnell, Town Fire Department.
- We have some needs for drainage improvements, but our main issue is the ditches and drainage areas badly need to be cleaned out and opened up. – Don Larson, Board Trustee.

Town of Kranzburg

**KRANZBURG TOWN  
BOARD MEETING**

*Monday, April 4, 2022*

Town Hall – 7:00PM

Agenda items;

**Codington County Pre-Disaster**

**Mitigation Plan:**

Payton Carda (First District, Planner, Economic Development  
Officer)



# KRANZBURG TOWN BOARD

## MEETING MINUTES

April 4, 2022

The Kranzburg Town Board met on Monday, April 4, 2022 at 7:00PM in the town hall, with Chairman Dale Plunkett, Trustees Shari Thiewes and Doug Kranz present. Plunkett moved to approve agenda, Thiewes seconded, motion carried. Kranz moved to approve March minutes with Thiewes seconding, motion approved. Old business included the utility pole in the town park. Plunkett will meet with RC to determine action. Payton Carda, Planner/Economic Development Officer from First District Assn of Local Governments, was present with Andrew Delgado, Codington County Emergency Management, to review and update with the board, plans for the town, in conjunction with the Codington County Pre-Disaster Mitigation Plan. After discussion, minor changes to the plan were reviewed and updated. The board discussed improving the corner at St Mary St and Dakota Ave. No action taken. The following bills were approved for payment; Kathleen Turbak - \$800 (salary), Public Opinion – tbd, SD One Call – tbd. Plunkett motioned to adjourn, Thiewes seconded, meeting adjourned at 7:37PM. The next regular board meeting to be held on May 2, 2022 at 7:00PM in the town hall.

Respectfully Submitted,

Kathleen Turbak, Finance Officer  
Town of Kranzburg

### Town of Kranzburg Public Comment

- The Town does not have a designated emergency operations center anymore. The closed school would probably be the best location for emergency shelter, but it is privately owned which makes it difficult for residents to use freely. It may be better to have a tornado shelter in the center of town. – Dale Punkett, Board President.
- Kranzburg does not have any methods of fire suppression and the closest fire departments are at least a 10–15-minute drive away. Addressing this is one of our highest concerns. – Doug Kranz, Board Member.

**Town of South Shore**

**Town of South Shore**

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**Town Board Meeting**

**7:00**

**April 12, 2022**

**Call meeting to order –**

**Pledge of Allegiance**

**Conflict of Interest for Council Members**

**Approve Agenda**

**Reading of Finances, Warrants**

**Old Business –**

1. Vision 2030 reporting
2. Petitioning on School St for right of way update
3. Water/Sewer Maintenance Report
4. Water Rate adjustment-increase from \$30 to \$40-last increase Nov. 1, 2016-INSERT MAILED
5. Recreational vehicle parking
6. Past Due Utility Accounts 120,99,67
7. Abandoned homes/Property Care Letter

**New Business –**

1. Public Input
2. Pre-disaster Mitigation Plan-Payton Carda
3. Liquor License Renewal: RB-3145 (Meyer's Rec) & RB-3462 (Scotty's Black Lab Tavern)
4. South Shore Days Planning
5. Town Mowing
6. Building Permit-Paula Ott 203 S Main St

**Other –**

- 1.

**Set Next Regular Meeting – Tuesday, May 10, 2022 7:00pm**

**Motion to adjourn**

This institution is an equal opportunity employer and provider.



## TOWN BOARD PROCEEDINGS

The Town Board of South Shore met for their regular meeting on Tuesday, April 12, 2022, at 7:00pm at the South Shore Community Center. In attendance was council members J Dolen, M. Klatt and S. Schmeichel. Also present were FO Zirbel, P. Nelson, K. Nelson, C. Werner, M. O'Farrell, J. Jensen, P. Carda (1<sup>st</sup> District), A. Delgado, Codrington County.

The meeting was called to order at 7:00pm by Dolen followed by the Pledge of Allegiance.

With no conflicts on the agenda, a motion was made by S. Schmeichel, seconded by M. Klatt to approve the agenda with HVAC bids and State Water Plan added to old business and Dynamic Engine Braking added to other, motion carried.

The financial report was given reflecting the following fund balances: General Fund \$124,576.14, Water Fund \$57,954.95 Sewer Fund \$108,357.39, Sewer Surcharge fund, \$11,206.77, Water deposits \$600, CD's \$33,041.84, Outstanding sewer loan \$183,130.71.

Warrants presented were as follows for a total of \$9,410.85:

**GENERAL FUND** Brian's Glass, Comm Center front door; \$87.43 CNA Surety, bond renewal, \$381.50; D. Ries, wages, \$127.44; Dependable Sanitation, garbage, \$185.40; EFTPS, payroll taxes, \$320.50; FT&B Credit Card, Norton Anti-Virus, \$89.66; ITC, phone and internet, \$92.78; Menards, supplies, \$130.90; M. Zirbel, wages/travel, \$1,325.02; Olson's Pest Control, pest control, \$150.00; Ottertail, streets/ parks /center /garage, liquor store \$1,129.35; PWLA, annual donation, \$1,200.

**WATER FUND** EFTPS, Payroll Tax, \$23.72; C. Werner, wages, \$143.14; Ottertail, electricity, \$246.13; Public Health Lab, water testing, 30.00.

**SEWER FUND** EFTPS, Payroll Tax \$23.72; Ottertail, Electricity, \$143.18; C. Werner, Wages, \$143.15; Team Lab, Super Bugs, \$812.00; SD 811, locates, \$3.15; USDA, Loan Payment, \$2,431.00.

A motion was made by S. Schmeichel, seconded by M. Klatt to approve the warrants for payment. Motion carried.

**OLD BUSINESS** (1) Vision 2030, J. Dolen commented the PWLA fish fry was a success as was the Easter Egg Hunt and Bingo. (2) Petitioning on School St for right of way update: still waiting on the surveyor. (3) No water/sewer updates at this time (4) Customers with city water received an insert with their monthly bill stating beginning May 1, 2022, the water rate is raised from \$30 to \$40. (5) Discussion on recreational vehicles was discussed again. A rough draft was read, and some clarifications are needed before adopting. (6) Past due utility bills were discussed. It was brought up if an account gets disconnected there will be a substantial fee for reconnection (7) Abandoned homes/Property care letter was discussed. With the time and energy being put into contacting homeowners, the fees will have to go up. A town newsletter was brought up that could possibly help with better communication. (8) Got bids on HVAC system for Community Center. Tabled discussion till more information is presented. (9) Received news on funding for the state water plan. South Shore was granted approx. 1.7 million. Though it was a significantly smaller number than anticipated, it was discussed to do project in phases. Helm's is working on a modified plan. Water rates will have to be raised to \$55/mo. if

plan is accepted. New plan should be presented by the middle of May.

**NEW BUSINESS** (1) Public input: K. Nelson asked for clarification on what committees got to use the center at no charge. It was stated PWLA and SS Fire and Ambulance are no charge as a committee with no building. (2) P. Carda and A. Delgado from 1<sup>st</sup> District Emergency Management visited and talked about Pre-disaster Mitigation plan. Updated risk management.

(3) Motioned by M. Klatt, seconded by S. Schmeichel to renew liquor licenses RB-3145(Meyer's Rec) and RB- 3462 (Scotty's Black Lab Tavern) motion passed. (4) M. O'Farrell talked about South Shore Days during Fourth of July festivities. There will be activities down main street during the day and at the ballpark roughly 6pm-8pm followed by fireworks. (5) J. Jensen resigned from the town mowing job. Must be 18 or older. If interested, contact the finance office for an application. Please call, 605-756-4130, stop in the office or email [townsouthshore@sstel.net](mailto:townsouthshore@sstel.net). (6) P. Ott applied for a building permit for 203 S Main. Motioned by J. Dolen, seconded by S. Schmeichel to approve. Motion passed. M. Klatt abstained from the vote.

In other business, dynamic breaking was brought up. Will contact Codrington County Sheriff's Office for help enforcing. Motion to set the next regular meeting for Tuesday, May 10, 2022, at 7:00pm at the South Shore Community Center by S. Schmeichel, seconded by J. Dolen. Motion carried.

With no further business, S. Schmeichel moved, seconded by Klatt to adjourn at 8:31. Motion carried.

Jamie Dolen, President Michelle Zirbel, Finance Officer

(Publish once on April 21, 2022 at an approximate cost of \$ )

## **Town of South Shore Public Comment**

- The Lutheran church does not have a daycare service any longer. The only event we run is a week-long day camp in the summertime, so that can be removed from critical infrastructure. The other two daycares are longer in operation either. – Penny Nelson, Town Citizen.
  
- We should add all the Town’s sewer facilities to the Critical Infrastructure list. We recently elevated two of the lift stations and replaced all the shut-off valves. – Jerry Jensen, Town Employee.
  
- The Town just did a big sewer project, so we do not have much for mitigation in that area. However, the Town’s water system has not been upgraded in years and is highly vulnerable to spring flooding. The Town also lacks capacity for water storage, which puts us at a higher risk when residential fires occur and spread. – Jamie Dolen, Mayor.

Town of Wallace

**Town of Wallace**  
**PO Box 65**  
**Wallace, SD 57272**

Town board meeting will be held on Monday, May 2nd, 2022 at 7:00 PM in the Wallace Community Center

**AGENDA**

--Pre-Disaster Mitigation Plan (Presented by Payton Carda)

--Minutes and financial report from April meeting

--7:30 Executive session to discuss Financial Officer job

**UNFINISHED BUSINESS:**

--Steel on ceiling of old fire hall- Springers are in the process

--New lights in park – KMI will be putting new lights up when they can

--Hail damage on community center – new steel has been put on

--Street lights

--Other unfinished business

--8:15 Executive session to discuss Financial Officer job

**NEW BUSINESS:**

--Trustee position

--Election of officers

--Blading of roads

--Fun Fest

--Roll off dumpster will arrive on May 9th

--Mowing bids

--Mosquito spraying grant

--Aluminum cans

--Other new business

--Review and pay bills

--Next meeting date & time: June 6th at 7:00 PM

--Adjourn



OFFICIAL PROCEEDINGS  
TOWN OF WALLACE, SD  
REGULAR MEETING

May 2nd, 2022

The Wallace Town Board met at the Community Center, May 2nd, 2022. Board President Al Keller called the meeting to order at 7:00 p.m. Present were Harvey Wibeto, and Mike Grann of the council. Also present Payton Carda, Aliesha Sonstebo, Dan Keller.

April minutes and financial reports were approved as read with a motion by Grann seconded by Wibeto. Motion carried.

UNFINISHED BUSINESS – Steel on firehall ceiling is in progress.

NEW BUSINESS – Pre-Disaster Mitigation (Presented by Payton Carda)

Trustee position - Wibeto motioned to appoint Al Keller to the 3 year term, Grann seconded. Motion carried.

Election of Officers - Grann motioned to nominate Al Keller for Chairman. Wibeto seconded. Grann motioned to nominate Wibeto for Vice chair Al Keller seconded. Motions carried

Executive Session motion by Wibeto to move into executive session at 7:28 to interview finance officer position with first applicant seconded by Grann. Motion carried. Came out of session at 7:58

Roll off dumpster will be here May 9<sup>th</sup>.

Road blading will be done as soon as possible.

Fun Fest is scheduled for Wednesday June 29<sup>th</sup>, 2022.

Executive Session motion by Wibeto to move into executive session at 8:15 to interview finance officer position with seconded applicant seconded by Grann. Motion carried. Came out of session at 9:10

Mowing Bids were opened with East end lots and Fire Hall awarded to Ryan Keller and the Town Park & parking lot and Ballpark awarded to Ross Keller with a motion by Wibeto seconded by Grann. Motion carried.

Building Permit – Agwrx would like to build a 427,000 bushel grain bin, discussion was held on the noise level from the drying fans on the bin. More questions will be asked before approval is given.

Annual Drinking water report – motion by Wibeto second by Grann to approve. Motion carried.

CLAIMS – Grann motioned Wibeto seconded, to approve the following claims: North Western Energy \$454.92, Clark Rural Water System Inc. \$498.20, George's Sanitation Inc. \$808.00, SD Dept. of Health \$15.00, Portable Toilets, Inc. \$150.00, Ross Keller \$25.00 (water turn on fee), Al Keller \$540.25 (wages), Harvey Wibeto \$660.30 (wages), Mike Grann \$660.30 (wages), Ross Keller \$1847.00 (wages), Patsy Flatten \$554.10 (wages), Pat Callan \$554.10 (wages),

Motion made by Grann second by Wibeto to recess at 10:45 pm . Motion carried

President Keller reconvened meeting at 9am 5/9/2022 with Wibeto& Grann present along with Rob Goens (Agwrx).

After discussion on some options and making Agwrx aware of the noise concerns their building permit was approved with a motion by Grann seconded by Wibeto. Motion carried.

Finance Officer position – Wibeto motioned to appoint Aliesha Sonstebo to the position Grann seconded. Motion carried.

Motion to add Aliesha Sonstebo and Harvey Wibeto to the Dacotah Bank signature card, motion by Grann seconded Keller. Motion carried.

A motion to adjourn at 9:45am by Grann seconded by Wibeto. Motion carried.

The next regular scheduled meeting is June 6th, 2022 at 7:00 pm..

Ross Keller / Finance Officer

Published once at an approximate cost of \_\_\_\_\_

June Bank Balances

Checking \$60,837.60

Comm. Center \$21,040.40

Checking balance after bills \$39,241.63

**City of Watertown  
City Staff – Pre-disaster Mitigation Meeting  
10:00 a.m. April 7th, 2022  
Teleconference via Zoom**

**Agenda**

- Introduction
  
- What is Mitigation Planning?
  
- Why is Lake County Updating the Pre-Disaster Mitigation Plan?
  
- Review plan components specific to City of Madison
  - Risk Assessment Worksheet
  - Critical Infrastructure
  - Goals and Objectives
  - Project Identification
  
- Questions
  
- Next Steps in PDM Plan Update Process

City of Watertown (City Staff)

Sign-In

Pre-Disaster Mitigation (PDM)  
 04-07-2022 10am  
 Watertown City Hall

Name	Organization	Email
RYAN REMMERS	Police	rremmers@watertown.wa.spd.com
Justin Petersen	Engineering	jpetersen@watertown.sd.us
Daw Rowland	WFR	drowland@watertown.sd.us
Adam Blythe	WFR	ablythe@watertownfire.org
Rob Beynon	Street	rbeynon@watertown.sd.us
BERT MARGSTADT	WMU	bmargst@watertown.wa.wm
Heath Uwe Eys	Public Works - City	huweye@watertown.sd.us
Brandi Hanten	Community Development	bhanten@watertown.sd.us
Amanda Mack	City Manager	amack@watertown.sd.us
Andrew Delgado	Emergency Management	adelgado@cedington.org
Jasmin Spurgin	Community Development	jispurgin@watertown.sd.us

**City of Watertown**  
**City Staff – Pre-disaster Mitigation Meeting**  
**10:00 a.m. April 7th, 2022**  
**Teleconference via Zoom**

**Minutes**

12 individuals were in attendance:

<b>Last</b>	<b>First</b>	<b>Organization</b>
Remmers	Ryan	Watertown Police
Petersen	Justin	Watertown Engineering Dept.
Rowland	Don	Watertown Fire & Rescue
Bloom	Adam	Watertown Fire & Rescue
Beymon	Rob	Watertown Street Dept.
Magstadt	Bert	Watertown Municipal Utilities
VonEye	Heath	Watertown Public Works
Hanten	Brandi	Watertown Community Development/Zoning
Mack	Amanda	Watertown City Manager
Delgado	Andrew	Codington County Emergency Manager
Spurgin	Jason	Watertown Community Development
Carda	Payton	First District

Payton Carda, Planner at First District, welcomed those in attendance and had those present introduce themselves and what entity they represent.

Carda provided an overview of what is mitigation planning and why the county is required to update their Pre-Disaster Mitigation (PDM) Plan every five years. A detailed review of the City of Watertown’s components of the Plan stated by discussing the risk assessment worksheets – risk identification and vulnerability. Discussion occurred, specifically on whether flooding and tornado pose greater threats to the community than five years ago.

Following this discussion, the city staff members reviewed the Critical Infrastructure list. Several new government facilities, medical facilities, and senior housing were added. Lastly, the city staff members evaluated previously proposed mitigation actions and goals. Complete projects were removed, while uncompleted mitigation actions were updated, if determined to still be necessary, and staff members discussed new mitigation actions to be included.

Carda informed the city staff that this information would be reviewed with the City Council at an upcoming meeting and allow the public an opportunity to comment.

Meeting adjourned at 11:30 a.m.

Minutes recorded by Payton Carda

**City of Watertown  
(City Council)**

City of Watertown  
Proposed City Council Agenda  
City Hall, 23 2ND ST NE  
Watertown, South Dakota  
June 6, 2022, 5:30 PM



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	Page
<b>1. CALL TO ORDER</b>	
<b>2. PRAYER</b>	
<b>3. PLEDGE OF ALLEGIANCE</b>	
<b>4. ROLL CALL</b>	
<b>5. APPROVAL OF CONSENT AGENDA</b>	
(a) Approval of the minutes of the Council meeting held on May 16, 2022 <a href="#">City Council - May 16 2022 - Minutes</a>	4 - 6
(b) Renewal of Alcoholic Beverage license for the period of July 1, 2022 to June 30, 2023 <a href="#">Malt Beverage Renewal</a>	7 - 10
(c) Approval of a Pyrotechnics or Open Flame Permit Application for Fireworks Display at 3121 North Serenity Drive Watertown SD on July 9, 2022 <a href="#">Fireworks Permit</a>	11 - 12
(d) Approval of a Professional Services Agreement for Asphalt Testing Services associated with the Watertown Regional Airport Terminal Project, with Aaron Swan & Associates, in the amount of \$4,970.00, authorizing the City Manager to sign all applicable documents <a href="#">Aaron Swan &amp; Associates</a>	13 - 18
(e) Approval of business license to SoDak Heating & Cooling as a Gasfitting Contractor (\$250) and Adrian Wickherst as a Gasfitter <a href="#">Gasfitting Contractor Application</a>	19 - 21
(f) Approval of bills and payroll and authorization to pay	
<b>6. PUBLIC COMMENTS</b>	
<b>7. APPROVAL OF AGENDA</b>	
<b>8. REGULAR AGENDA</b>	
(a) Application for a transfer of ownership of a retail (on-off sale) malt beverage & SD Farm Wine license and video lottery license from Mint Inc d/b/a Mint Casino, 1500 9th Ave SE, to Heilman Roadside Gas, LLC d/b/a Mint Casino, at the same location 1. Public Hearing	22 - 26

	2. Council Action	
	<a href="#">Transfer Application Malt Beverage and Video Lottery</a>	
(b)	Application for a Special Retail Malt Beverage and Wine License to the Lake Area Zoological Society from 4:00 PM until 11:00 PM on Friday, June 24, 2022 for the Sippin' Safari Event	27 - 29
	1. Public Hearing	
	2. Council Action	
	<a href="#">Application for Special Event Retail License</a>	
(c)	Approval of a one-year lease agreement with Pioneer Agviation 2, LLC for city-owned real property located at the Watertown Regional Airport	30 - 37
	1. Public Hearing	
	2. Council Action	
	<a href="#">Lease Agreement</a>	
(d)	Codington County Pre-Disaster Mitigation Plan Discussion	38 - 54
	<a href="#">Codington County Pre-Disaster Mitigation Plan</a>	
(e)	First Reading of Ordinance No. 22-18, Establishing the Zoning Designation of A-1 Agricultural District which upon annexation shall be known as Harmony Hill First Annexation Addition	55 - 60
	<a href="#">Ordinance No. 22-18</a>	
(f)	Approval of Resolution No. 22-29, Adopting the Boundaries and Approving the Project Plan for Tax Increment District No. 20, generally located south of US Highway 212 and west of Roby Creek, for Economic Development	61 - 95
	<a href="#">Resolution No. 2022-20 (TIF 20)</a>	
(g)	Tax Increment Financing District Number Seventeen:	96 - 143
	1. Approval of Resolution No. 22-31, Adopting the Boundaries and Approving the Project Plan for Tax Increment District No. 17, as amended, located along Golf Course Road between 4th Avenue SW and 3rd Avenue SW, to the south of the Derby Downs development for Affordable Housing	
	2. Authorization for the City Manager to sign the Development Agreement between the City of Watertown and High Five, LLC for Tax Increment District No. 17	
	<a href="#">Resolution No. 22-31</a>	
(h)	Approval of a Resolution of Acceptance for development improvements related to the 10th Avenue North Reconstruction Project, Installed by Timmons Construction on behalf of the developer, Prairie Lakes Health Care System, Inc.	144 - 154
	<a href="#">Resolution of Acceptance 22-28</a>	
(i)	Authorization for the City Manager to sign a two year contract with Hamlin County in the amount of \$24,685.20 annually for non-emergency Police dispatching for Hamlin County including the towns of Lake Norden, Bryant, Castlewood, Estelline, Hazel and Hayti	155 - 162
	<a href="#">Hamlin County</a>	

- (j) Approval of Purchase Agreement for the sale of Lot 2B in Block 1 of the Pheasant Ridge development to the Watertown Development Company 163 - 176  
[Purchase Agreement](#)
  - (k) Approval of a Professional Services Agreement for the relocation of TSA checkpoint equipment associated with the Watertown Regional Airport Terminal Project, with The Vertex Company, in the amount of \$65,500.00, authorizing the City Manager to sign all applicable documents 177 - 192  
[Vertex Contract for TSA Checkpoint move to New Terminal](#)
9. **OLD BUSINESS**
  10. **NEW BUSINESS**
  11. **LIAISON MEMBER REPORTS**
  12. **ANNOUNCEMENTS**
  13. **EXECUTIVE SESSION PURSUANT TO SDCL 1-25-2**
  14. **ADJOURNMENT**

Kristen Bobzien  
 Finance Officer

The City of Watertown, South Dakota does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment or the provision of services. ADA Compliance:

The City of Watertown fully subscribes to the provisions of the Americans with Disabilities Act. If you desire to attend this public meeting and are in need of special accommodations, please notify the City Finance Office 24 hours prior to the meeting so that appropriate auxiliary aids and services are available.

**CODINGTON COUNTY PRE-DISASTER MITIGATION PLANNING MEETING**

**CITY OF WATERTOWN (City Council)**

June 6th, 2022

Name	Organization	Email*
Payten Carda	First District	payten@1stdistrict.org
M. Dwyer	Council	
Dan Schutte	Council	
M. Wilham	Council	
Fied Holien	Mayor	
Bruce Sahlber	Council	
Randy Tupper	Council	
COLIN PAULSEN	Council	
Kristen Bobzien	City Staff	
Matt Roby	City Staff	mrob@watertown.sd.us
Heath VanEge	City Staff	
Kevin Remmers	Police	
Brandi Hunter	City of Watertown	
Troy Vandusen	City of Watertown	
Justin Peterson	City of Watertown	
Michelle Kakacek	Watertown Development Company	

# City of Watertown (City Council) MINUTES

## Watertown City Council Meeting Minutes June 6, 2022

**CALL TO ORDER**

The City Council met in regular session at 5:30 PM in the City Hall, 23 2ND ST NE. Mayor Ried Holien presiding.

**ROLL CALL**

Present upon roll call: Alderperson Buhler, Danforth, Paulsen, Schutte, Tupper, Vilhauer and Mayor Holien.

**APPROVAL OF CONSENT AGENDA**

Motion by Tupper, seconded by Schutte, to approve the following items on the consent agenda: minutes of the Council Meeting held on May 16, 2022; approval of a Pyrotechnics or Open Flame Permit Application for Fireworks Display at 3121 North Serenity Drive Watertown, SD on July 9, 2022; approval of a Professional Services Agreement for Asphalt Testing Services associated with the Watertown Regional Airport Terminal Project, with Aaron Swan & Associates, in the amount of \$4,970.00, authorizing the City Manager to sign all applicable documents; approval of business license to SoDak Heating & Cooling as a Gasfitting Contractor (\$250) and Adrian Wickherst as a Gasfitter; approval of bills and payroll authorization to pay; renewal of Alcoholic Beverage license for the period of July 1, 2022 to June 30, 2023. Motion Carried.

**MALT BEVERAGE & SD FARM WINE LICENSE RENEWALS – FROM PERIOD JULY 1, 2022 TO JUNE 30, 2023**

**MALT BEVERAGE & SD FARM WINE (On-Off Sale) LICENSES**

1. Heilman Roadside Gas LLC, Mint Casino, 1500 9<sup>th</sup> Ave SE, E135.4' of W403.4' of Kranz & DeVille OL A, Govt Lot 1, 5-116-52 (A)

**BILLS:**

#1 WELDING	SERVICE	329.55	MACKSTEEL WAREHOUSE INC.	SERVICE	827.79
292 DESIGN GROUP CORPORATI	SERVICE	144,393.69	MARK'S AUTO	SERVICE	287.81
A & B BUSINESS SOLUTIONS,	SUPPLIES	61.85	MARSH & MCLENNAN AGENCY LL	FEES	3,163.00
A-OK WELDING CO, INC.	SUPPLIES	67.64	MARTIN GEIER	TRAVEL	200.00
AASON MASONRY	SERVICE	430.00	MATHESON TRI-GAS, INC.	RENT	45.85
ACCESS ELEVATOR & LIFTS, I	SERVICE	434.08	MAVERICKS STEAKS AND COOKT	SERVICE	324.37
ACTIVE HEATING, INC.	SERVICE	3,657.99	MAXMEDIA	ADV	3,140.00
ADAM BLOOM	TRAVEL	307.22	MAXWELL FOOD EQUIPMENT	SUPPLIES	42.59
ADAM HEINRICH	TRAVEL	264.00	MCKEEVER, INC.	SUPPLIES	69.50
ADAFCO	SUPPLIES	26,338.00	MEAD & HUNT, INC.	SERVICE	42,187.91
ADVANCED ENGINEERING & ENV	SERVICE	695.00	MENARD'S	SUPPLIES	8,326.96
AGRITECH	SUPPLIES	980.10	MICRO MARKETING ASSOCIATE	SUPPLIES	806.52
AGWRX COOPERATIVE - WATERT	SUPPLIES	566.58	MIDCONTINENT COMMUNICATIO	SERVICE	138.39
AMANDA MACK	TRAVEL	355.65	MIDWEST ALARM COMPANY, INC	SERVICE	120.75
AMAZON.COM	SUPPLIES	5,630.30	MIDWEST MINI MELTS	SUPPLIES	861.00
AMERICAN ENGINEERING TESTI	SUPPLIES	738.80	MIDWEST TAPE	SUPPLIES	90.71
AMERICAN FLAGPOLE & FLAG C	SUPPLIES	79.90	MIDWEST TURF & IRRIGATION	SUPPLIES	1,399.53
AMERICAN LIBRARY ASSOCIATI	SUPPLIES	228.00	MIDWEST VETERINARY SERVICE	SERVICE	166.23
AMERICAN RED CROSS - TRAIN	TRAINING	1,246.40	MIKE BOERGER	TRAVEL	34.00
ANDOR INC.	SERVICE	1,776.70	MILBANK WINWATER WORKS CO	SUPPLIES	1,032.96
AP AUTO PROS, INC.	SERVICE	2,135.21	MILLBORN SEEDS INC.	SUPPLIES	1,072.00
ARFF SPECIALISTS	TRAINING	8,200.00	MOE OIL CO, INC.	SUPPLIES	1,802.46
ARGUS LEADER MEDIA	ADV	548.08	MUNICIPAL UTILITIES	SERVICE	150,528.25
ARKSTAR GROUP	SERVICE	9,000.00	MUTH ELECTRIC, INC.	SERVICE	626.07
ASSOCIATED SUPPLY COMPANY	SUPPLIES	676.39	MY PLACE HOTEL - RAPID CIT	TRAVEL	385.00
AT&T MOBILITY	SERVICE	1,054.26	NAPA CENTRAL	PARTS	536.42
AURORA WORLD	SUPPLIES	3,443.76	NATHAN MURPHY	REIMB	50.00
AUTO VALLUE WATERTOWN	PARTS	1,155.17	NIHCA	MEMBERSHIP	99.00
BAKER & TAYLOR	SUPPLIES	3,912.34	NORTH CENTRAL LABORATORIES	SUPPLIES	654.21
BATTERIES UNLIMITED, INC.	SUPPLIES	911.44	NORTHERN TRUCK EQUIPMENT C	SUPPLIES	34,194.30
BEACON CENTER	2022 CONTRIBUTION	10,000.00	O'REILLY AUTO PARTS	PARTS	287.18
BERNIE'S BODY & GLASS	SERVICE	34.00	OCLC INC.	SUBSCRIPTION	346.76
BOARD OF OPERATOR CERTIFIC	SERVICE	120.00	OFFICE PEEPS, INC.	SUPPLIES	1,887.88
BOLDT CONSTRUCTION	SERVICE	8,435.00	OLD DUTCH FOODS, INC.	SUPPLIES	97.92
BORNS GROUP	SERVICE	1,210.00	OLIVIA WULFF	TRAVEL	239.82
BOUND TREE MEDICAL LLC	SUPPLIES	2,784.50	OVERDRIVE, INC.	SUPPLIES	61.44
BOW WOW PET WASTE INC.	SUPPLIES	423.92	OVERHEAD DOOR CO INC.	SERVICE	897.46
BRAD MILES	TRAVEL	116.00	PAUL OSTOFF	SERVICE	413.40
BRIAN'S GLASS INC.	SUPPLIES	355.00	PEARSON GOLF MANAGEMENT,LL	REIMB	16,728.27

BURCHATZ CONSTRUCTION CO,	SERVICE	1,530.62	PEPSI	SUPPLIES	1,318.99
BUREAU OF ADMINISTRATION	SERVICE	3.93	PERFORMANCE FOOD GROUP INC	SUPPLIES	2,046.37
BUTLER MACHINERY CO INC.	PARTS	18.67	PERFORMANCE TOWING	SERVICE	200.00
BX CIVIL & CONSTRUCTION IN	SERVICE	32,394.53	PETERBILT OF FARGO	SERVICE	342.27
C & G TRUCKING	SERVICE	3,740.00	PICTOMETRY INTERNATIONAL C	LICENSE	30,641.59
C & S PEST CONTROL	SUPPLIES	90.00	PIZZA RANCH	SUPPLIES	272.97
CAMPSPOT	SERVICE	784.20	PLANIT GEO, INC.	SUPPLIES	19,450.00
CARTNEY BEARING CORPORATIO	SUPPLIES	31.34	POLICE PETTY CASH FUND	CASH	113.45
CASHWAY LUMBER INC.	SUPPLIES	388.70	POMP'S TIRE SERVICE, INC.	SERVICE	2,658.00
COW GOVERNMENT, INC.	SUPPLIES	719.78	PORTER DISTRIBUTING CO.	SUPPLIES	1,141.95
CENTER POINT LARGE PRINT	SUPPLIES	172.04	PRAIRIE LAKES HEALTHCARE	SUPPLIES	380.69
CENTURY BUSINESS PRODUCTS,	SUPPLIES	348.28	PREMIER BIOTECH	SUPPLIES	160.38
CENTURYLINK	SERVICE	132.39	PRINT EM NOW	SUPPLIES	360.40
CENTURYLINK	SERVICE	13.38	PRO LINE, INC.	SERVICE	367.12
CHAD FOUST	SERVICE	1,140.00	PRODUCTIVITY PLUS ACCOUNT	PARTS	1,755.63
CHAMPION LIGHTING & SUPPLI	SUPPLIES	1,380.01	PURE & SECURE	SUPPLIES	50.95
CLASSROOM CONNECTION	SUPPLIES	168.58	PUSH-PEDAL-PULL	SUPPLIES	204.28
COCA COLA BOTTLING COMPANY	SERVICE	2,133.75	QC CLOWN AROUND	SERVICE	650.00
CODI MARTIN	REIMB	297.00	QUALITY FIRST PLUMBING AND	SERVICE	6,387.77
CODINGTON CLARK ELECTRIC C	SERVICE	754.00	RAMKOTA HOTEL	TRAVEL	308.00
CODINGTON CO REGISTER OF D	SERVICE	480.00	RAMKOTA HOTEL	TRAVEL	294.00
CODY BERNS	SERVICE	2,520.00	RAMKOTA HOTEL	TRAVEL	876.00
COLE PAPERS	SUPPLIES	2,460.50	RC FIRST AID	SUPPLIES	89.50
COLLABORATIVE SUMMER LIBRA	SUPPLIES	65.67	RC TECHNOLOGIES, INC	SERVICE	78.20
CONFLUENCE, INC.	SERVICE	7,502.89	REDLINGER BROS INC.	SUPPLIES	542.38
CONNECTING POINT, INC.	SUPPLIES	83.47	ROB BEYNDON	TRAVEL	74.00
CONNECTIONS INC EAP	FEES	640.52	RON'S AUTO REPAIR INC.	SERVICE	83.00
CORE & MAIN LP	SUPPLIES	2,900.88	RON'S SAW SHOP	SERVICE	1,059.61
COUNTY FAIR FOODS	SUPPLIES	653.70	ROY'S SPORT SHOP INC.	SUPPLIES	24,970.16
CREATIVE CONCEPTS, INC.	SUPPLIES	722.86	RSCS LLC.	SERVICE	1,000.00
CREATIVE REWARDS & SPECIAL	SUPPLIES	140.00	RUNNINGS FARM AND FLEET	SUPPLIES	1,886.76
CREATIVE VISIONS LANDSCAPE	SERVICE	1,950.00	SAFE-N-SECURE	SUBSCRIPTION	2,808.00
CRESENT ELECTRIC SUPPLY, C	SUPPLIES	193.79	SAFETY VISION	SUPPLIES	733.94
CRITTER MART & MORE	SUPPLIES	1,219.44	SAME DAY EXPRESS, INC.	SHIPPING	140.00
CSI TESTING	SERVICE	330.00	SANFORD HEALTH OCCUPATIONA	SERVICE	207.00
CUES, INC.	SUPPLIES	1,888.26	SANFORD USD MEDICAL CENTER	SERVICE	1,200.00
CULLIGAN	SERVICE	318.45	SCHAEFFER MFG CO.	SUPPLIES	1,338.70
CUSTOM TRUCK ONE SOURCE LP	SERVICE	121,905.00	SCOTT BRINKMAN	TRAVEL	40.00
DACOTAH PAPER COMPANY	SUPPLIES	862.24	SCOTT JONGBLOED	TRAVEL	331.68
DAKOTA DATA SHRED	SERVICE	133.67	SD BOARD OF MEDICAL AND OS	SERVICE	950.00
DAKOTA PORTABLE TOILETS, I	SUPPLIES	823.00	SD DEPT OF ENVIRONMENT & N	SERVICE	4,289.11
DAKOTA SIGNATURE MEATS	SUPPLIES	880.00	SD DEPT OF TRANSPORTATION	SERVICE	5,216.02
DAKOTA SUPPLY GROUP	SUPPLIES	494.14	SD DOH - EMS PROGRAM	SERVICE	12.00
DAN HART PATROL SERVICE, L	SERVICE	158,521.88	SD GOVERNMENTAL HUMAN RESO	SERVICE	73.00
DARKTRACE HOLDINGS LIMITED	SERVICE	46,312.50	SD LIBRARY ASSOCIATION	MEMBERSHIP	63.00
DEL-MAR UPHOLSTERY	SERVICE	150.00	SD PUBLIC ASSURANCE ALLIAN	SERVICE	807.35
DEMCO, INC.	SUPPLIES	613.46	SDLA	MEMBERSHIP	42.00
DEPENDABLE SANITATION INC.	SERVICE	4,181.26	SDN COMMUNICATIONS	SERVICE	1,122.35
DIAMOND VOGEL, INC	SUPPLIES	6,550.73	SERVICE PLUS INC.	SERVICE	287.38
DIRECT DIGITAL CONTROL INC	SERVICE	113.00	SERVICEMASTER OF WATERTOWN	SERVICE	572.00
DORSEY & WHITNEY LLP	SERVICE	19,500.00	SHERWIN WILLIAMS	SUPPLIES	159.02
DOWNTOWN BIKEWORKS LLC	SERVICE	359.42	SHRED-IT	SERVICE	273.70
DUGAN SALES & SERVICE INC.	SERVICE	424.90	SIGN PRO	SUPPLIES	300.00
DUININCK, INC	CONSTR	1,315.46	SIGN SOLUTIONS USA	SUPPLIES	884.97
EACHEN INC.	SERVICE	6,543.05	SIMCO LLP	SERVICE	638.00
EASTSIDE EQUIPMENT LLC	SERVICE	717.62	SIoux RURAL WATER SYSTEM	SERVICE	67.20
EBSco INFORMATION SERVICES	SUPPLIES	422.43	SIoux VALLEY COOP	SERVICE	57,374.09
EBSco MAGS	SERVICE	43.00	SOUTH DAKOTA MAGAZINE	SUBSCRIPTION	23.00
ELECTRIC MOTORS & MOORE IN	SUPPLIES	276.00	STAN HOUSTON EQUIPMENT INC	SERVICE	2,096.80
ELKS LODGE	SERVICE	1,141.15	STAN OR SHEILA LAMB	SUPPLIES	80.00
ELLIOTT EQUIPMENT CO.	SUPPLIES	35.23	STAR LAUNDRY & CLEANERS, I	SERVICE	877.50
ELLWEIN BROTHERS, INC.	SUPPLIES	1,575.20	STEIN'S INC.	SUPPLIES	102.74
ELSENFETER PRODUCTIONS	SERVICE	700.00	STEVE'S WORLD INC.	SERVICE	3,633.86
ENGELSTAD ELECTRIC	SERVICE	10,705.58	STREICHER'S INC.	SUPPLIES	1,393.99
ENVIRONMENTAL RESOURCES AS	SUPPLIES	813.10	STUART C. IRBY CO.	SUPPLIES	65.06
FARMERS IMPLEMENT & IRRIGA	PARTS	267.50	SUBARCTIC MEDIA LLC - MARS	ADV	1,600.00
FASTENAL COMPANY	SUPPLIES	640.09	SUPERIOR JETTING, INC.	SERVICE	3,861.68
FEDERAL EXPRESS CORPORATIO	SERVICE	23.04	SUSAN PEARSON	SERVICE	1,952.00
FERGUSON WATERWORKS #2316	SUPPLIES	1,650.94	SYNOVIA SOLUTIONS, LLC	LEASE	456.00
FIRST DISTRICT ASSN OF LOC	SERVICE	3,500.00	TACTICAL TECHNOLOGIES, INC	SUPPLIES	449.90
FIRST NATIONAL BANK OMAHA	SERVICE	12,087.28	TAYLER MAERTENS	TRAVEL	134.00
FISHER SCIENTIFIC	SUPPLIES	126.28	TEAM LABORATORY CHEMICAL	SUPPLIES	900.00
FRONTIER PRECISION INC.	SUPPLIES	183.08	TECH LOGIC CORPORATION	SERVICE	19,346.20
G & R CONTROLS, INC.	SERVICE	256.00	TECH SALES CO.	SERVICE	6,315.00
GALL'S INC.	SUPPLIES	426.83	TECHNICOLOR SCREEN PRINTIN	SUPPLIES	6,597.45
GATEHOUSE MEDIA SOUTH DAKO	SERVICE	3,076.60	TEGRA GROUP, INC.	SERVICE	21,500.00

GLACIAL LAKES POWERSPORTS	PARTS	41.99	TELEFLEX LLC	SUPPLIES	3,450.00
GLACIAL LAKES VETERINARY	SERVICE	2,181.40	TEREK USA LLC	SERVICE	523.39
GPSI	SERVICE	1,080.00	TESSIERS, INC.	SERVICE	0.00
GRAINGER	SUPPLIES	206.73	THE LIBRARY CORPORATION	SERVICE	25,463.00
GRAY CONSTRUCTION	CONSTR	643,671.62	THE LODGE AT DEADWOOD	TRAVEL	246.00
HDR ENGINEERING INC.	SERVICE	5,289.48	THOMSON REUTERS - WEST	SUBSCRIPTION	826.26
HEFTY SEED COMPANY	SUPPLIES	2,926.56	TRACY EICHENS	TRAVEL	760.43
HEIMAN, INC.	SUPPLIES	1,635.00	TRAFFIC CONTROL CORPORATIO	PARTS	1,314.00
HELMS & ASSOCIATES	SERVICE	1,395.00	TRANSOURCE TRUCK & EQUIPME	SERVICE	2,728.88
HIGH PLAINS TECHNOLOGY, IN	SUPPLIES	4,169.82	TRANSUNION RISK AND ALTERN	SERVICE	75.00
HILLYARD / SIOUX FALLS	SUPPLIES	2,934.16	TRAV'S OUTFITTER, INC.	SUPPLIES	868.80
HOBBY LOBBY STORES, INC.	SUPPLIES	351.53	TREE FARM	SUPPLIES	970.18
HOUSTON ENGINEERING, INC.	SERVICE	17,281.55	TRI-STATE NATURAL FOOD PRO	SERVICE	600.00
HY VEE FOOD STORE	SUPPLIES	675.15	TRIPLE A BRAND MEAT CO.	SUPPLIES	11,343.00
IMAGE TREND, INC.	SERVICE	13,632.33	TRITECH SOFTWARE SYSTEMS	SUBSCRIPTION	120.00
INFOUSA MARKETING, INC.	SERVICE	402.00	TRUCK CENTERS COMPANIES EA	PARTS	207.41
INTERNATIONAL ACADEMIES OF	SERVICE	93.00	TSP, INC.	SERVICE	15,141.28
ITC, INC	SERVICE	387.83	TWO WAY SOLUTIONS, INC.	SERVICE	277.19
J & B SCREEN PRINTING INC.	SUPPLIES	1,208.50	ULINE	SUPPLIES	1,345.56
J & J EARTHWORKS, INC.	CONSTR	744,149.28	UPS STORE	SERVICE	74.07
J H LARSON ELECTRICAL CO.	SUPPLIES	123.15	US BANK ST PAUL	SERVICE	401,136.25
JASON RAML TRUCKING	SERVICE	3,037.00	US FOODS - SIOUX FALLS	SUPPLIES	3,409.17
JASON SPURGIN	TRAVEL	60.55	VAN DIEST SUPPLY CO.	SUPPLIES	11,056.25
JEFF'S VACUUM CENTER	SUPPLIES	81.92	VAST BROADBAND	SERVICE	6,911.45
JEREMY BJERKE	TRAVEL	220.00	VERIZON WIRELESS	SERVICE	634.37
JESSE LINDNER	TRAVEL	40.00	WAL-MART	SUPPLIES	838.24
JM DIESEL LLC	SERVICE	467.50	WARNE PLUMBING & HEATING	SERVICE	181.84
JOHN DAHL	SERVICE	240.00	WATERTOWN AREA CHAMBER OF	SUBSIDY	2,000.00
JOHN DEERE FINANCIAL	PARTS	45.71	WATERTOWN BOYS AND GIRLS O	SUBSIDY	16,462.68
JOHNSON CONTROLS, INC.	SERVICE	2,550.41	WATERTOWN BUSINESS ASSOCIA	SUBSIDY	2,000.00
JOSH VOLKART	TRAVEL	127.06	WATERTOWN BUSINESS DISTRIC	SUBSIDY	17,786.34
JUSTICE FIRE & SAFETY	SERVICE	2,986.25	WATERTOWN CONVENTION & VIS	SUBSIDY	29,166.67
JUSTIN PETERSEN	TRAVEL	55.00	WATERTOWN EVENT CENTER	SERVICE	590.00
KARL CHEVROLET	PARTS	4,189.23	WATERTOWN FLOWERS, INC.	SUPPLIES	164.00
KATHY ANTOINE	SERVICE	1,450.00	WATERTOWN FORD	PARTS	46.66
KHC CONSTRUCTION, INC.	CONSTR	91,449.71	WATERTOWN LAWN & GARDEN &	PARTS	120.00
KIXX	ADV	500.00	WATERTOWN MUNICIPAL BAND	SUBSIDY	6,187.50
KOHL EXCAVATING, LLC	SERVICE	2,381.25	WATERTOWN TRUCK & TRAILER	PARTS	385.26
KPHR	ADV	384.00	WATERTOWN WHOLESALE	SUPPLIES	1,540.87
KURITA AMERICA INC	SUPPLIES	3,543.30	WELLS FARGO FINANCIAL LEAS	SERVICE	5,722.20
KXLG	ADV	995.00	WEST METRO FIRE-RESCUE DIS	SERVICE	225.00
L MARQUARDT ELECTRIC INC.	SERVICE	973.93	WEST RIVER BEVERAGE, INC.	SUPPLIES	652.00
LACAL EQUIPMENT INC.	PARTS	775.18	WHEELCO TRUCK & TRAILER PA	PARTS	112.54
LAKE AREA / BIT	WORKSTUDY HOURS	207.68	WINSUPPLY OF WATERTOWN	SUPPLIES	23.00
LAKE AREA ZOOLOGICAL SOCIE	REIMB	16,182.47	WISE PIZZA	SUPPLIES	173.00
LANGUAGE LINE SERVICES, IN	SERVICE	60.40	WITTNEBEL CONSTRUCITON	SERVICE	16,681.85
LAUGHING MATTERS	SERVICE	850.00	WORLD TRADE PRESS	SUBSCRIPTION	630.36
LEAH LUKEN	REIMB	160.00	WW TIRE SERVICE INC.	SERVICE	130.70
LES MILLS US TRADING, INC.	SERVICE	649.00	XTRME GARAGE DOOR LLC	SERVICE	1,275.62
LINDNER MUSIC	SUPPLIES	120.00	ZIEMER LANDSCAPING & LAWN	SERVICE	122.50
LTD BROADBAND LLC	SERVICE	210.00	ZIMCO SUPPLY CO.	SUPPLIES	311.00
MAC'S INC.	SERVICE	1,462.16	ZIP AND STITCH SEWING	SERVICE	45.00
MACK CONCRETE & HAULING LL	SERVICE	2,025.00			

**PAYROLL:**

	Sal	SS	Pen	Ins		Sal	SS	Pen	Ins
<b>Mayor/CC</b>	9,000.00	460.51	-	-	<b>Mosquito</b>	-	-	-	-
<b>City Manager</b>	17,211.29	1,251.20	863.36	1,677.84	<b>Animal Contri</b>	4,627.87	347.57	275.27	574.67
<b>Attorney</b>	11,766.81	865.72	691.92	288.61	<b>Forestry</b>	15,619.03	1,100.41	928.75	3,322.60
<b>Human Resources</b>	12,124.40	865.18	725.06	1,965.17	<b>Library</b>	42,174.40	3,023.25	2,282.17	7,286.01
<b>Finance</b>	20,191.74	1,413.05	1,209.11	3,398.02	<b>Comm Develop</b>	20,027.20	1,469.99	1,194.44	2,652.35
<b>Info Tech</b>	17,801.39	1,297.66	1,051.16	2,539.84	<b>Park &amp; Rec.</b>	167,929.21	12,393.62	8,929.10	21,057.07
<b>City Hall</b>	1,246.96	94.22	74.82	229.87	<b>PLWC</b>	67,163.25	4,854.51	2,648.30	7,898.57
<b>Engineer</b>	35,918.40	2,681.80	2,145.50	2,583.49	<b>E-911</b>	58,522.31	4,178.17	3,508.91	11,413.56

Police	239,936.83	17,286.40	18,335.51	31,296.24	Upper Big Sioux	-	-	-	-
Fire	227,490.26	3,270.01	17,673.74	35,852.43	Sewer	70,907.96	5,180.29	4,229.21	9,990.61
Street	65,925.64	4,826.08	3,898.90	11,201.27	Landfill	72,993.27	5,110.80	4,351.57	16,032.87
Snow Removal	498.20	-	-	-	Airport	28,152.27	1,995.41	1,684.34	3,183.84
Cemetery	11,372.55	816.30	591.71	1,965.17					
Add'l 8.00 Long	M. Halfday & M. Brandsrud (P&R), A. Buysse, J. Harbertz, & T. Maertens (Police), P. Herting (Library), L. Howard (Sewer)								
Add'l 8.00 Long	T. Beutow & T. Wollan (E-911), J. Simonton (Landfill), R. Maag (Airport)								
New Hire P&R	R. Buseman (10.25/hr), B. Christianson & S. Matson (11.00/hr), S. Struss (12.00/hr), G. Moog & S. Moog (14.00/hr)								
New Hire P&R	J. Johnson (15.00/hr), H. Pearson (16.00/hr), J. Elkins (18.00/hr), T. Varns (3,518.67/mo), New Hire Cemetery D. Richardson (11.50/hr)								
New Hire PLWC	B. Schmeling & C. Hartwig (11.00/hr), New Hire IT T. Wallert (5,201.73/mo)								
Salary Inc Ambulance	M. VanDuzen (14.00/hr) Salary Inc Forestry D. Herr & D. Tulowitzke (13.00/hr) Salary Inc PLWC I. Griffin & A. Thonvoid (10.25/hr)								
Salary Inc P&R	K. Ramirez & C. Besuchamp (10.00/hr), H. Eicholtz (10.25/hr), D. Dalton (10.50/hr), G. Lindner, B. York & J. Sandquist (10.75/hr)								
Salary Inc P&R	P. Hanten, J. Ries, S. Torstenson, & A. Berg (11.00/hr), G. Jongbloed, M. Coble, W. Sprouse, H. Moeding, T. Van Well, P. Wells, &								
Salary Inc P&R	O. Fox (11.25/hr), T. Joreny (11.50/hr), C. Behkne & M. Heck (12.00/hr), G. Geffre (12.75/hr), H. Carstens (13.00/hr)								
Salary Inc P&R	C. Stein (13.50/hr), J. Pike (14.00/hr)								
Cell Phone Stipend \$40	T. Varns, T. Wallert								

## PUBLIC COMMENTS

Mayor Holien called for Public Comment. No public comments.

## APPROVAL OF AGENDA

Motion by Vilhauer, seconded by Paulsen, to approve the agenda as presented. Motion Carried.

## REGULAR AGENDA

This being the time scheduled for the public hearing on a transfer of ownership of a retail (on-off sale) malt beverage & SD Farm Wine license and video lottery license from Mint Inc. d/b/a Mint Casino, 1500 9th Ave SE, to Heilman Roadside Gas, LLC d/b/a Mint Casino, at the same location, the Mayor called for public comment. Hearing no comment from the public, Motion by Tupper, seconded by Buhler, to approve the application as presented. Motion Carried.

This being the time scheduled for the public hearing on a Special Retail Malt Beverage and Wine License to the Lake Area Zoological Society from 4:00 PM until 11:00 PM on Friday, June 24, 2022 for the Sippin' Safari Event, the Mayor called for public comment. Jaime Stricker spoke in favor of the license. There were no further comments from the public. Motion by Vilhauer, seconded by Paulsen, to approve the application as presented. Motion Carried.

This being the time scheduled for the public hearing for approval of a one-year lease agreement with Pioneer Agviation 2, LLC for city-owned real property located at the Watertown Regional Airport, the Mayor called for public comment. Hearing no comment from the public, Motion by Schutte, seconded by Danforth, to approve the agreement as presented. Motion Carried.

Discussion regarding Codington County Pre-Disaster Mitigation Plan. No Action Taken.

First reading of Ordinance No. 22-18, establishing the Zoning Designation of A-1 Agricultural District which upon annexation shall be known as Harmony Hill First Annexation Addition was placed on its first reading and the title was read. No Action Taken.

Motion by Tupper, seconded by Vilhauer, to approve Resolution No. 22-29, Adopting the Boundaries and Approving the Project Plan for Tax Increment District No. 20, generally located south of US Highway 212 and west of Roby Creek, for Economic Development Motion Carried.

Motion by Tupper, seconded by Danforth, to approve Resolution No. 22-31, Adopting the Boundaries and Approving the Project Plan for Tax Increment District No. 17, as amended, located along Golf Course Road between 4th Avenue SW and 3rd Avenue SW, to the south of the Derby Downs development for Affordable Housing and to authorize the City Manager to sign the Development Agreement between the City of Watertown and High Five, LLC for Tax Increment District No. 17. Motion Carried.

Motion by Buhler, seconded by Tupper, to approve a Resolution of Acceptance for development improvements related to the 10th Avenue North Reconstruction Project, Installed by Timmons Construction on behalf of the developer, Prairie Lakes Health Care System, Inc. Motion Carried.

Motion by Schutte, seconded by Buhler, to approve the authorization for the City Manager to sign a two year contract with Hamlin County in the amount of \$24,685.20 annually for non-emergency Police dispatching for Hamlin County including the towns of Lake Norden, Bryant, Castlewood, Estelline, Hazel and Hayti. Motion Carried.

Motion by Danforth, seconded by Vilhauer, to approve the Purchase Agreement for the sale of Lot 2B in Block 1 of the Pheasant Ridge development to the Watertown Development Company. Motion Carried.

Motion by Tupper, seconded by Paulsen, to approve a Professional Services Agreement for the relocation of TSA checkpoint equipment associated with the Watertown Regional Airport Terminal Project, with The Vertex Company, in the amount of \$65,500.00, authorizing the City Manager to sign all applicable documents. Motion Carried.

#### **OLD BUSINESS**

Councilman Danforth asked about 12<sup>th</sup> Ave NE reconstruction.

#### **LIAISON MEMBER REPORTS**

Councilman Vilhauer provided an update on the airport terminal and boarding numbers.

#### **ANNOUNCEMENTS**

Public Works Director VonEye announced hiring Robert Cyrus as the Airport Manager. Councilman Tupper stated the fundraising for the Fireworks are going strong. Mayor Holien stated the next City Council Meeting will be held on June, 21<sup>st</sup> due to the Juneteenth holiday.

#### **ADJOURNMENT**

Motion by Tupper, seconded by Buhler, to adjourn until 5:30 pm on June 21<sup>st</sup>, 2022. Motion Carried.

The City of Watertown, South Dakota does not discriminate on the basis of race, color, national origin, sex, religion, age, or disability in employment or the provision of service.

Dated at Watertown, South Dakota, Jun 06 2022.

ATTEST:

\_\_\_\_\_  
Kristen Bobzien, Finance Officer

\_\_\_\_\_  
Ried Holien, Mayor

## **City of Watertown Public Comment**

- General questions about what funding is currently available for tackling the project list. – Randy Tupper, City Council Member.
- Are we including these projects in our annual Capital Improvement budget? If we are not currently, should we be including them. – Glen Vilhauer, City Council Member.

## **Appendix D Hazard Identification/Vulnerability Worksheets**

Appendix D includes master worksheets for Hazard Identification and Vulnerability for jurisdictions. Lists were gathered at meetings as described below:

<b>Entity</b>	<b>Date</b>
Florence	May 9, 2022
Henry	March 7, 2022
Kranzburg	April 4, 2022
South Shore	April 12, 2022
Wallace	May 2, 2022
Watertown (City Staff)	April 7, 2022
Watertown (City Council)	June 6, 2022
Planning Mitigation Team	March 3, 2022

Master worksheets for Hazard Identification and Vulnerability for jurisdictions (multiple were submitted for the City of Watertown) below.

## Town of Florence

### Codington County PDM Worksheet #1 (Town of Florence) 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			<b>X</b>
Drought		<b>X</b>	
Earthquake			<b>X</b>
Extreme Cold	<b>X</b>		
Extreme Heat	<b>X</b>		
Flood		<b>X</b>	
Freezing Rain/Sleet/Ice	<b>X</b>		
Hail	<b>X</b>		
Heavy Rain	<b>X</b>		
Heavy Snow	<b>X</b>		
Ice Jam			<b>X</b>
Landslide			<b>X</b>
Lightning	<b>X</b>		
Rapid Snow Melt		<b>X</b>	
Strong Winds	<b>X</b>		
Subsidence			<b>X</b>
Thunderstorm	<b>X</b>		
Tornado		<b>X</b>	
Urban Fire		<b>X</b>	
Wildfire			<b>X</b>

**Codington County PDM  
Worksheet #2 (Town of Florence)  
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?

<b>Hazard</b>	<b>High Vulnerability</b> Significant risk/major damage potential (for example, destructive, damage to more than 10% of the jurisdiction and/or regular occurrence)	<b>Medium Vulnerability</b> Moderate damage potential (causing partial damage to 5-10% of the jurisdiction, and irregular occurrence)	<b>Low Vulnerability</b> Little damage potential (minor damage to less than 5% of the jurisdiction)	<b>NA</b> Not a hazard to the jurisdiction
Dam Failure				<b>X</b>
Drought		<b>X</b>		
Earthquake				<b>X</b>
Extreme Cold	<b>X</b>			
Extreme Heat		<b>X</b>		
Flood		<b>X</b>		
Freezing Rain/Sleet/Ice	<b>X</b>			
Hail	<b>X</b>			
Heavy Rain	<b>X</b>			
Heavy Snow	<b>X</b>			
Ice Jam				<b>X</b>
Landslide				<b>X</b>
Lightning			<b>X</b>	
Rapid Snow Melt		<b>X</b>		
Strong Winds	<b>X</b>			
Subsidence				<b>X</b>
Thunderstorm	<b>X</b>			
Tornado	<b>X</b>			
Urban Fire			<b>X</b>	
Wildfire				<b>X</b>

## Town of Henry

### Codington County PDM Worksheet #1 (Town of Henry) 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			<b>X</b>
Drought		<b>X</b>	
Earthquake			<b>X</b>
Extreme Cold	<b>X</b>		
Extreme Heat	<b>X</b>		
Flood			<b>X</b>
Freezing Rain/Sleet/Ice	<b>X</b>		
Hail	<b>X</b>		
Heavy Rain	<b>X</b>		
Heavy Snow	<b>X</b>		
Ice Jam			<b>X</b>
Landslide			<b>X</b>
Lightning	<b>X</b>		
Rapid Snow Melt		<b>X</b>	
Strong Winds	<b>X</b>		
Subsidence			<b>X</b>
Thunderstorm	<b>X</b>		
Tornado		<b>X</b>	
Urban Fire		<b>X</b>	
Wildfire			<b>X</b>

**Codington County PDM  
Worksheet #2 (Town of Henry)  
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?

<b>Hazard</b>	<b>High Vulnerability</b> Significant risk/major damage potential (for example, destructive, damage to more than 10% of the jurisdiction and/or regular occurrence)	<b>Medium Vulnerability</b> Moderate damage potential (causing partial damage to 5-10% of the jurisdiction, and irregular occurrence)	<b>Low Vulnerability</b> Little damage potential (minor damage to less than 5% of the jurisdiction)	<b>NA</b> Not a hazard to the jurisdiction
Dam Failure				<b>X</b>
Drought	<b>X</b>			
Earthquake				<b>X</b>
Extreme Cold	<b>X</b>			
Extreme Heat	<b>X</b>			
Flood			<b>X</b>	
Freezing Rain/Sleet/Ice	<b>X</b>			
Hail	<b>X</b>			
Heavy Rain	<b>X</b>			
Heavy Snow	<b>X</b>			
Ice Jam				<b>X</b>
Landslide				<b>X</b>
Lightning			<b>X</b>	
Rapid Snow Melt			<b>X</b>	
Strong Winds	<b>X</b>			
Subsidence				<b>X</b>
Thunderstorm	<b>X</b>			
Tornado	<b>X</b>			
Urban Fire			<b>X</b>	
Wildfire				<b>X</b>

## Town of Kranzburg

### Codington County PDM Worksheet #1 (Town of Kranzburg) 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			<b>X</b>
Drought		<b>X</b>	
Earthquake			<b>X</b>
Extreme Cold	<b>X</b>		
Extreme Heat	<b>X</b>		
Flood		<b>X</b>	
Freezing Rain/Sleet/Ice	<b>X</b>		
Hail	<b>X</b>		
Heavy Rain	<b>X</b>		
Heavy Snow	<b>X</b>		
Ice Jam			<b>X</b>
Landslide			<b>X</b>
Lightning	<b>X</b>		
Rapid Snow Melt	<b>X</b>		
Strong Winds	<b>X</b>		
Subsidence			<b>X</b>
Thunderstorm	<b>X</b>		
Tornado		<b>X</b>	
Urban Fire		<b>X</b>	
Wildfire			<b>X</b>

**Codington County PDM  
Worksheet #2 (Town of Kranzburg)  
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?

<b>Hazard</b>	<b>High Vulnerability</b> Significant risk/major damage potential (for example, destructive, damage to more than 10% of the jurisdiction and/or regular occurrence)	<b>Medium Vulnerability</b> Moderate damage potential (causing partial damage to 5-10% of the jurisdiction, and irregular occurrence)	<b>Low Vulnerability</b> Little damage potential (minor damage to less than 5% of the jurisdiction)	<b>NA</b> Not a hazard to the jurisdiction
Dam Failure				<b>X</b>
Drought	<b>X</b>			
Earthquake				<b>X</b>
Extreme Cold	<b>X</b>			
Extreme Heat	<b>X</b>			
Flood		<b>X</b>		
Freezing Rain/Sleet/Ice	<b>X</b>			
Hail	<b>X</b>			
Heavy Rain	<b>X</b>			
Heavy Snow	<b>X</b>			
Ice Jam				<b>X</b>
Landslide				<b>X</b>
Lightning	<b>X</b>			
Rapid Snow Melt	<b>X</b>			
Strong Winds	<b>X</b>			
Subsidence				<b>X</b>
Thunderstorm	<b>X</b>			
Tornado	<b>X</b>			
Urban Fire	<b>X</b>			
Wildfire				<b>X</b>

## Town of South Shore

### Codington County PDM Worksheet #1 (Town of South Shore) 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			<b>X</b>
Drought		<b>X</b>	
Earthquake			<b>X</b>
Extreme Cold	<b>X</b>		
Extreme Heat		<b>X</b>	
Flood		<b>X</b>	
Freezing Rain/Sleet/Ice	<b>X</b>		
Hail	<b>X</b>		
Heavy Rain	<b>X</b>		
Heavy Snow	<b>X</b>		
Ice Jam			<b>X</b>
Landslide			<b>X</b>
Lightning			<b>X</b>
Rapid Snow Melt		<b>X</b>	
Strong Winds	<b>X</b>		
Subsidence			<b>X</b>
Thunderstorm	<b>X</b>		
Tornado		<b>X</b>	
Urban Fire		<b>X</b>	
Wildfire			<b>X</b>

**Codington County PDM  
Worksheet #2 (Town of South Shore)  
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?

<b>Hazard</b>	<b>High Vulnerability</b> Significant risk/major damage potential (for example, destructive, damage to more than 10% of the jurisdiction and/or regular occurrence)	<b>Medium Vulnerability</b> Moderate damage potential (causing partial damage to 5-10% of the jurisdiction, and irregular occurrence)	<b>Low Vulnerability</b> Little damage potential (minor damage to less than 5% of the jurisdiction)	<b>NA</b> Not a hazard to the jurisdiction
Dam Failure			<b>X</b>	
Drought	<b>X</b>			
Earthquake				<b>X</b>
Extreme Cold			<b>X</b>	
Extreme Heat			<b>X</b>	
Flood			<b>X</b>	
Freezing Rain/Sleet/Ice	<b>X</b>			
Hail		<b>X</b>		
Heavy Rain			<b>X</b>	
Heavy Snow		<b>X</b>		
Ice Jam				<b>X</b>
Landslide				<b>X</b>
Lightning			<b>X</b>	
Rapid Snow Melt			<b>X</b>	
Strong Winds	<b>X</b>			
Subsidence				<b>X</b>
Thunderstorm		<b>X</b>		
Tornado		<b>X</b>		
Urban Fire		<b>X</b>		
Wildfire			<b>X</b>	

## Town of Wallace

### Codington County PDM Worksheet #1 (Town of Wallace) 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			<b>X</b>
Drought		<b>X</b>	
Earthquake			<b>X</b>
Extreme Cold	<b>X</b>		
Extreme Heat	<b>X</b>		
Flood	<b>X</b>		
Freezing Rain/Sleet/Ice	<b>X</b>		
Hail	<b>X</b>		
Heavy Rain	<b>X</b>		
Heavy Snow	<b>X</b>		
Ice Jam			<b>X</b>
Landslide			<b>X</b>
Lightning	<b>X</b>		
Rapid Snow Melt	<b>X</b>		
Strong Winds		<b>X</b>	
Subsidence			<b>X</b>
Thunderstorm	<b>X</b>		
Tornado		<b>X</b>	
Urban Fire		<b>X</b>	
Wildfire			<b>X</b>

**Codington County PDM  
Worksheet #2 (Town of Wallace)  
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?

<b>Hazard</b>	<b>High Vulnerability</b> Significant risk/major damage potential (for example, destructive, damage to more than 10% of the jurisdiction and/or regular occurrence)	<b>Medium Vulnerability</b> Moderate damage potential (causing partial damage to 5-10% of the jurisdiction, and irregular occurrence)	<b>Low Vulnerability</b> Little damage potential (minor damage to less than 5% of the jurisdiction)	<b>NA</b> Not a hazard to the jurisdiction
Dam Failure				<b>X</b>
Drought	<b>X</b>			
Earthquake			<b>X</b>	
Extreme Cold	<b>X</b>			
Extreme Heat	<b>X</b>			
Flood	<b>X</b>			
Freezing Rain/Sleet/Ice	<b>X</b>			
Hail	<b>X</b>			
Heavy Rain	<b>X</b>			
Heavy Snow	<b>X</b>			
Ice Jam				<b>X</b>
Landslide				<b>X</b>
Lightning			<b>X</b>	
Rapid Snow Melt	<b>X</b>			
Strong Winds		<b>X</b>		
Subsidence				<b>X</b>
Thunderstorm		<b>X</b>		
Tornado	<b>X</b>			
Urban Fire			<b>X</b>	
Wildfire			<b>X</b>	

## City of Watertown

### Codington County PDM Worksheet #1 (Watertown City Staff) 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			<b>X</b>
Drought		<b>X</b>	
Earthquake			<b>X</b>
Extreme Cold	<b>X</b>		
Extreme Heat	<b>X</b>		
Flood	<b>X</b>		
Freezing Rain/Sleet/Ice	<b>X</b>		
Hail	<b>X</b>		
Heavy Rain	<b>X</b>		
Heavy Snow	<b>X</b>		
Ice Jam	<b>X</b>		
Landslide			<b>X</b>
Lightning	<b>X</b>		
Rapid Snow Melt		<b>X</b>	
Strong Winds	<b>X</b>		
Subsidence			<b>X</b>
Thunderstorm	<b>X</b>		
Tornado		<b>X</b>	
Urban Fire		<b>X</b>	
Wildfire		<b>X</b>	

**Codington County PDM  
Worksheet #2 (Watertown City Staff)  
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?

<b>Hazard</b>	<b>High Vulnerability</b> Significant risk/major damage potential (for example, destructive, damage to more than 10% of the jurisdiction and/or regular occurrence)	<b>Medium Vulnerability</b> Moderate damage potential (causing partial damage to 5-10% of the jurisdiction, and irregular occurrence)	<b>Low Vulnerability</b> Little damage potential (minor damage to less than 5% of the jurisdiction)	<b>NA</b> Not a hazard to the jurisdiction
Dam Failure				<b>X</b>
Drought		<b>X</b>		
Earthquake				<b>X</b>
Extreme Cold	<b>X</b>			
Extreme Heat	<b>X</b>			
Flood		<b>X</b>		
Freezing Rain/Sleet/Ice	<b>X</b>			
Hail	<b>X</b>			
Heavy Rain		<b>X</b>		
Heavy Snow		<b>X</b>		
Ice Jam	<b>X</b>			
Landslide				<b>X</b>
Lightning		<b>X</b>		
Rapid Snow Melt		<b>X</b>		
Strong Winds	<b>X</b>			
Subsidence				<b>X</b>
Thunderstorm		<b>X</b>		
Tornado		<b>X</b>		
Urban Fire			<b>X</b>	
Wildfire			<b>X</b>	

**Codington County PDM  
Worksheet #1 (Watertown City Council)  
Risk Assessment Worksheet – Hazard Identification**

What is the probability of occurrence of the following hazards?

<b>Hazard</b>	<b>High Probability to Occur</b> (At least once in a year)	<b>Low Probability to Occur</b> (Hazards that may have occurred in the past or could occur in the future but do not occur on a yearly basis)	<b>Unlikely to Occur</b> (Hazards or disasters that have never occurred in the area before and are unlikely to occur)
Dam Failure			<b>X</b>
Drought		<b>X</b>	
Earthquake			<b>X</b>
Extreme Cold	<b>X</b>		
Extreme Heat	<b>X</b>		
Flood	<b>X</b>		
Freezing Rain/Sleet/Ice	<b>X</b>		
Hail	<b>X</b>		
Heavy Rain	<b>X</b>		
Heavy Snow	<b>X</b>		
Ice Jam	<b>X</b>		
Landslide			<b>X</b>
Lightning	<b>X</b>		
Rapid Snow Melt		<b>X</b>	
Strong Winds	<b>X</b>		
Subsidence			<b>X</b>
Thunderstorm	<b>X</b>		
Tornado		<b>X</b>	
Urban Fire	<b>X</b>		
Wildfire		<b>X</b>	

**Codington County PDM  
Worksheet #2 (Watertown City Council)  
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?

<b>Hazard</b>	<b>High Vulnerability</b> Significant risk/major damage potential (for example, destructive, damage to more than 10% of the jurisdiction and/or regular occurrence)	<b>Medium Vulnerability</b> Moderate damage potential (causing partial damage to 5-10% of the jurisdiction, and irregular occurrence)	<b>Low Vulnerability</b> Little damage potential (minor damage to less than 5% of the jurisdiction)	<b>NA</b> Not a hazard to the jurisdiction
Dam Failure				<b>X</b>
Drought		<b>X</b>		
Earthquake				<b>X</b>
Extreme Cold	<b>X</b>			
Extreme Heat	<b>X</b>			
Flood	<b>X</b>			
Freezing Rain/Sleet/Ice	<b>X</b>			
Hail	<b>X</b>			
Heavy Rain		<b>X</b>		
Heavy Snow		<b>X</b>		
Ice Jam	<b>X</b>			
Landslide				<b>X</b>
Lightning		<b>X</b>		
Rapid Snow Melt		<b>X</b>		
Strong Winds	<b>X</b>			
Subsidence				<b>X</b>
Thunderstorm	<b>X</b>			
Tornado			<b>X</b>	
Urban Fire			<b>X</b>	
Wildfire			<b>X</b>	

## PDM Planning Team

### Codington County PDM Worksheet #1 (Planning Team) Risk Assessment Worksheet – Hazard Identification

What is the probability of occurrence of the following hazards?

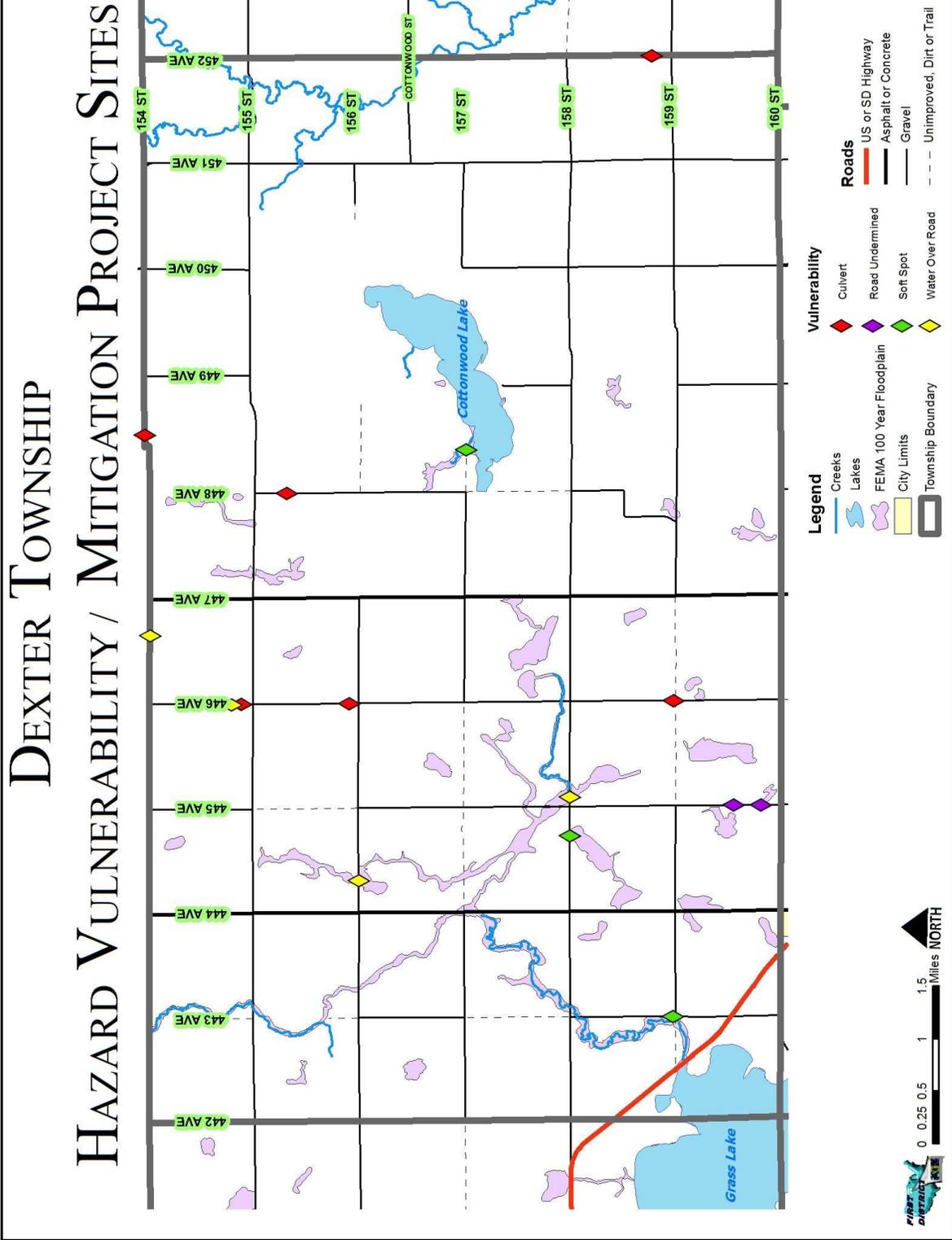
Hazard	High Probability to Occur (At least once in a year)	Low Probability to Occur (Hazards that may have occurred in the past or could occur in the future but do not occur on a yearly basis)	Unlikely to Occur (Hazards or disasters that have never occurred in the area before and are unlikely to occur)
Dam Failure			<b>X</b>
Drought		<b>X</b>	
Earthquake			<b>X</b>
Extreme Cold	<b>X</b>		
Extreme Heat	<b>X</b>		
Flood	<b>X</b>		
Freezing Rain/Sleet/Ice	<b>X</b>		
Hail	<b>X</b>		
Heavy Rain	<b>X</b>		
Heavy Snow	<b>X</b>		
Ice Jam		<b>X</b>	
Landslide			<b>X</b>
Lightning	<b>X</b>		
Rapid Snow Melt	<b>X</b>		
Strong Winds	<b>X</b>		
Subsidence			<b>X</b>
Thunderstorm	<b>X</b>		
Tornado		<b>X</b>	
Urban Fire		<b>X</b>	
Wildfire	<b>X</b>		

**Codington County PDM  
Worksheet #2 (Planning Team)  
Risk Assessment Worksheet – Hazard Vulnerability**

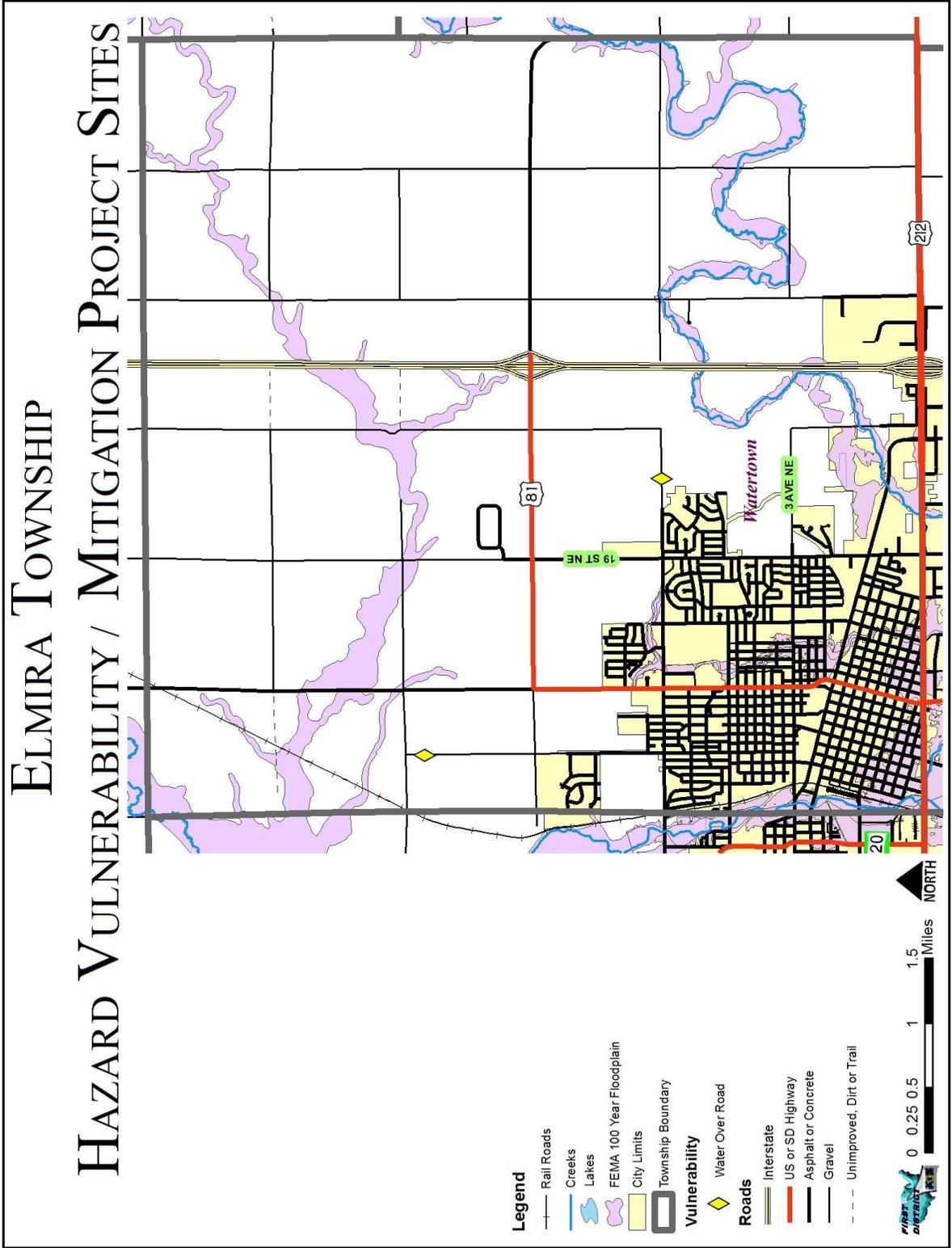
How vulnerable is the community from the following hazard? In other words, if the hazard occurs is there a potential to impact the community? If so, what would be impacted?

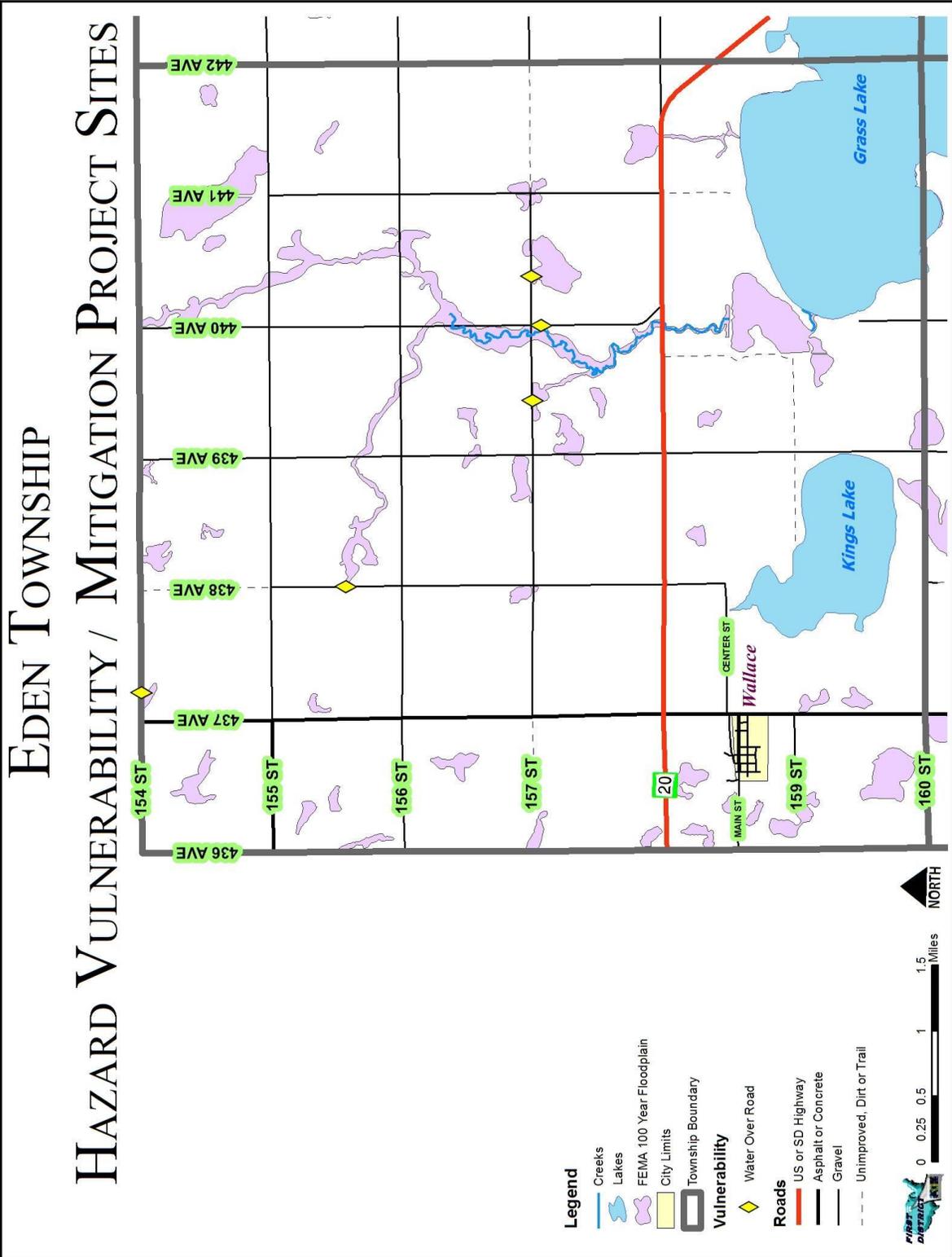
<b>Hazard</b>	<b>High Vulnerability</b> Significant risk/major damage potential (for example, destructive, damage to more than 10% of the jurisdiction and/or regular occurrence)	<b>Medium Vulnerability</b> Moderate damage potential (causing partial damage to 5-10% of the jurisdiction, and irregular occurrence)	<b>Low Vulnerability</b> Little damage potential (minor damage to less than 5% of the jurisdiction)	<b>NA</b> Not a hazard to the jurisdiction
Dam Failure				<b>X</b>
Drought	<b>X</b>			
Earthquake				<b>X</b>
Extreme Cold	<b>X</b>			
Extreme Heat	<b>X</b>			
Flood	<b>X</b>			
Freezing Rain/Sleet/Ice	<b>X</b>			
Hail	<b>X</b>			
Heavy Rain		<b>X</b>		
Heavy Snow	<b>X</b>			
Ice Jam			<b>X</b>	
Landslide				<b>X</b>
Lightning			<b>X</b>	
Rapid Snow Melt	<b>X</b>			
Strong Winds	<b>X</b>			
Subsidence				<b>X</b>
Thunderstorm		<b>X</b>		
Tornado		<b>X</b>		
Urban Fire			<b>X</b>	
Wildfire		<b>X</b>		

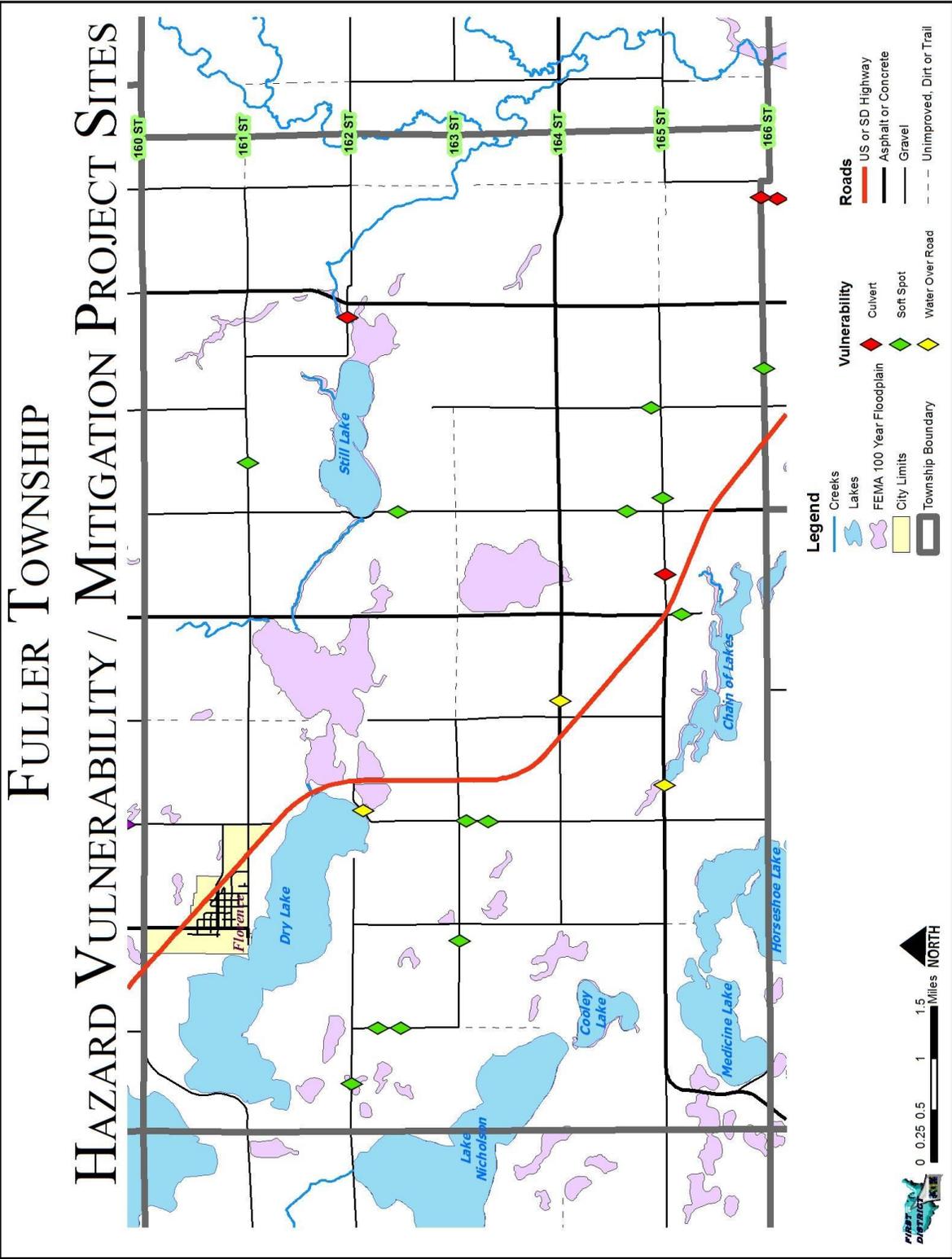
**Appendix E**  
**Township Vulnerable and Potential Mitigation Project Site Maps**



# ELMIRA TOWNSHIP HAZARD VULNERABILITY / MITIGATION PROJECT SITES

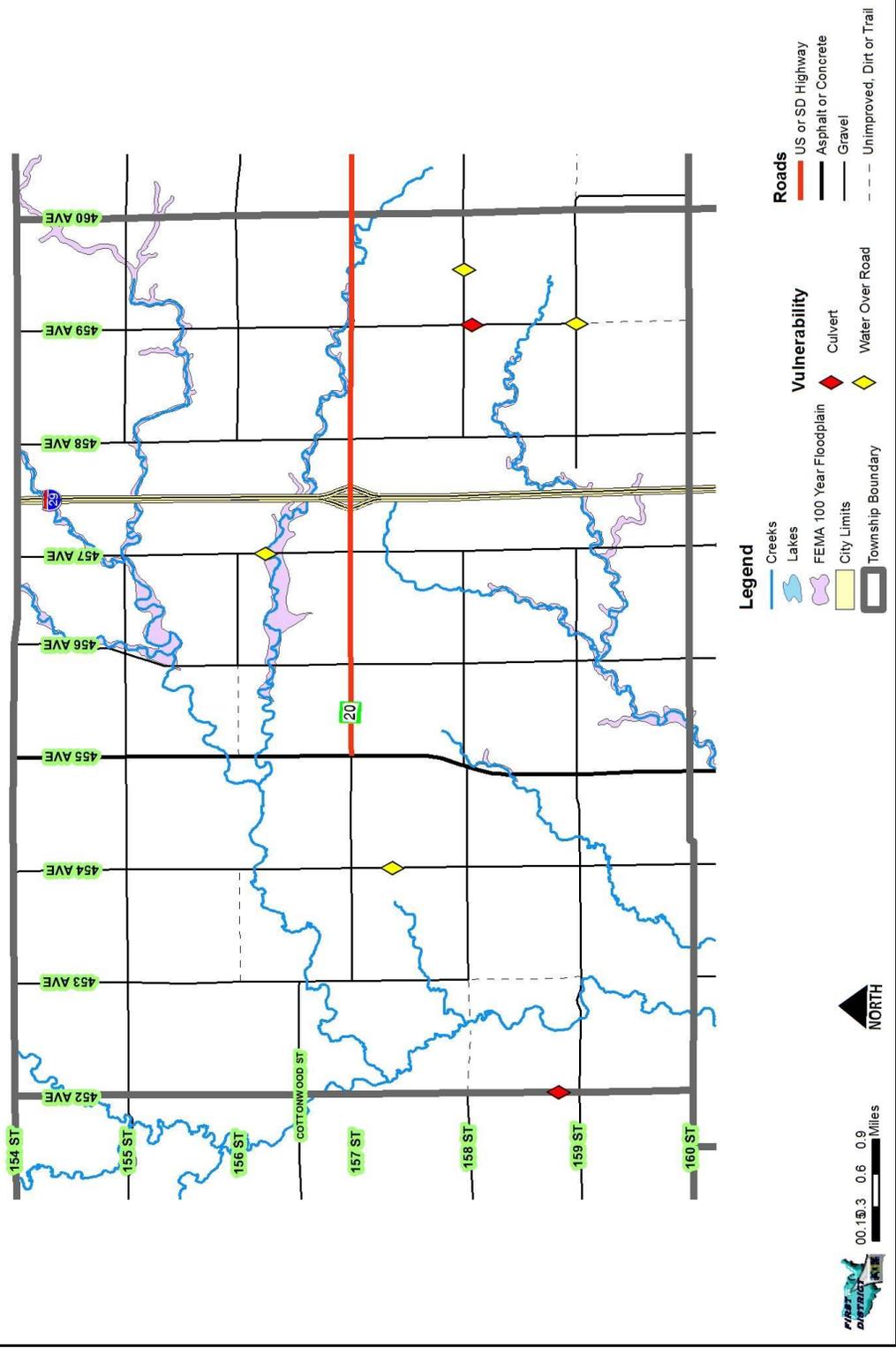






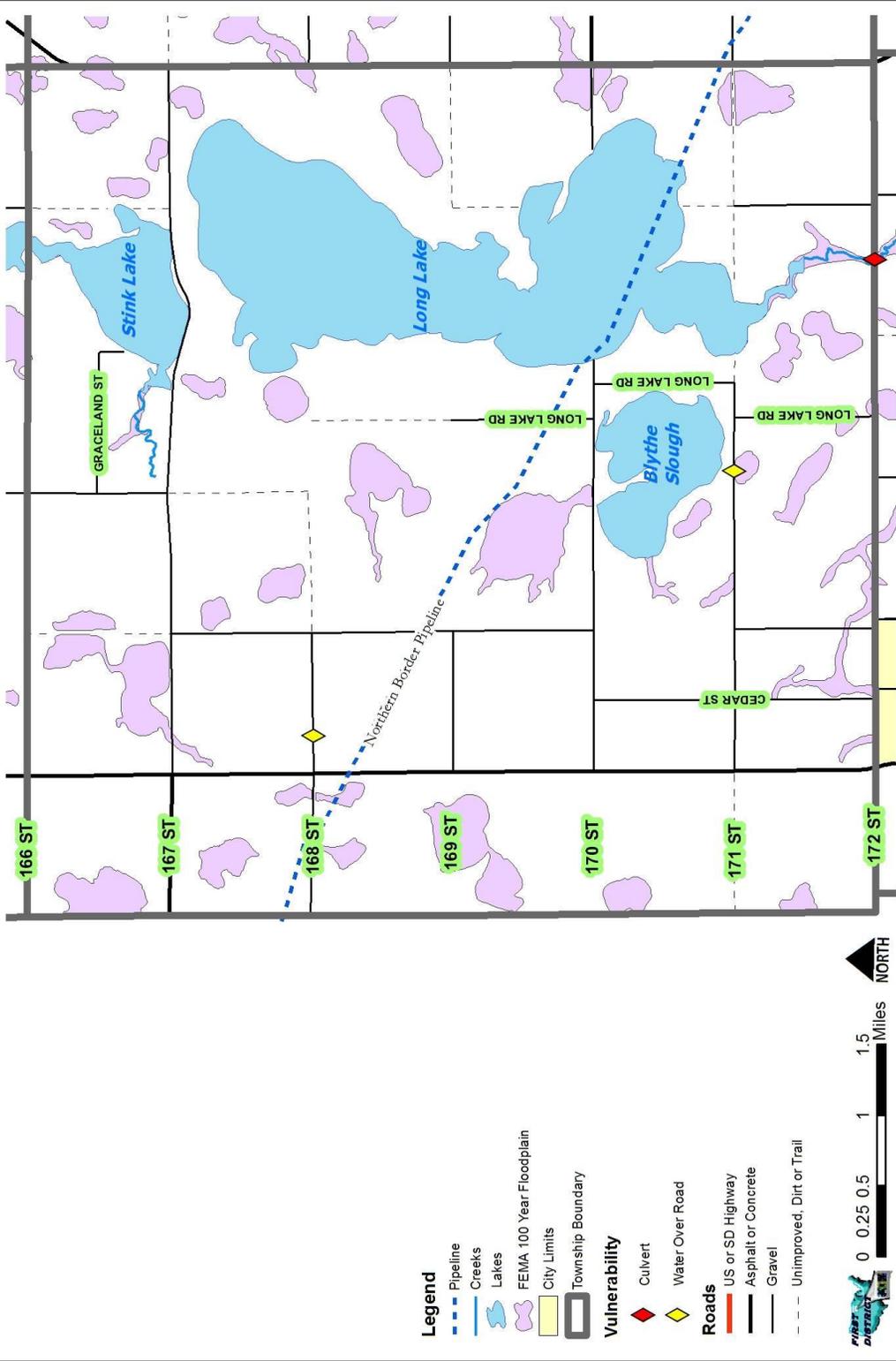
# GERMANTOWN TOWNSHIP

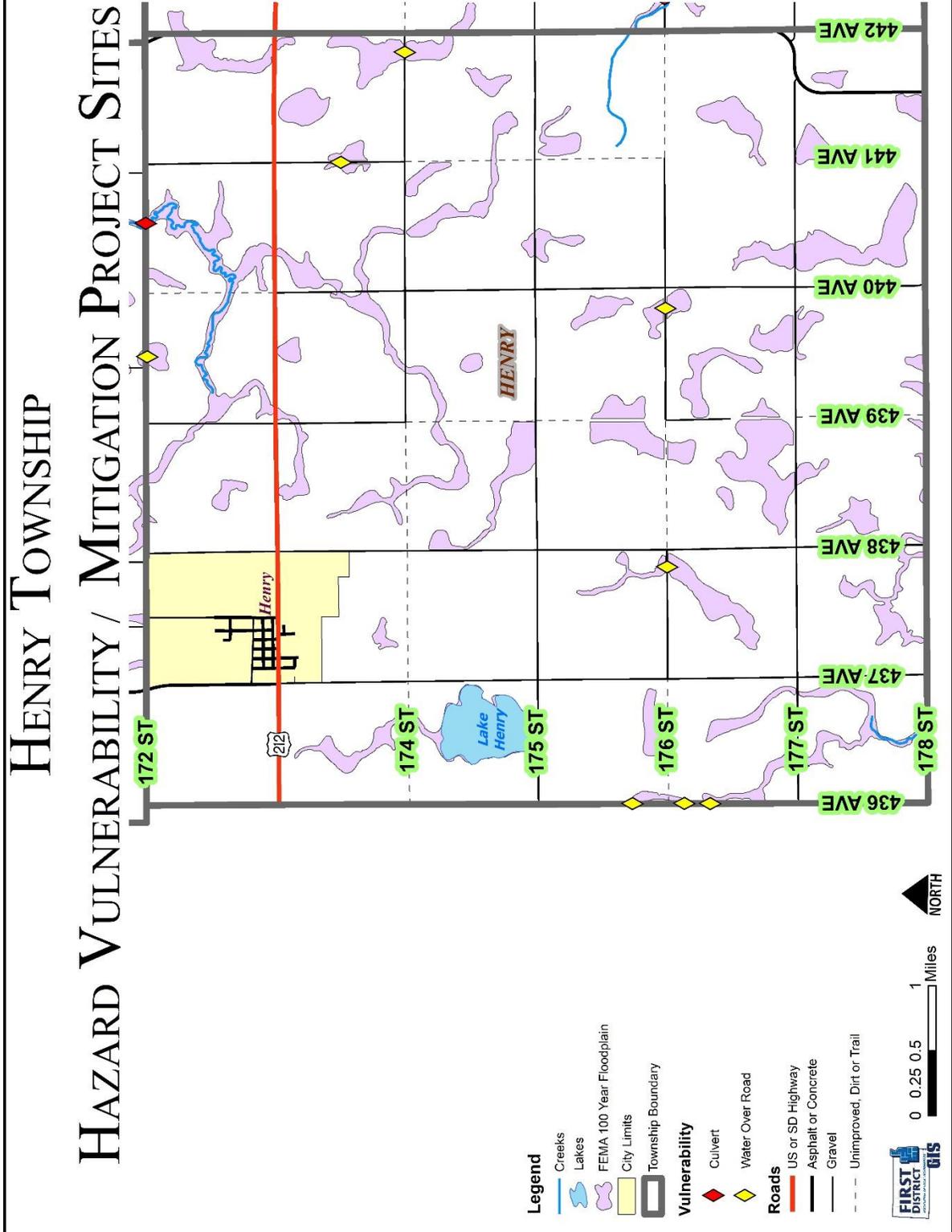
## HAZARD VULNERABILITY / MITIGATION PROJECT SITES

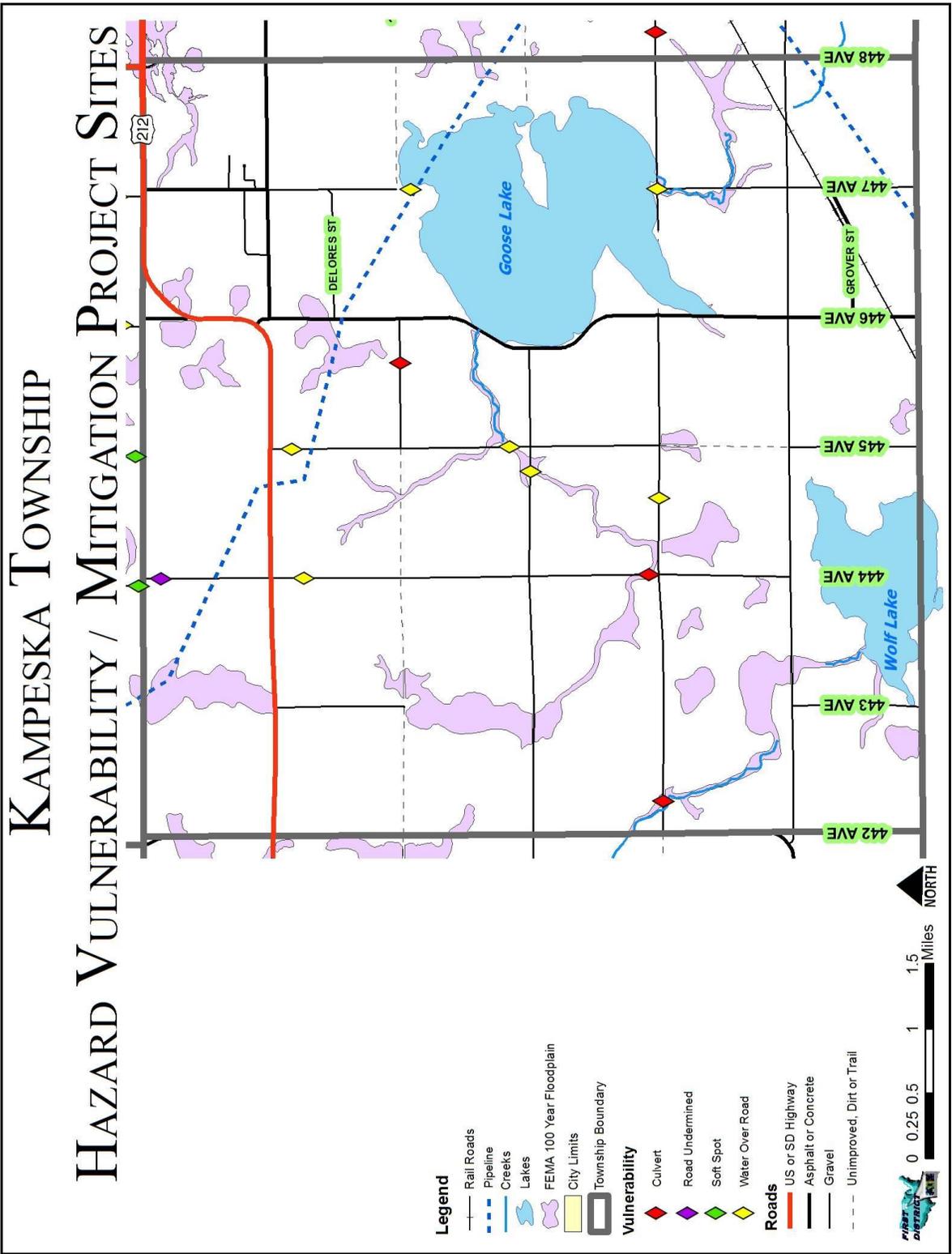


# GRACELAND TOWNSHIP

## HAZARD VULNERABILITY / MITIGATION PROJECT SITES

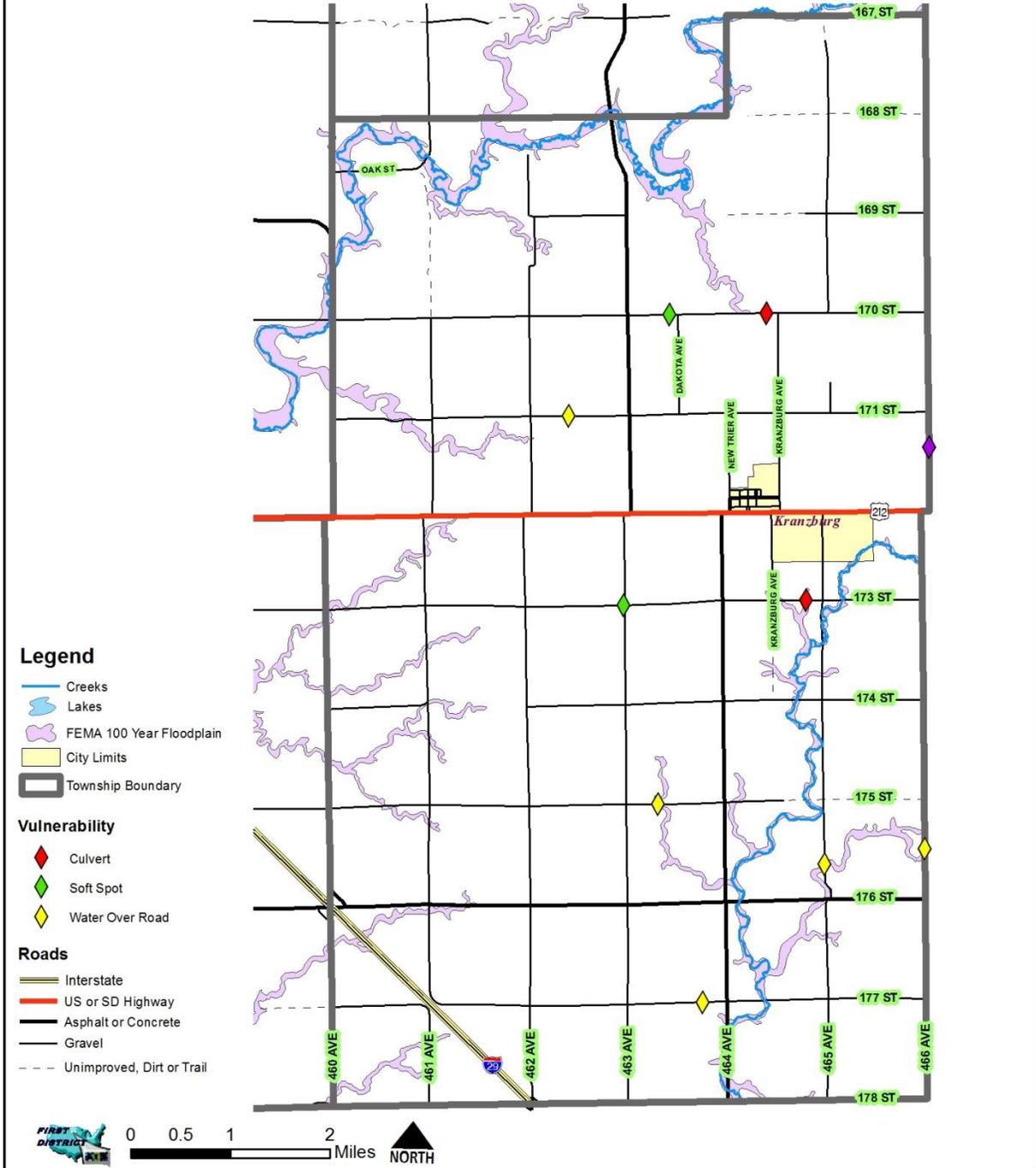


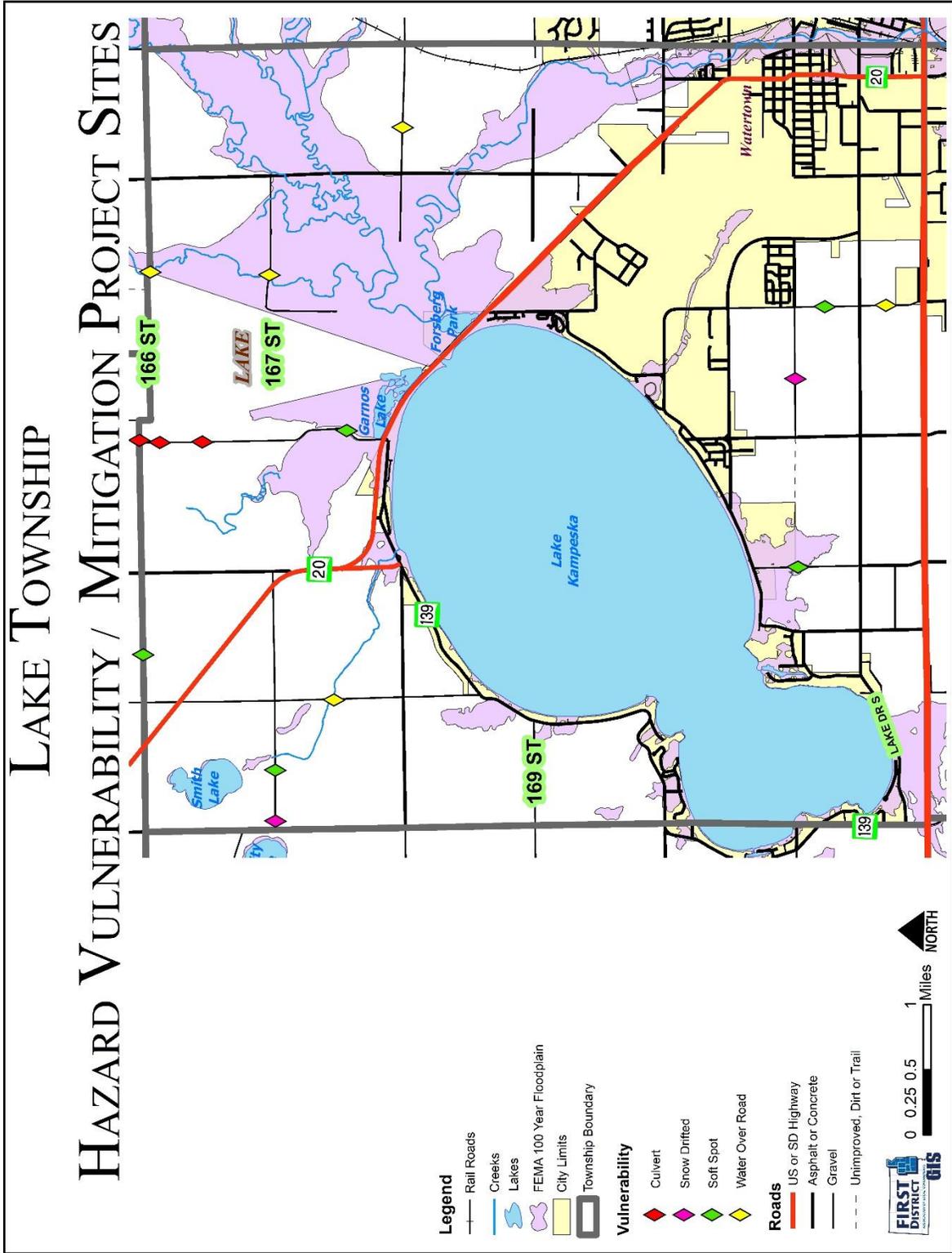


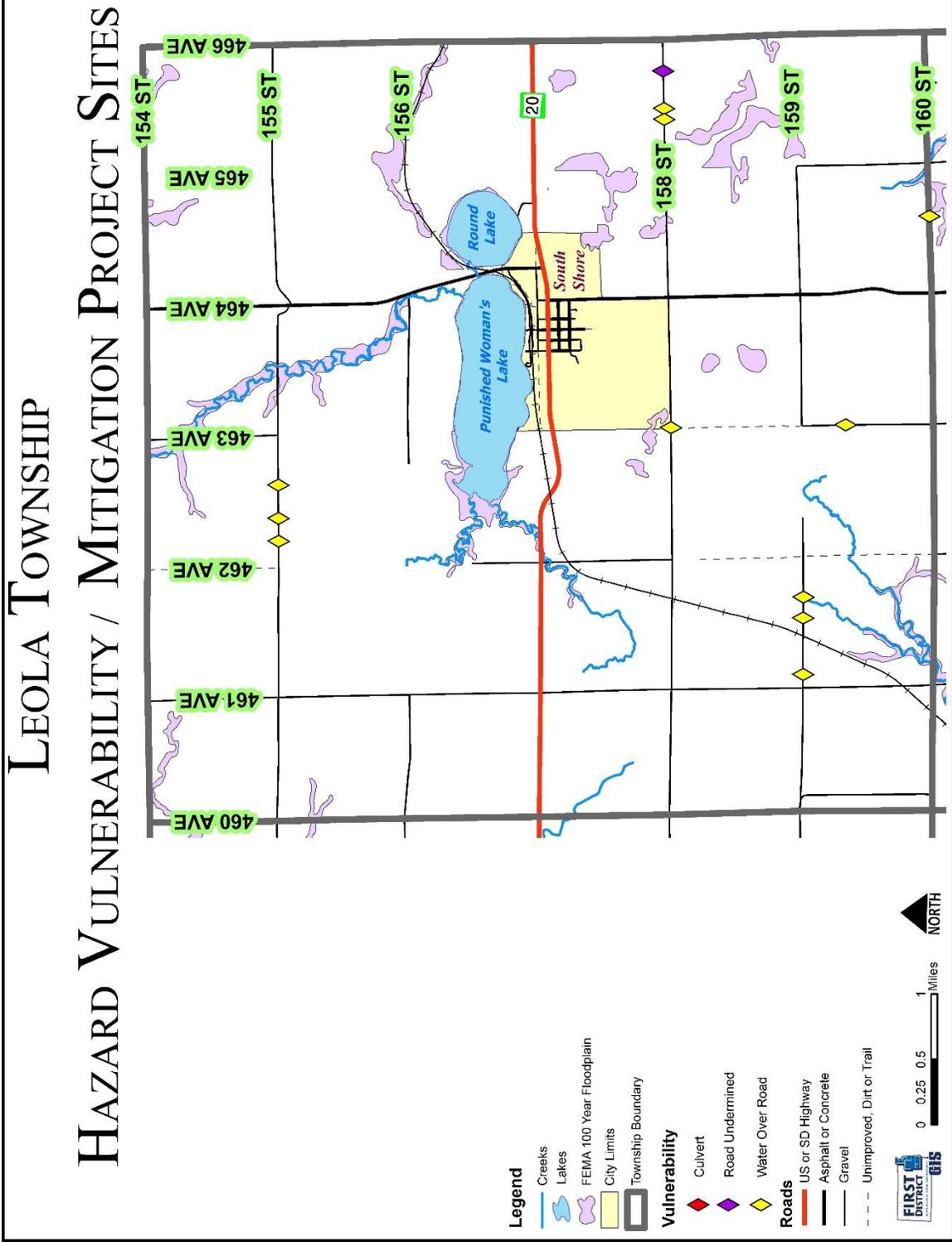


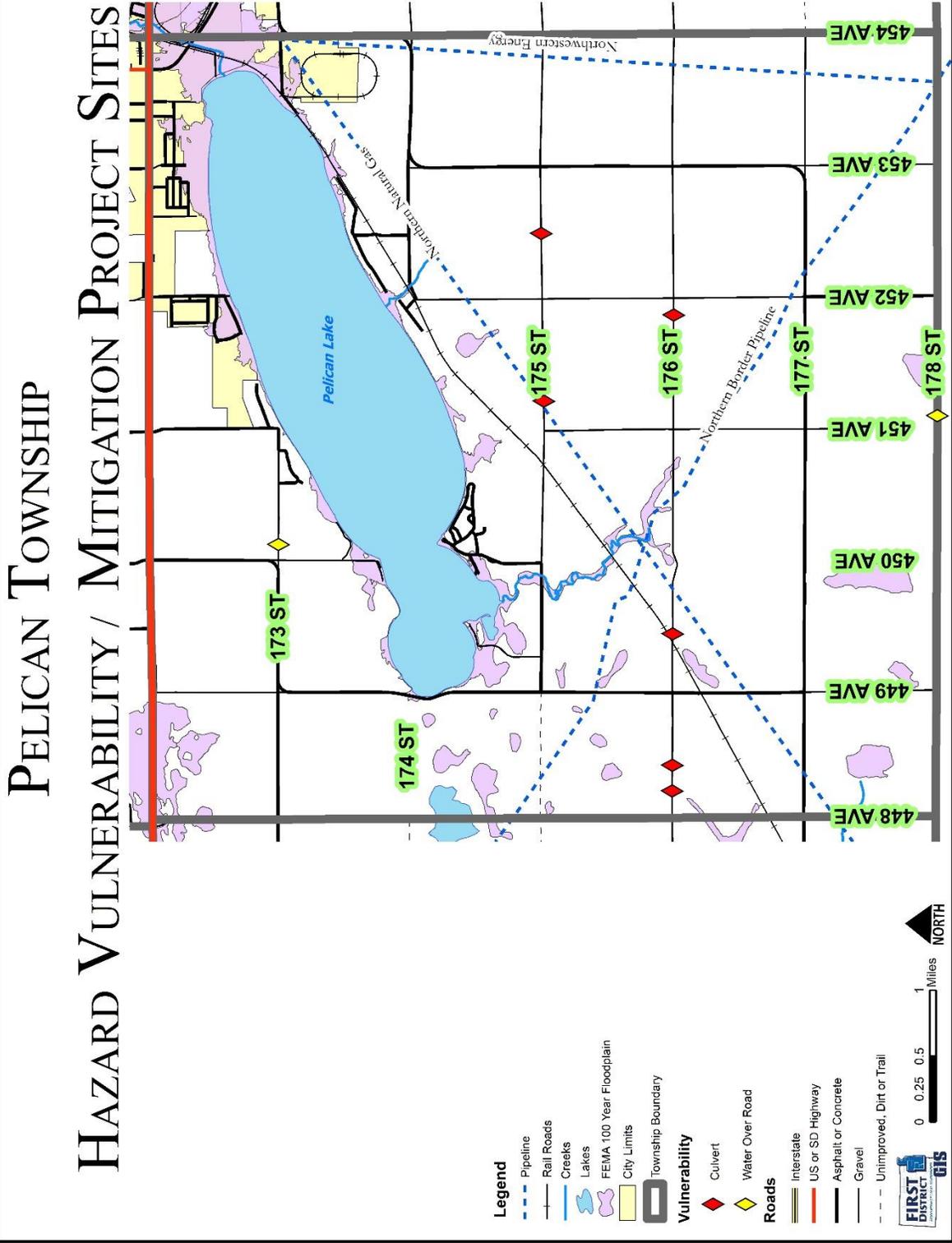
# KRANZBURG TOWNSHIP

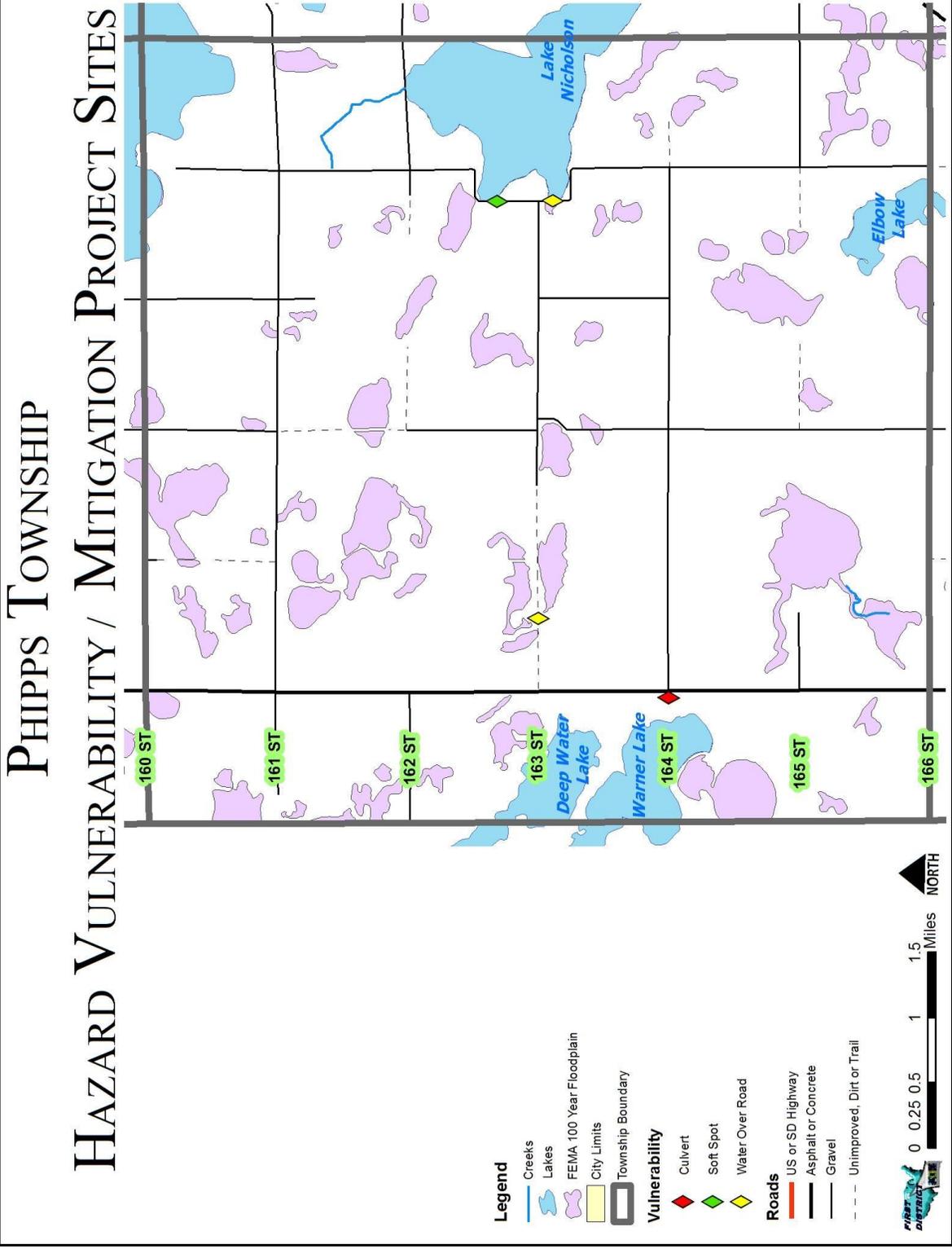
## HAZARD VULNERABILITY / MITIGATION PROJECT SITES



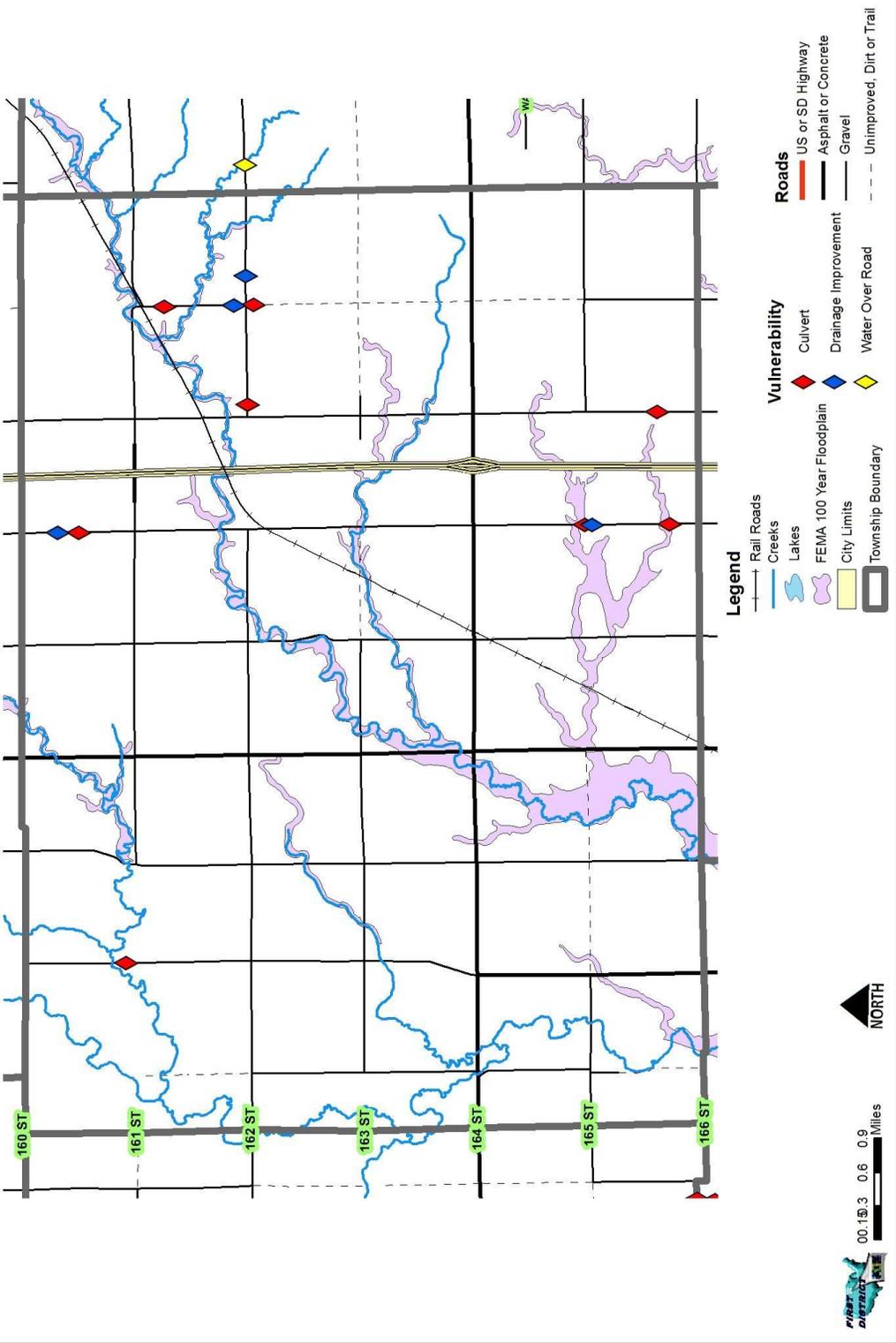


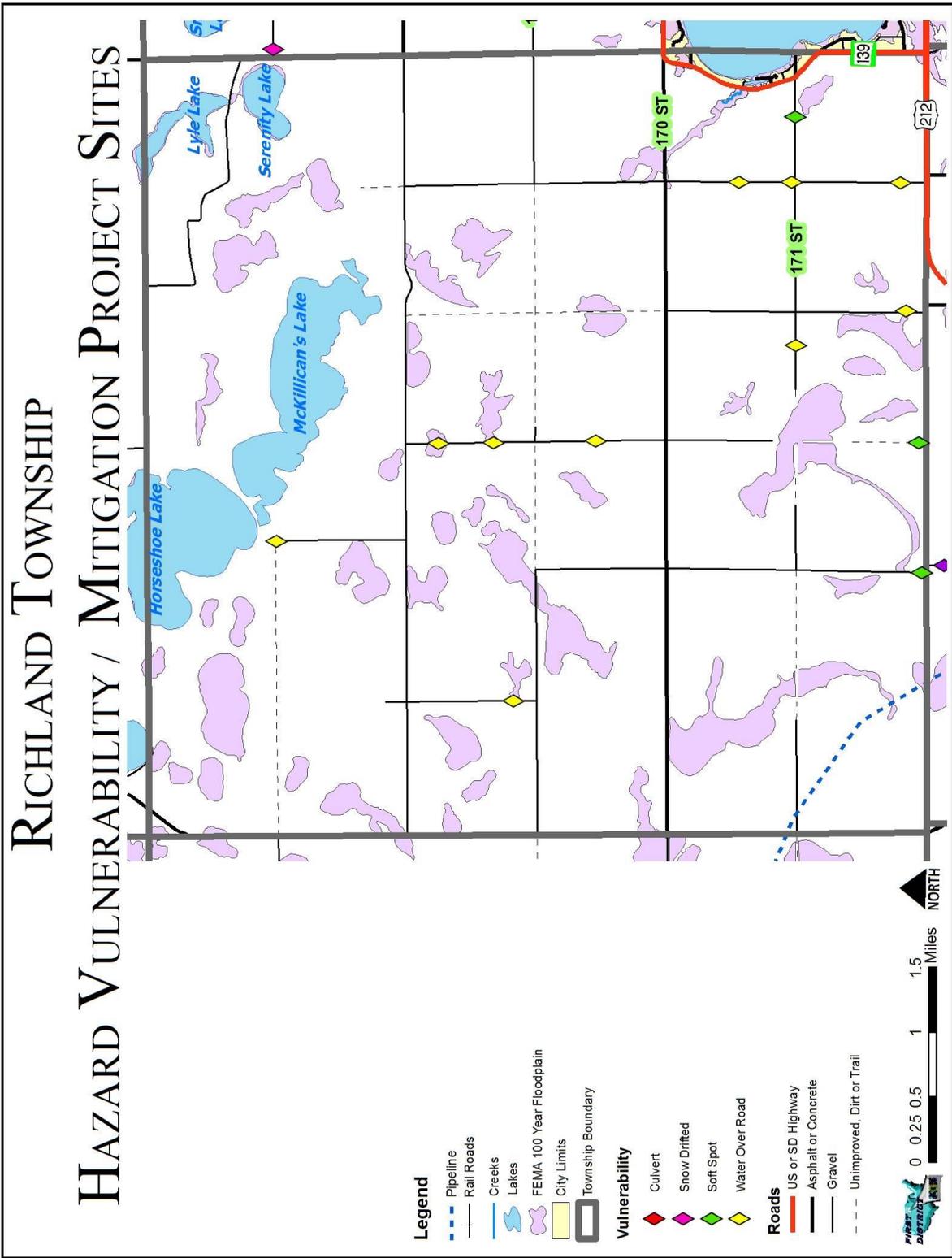


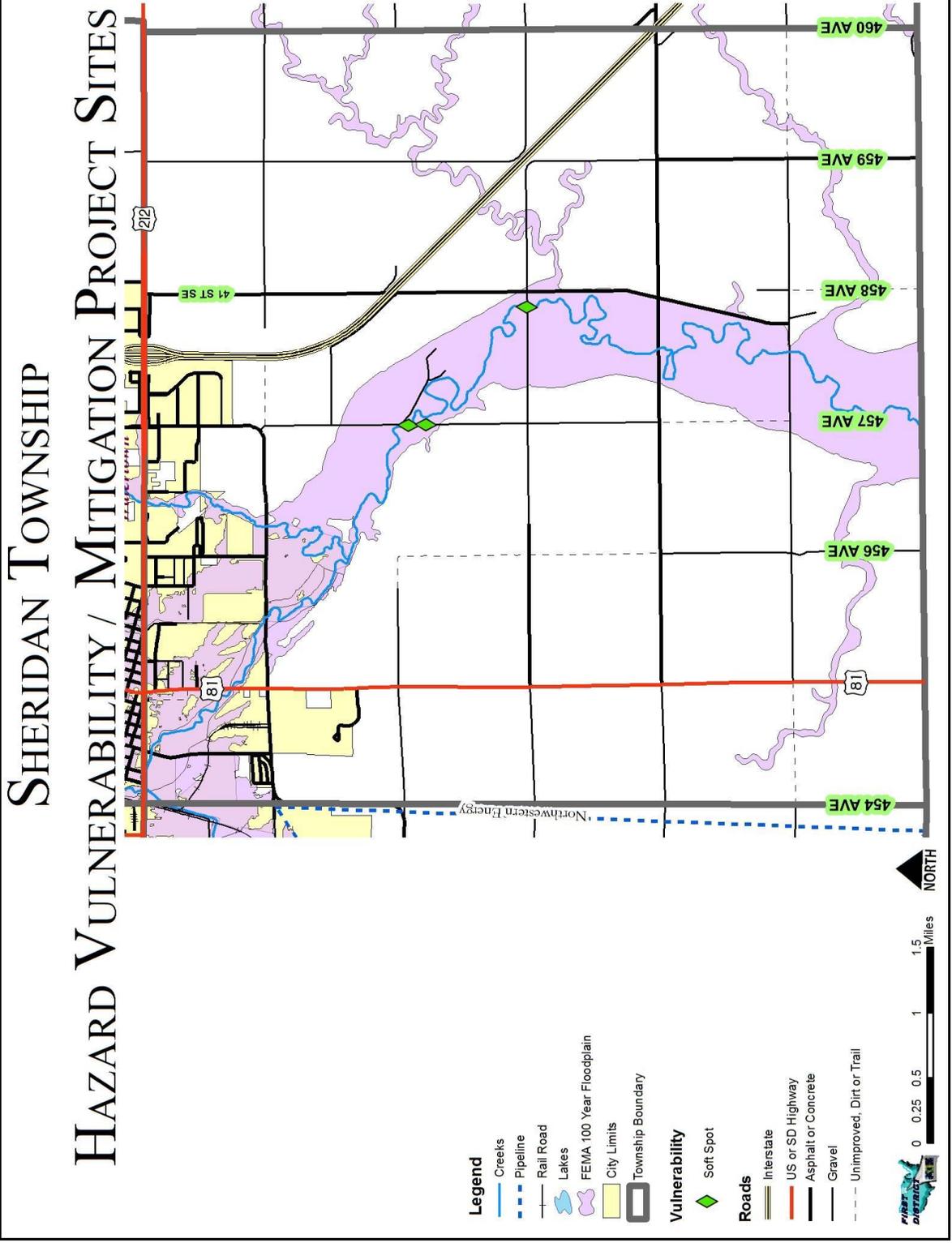




# RAUVILLE TOWNSHIP HAZARD VULNERABILITY / MITIGATION PROJECT SITES

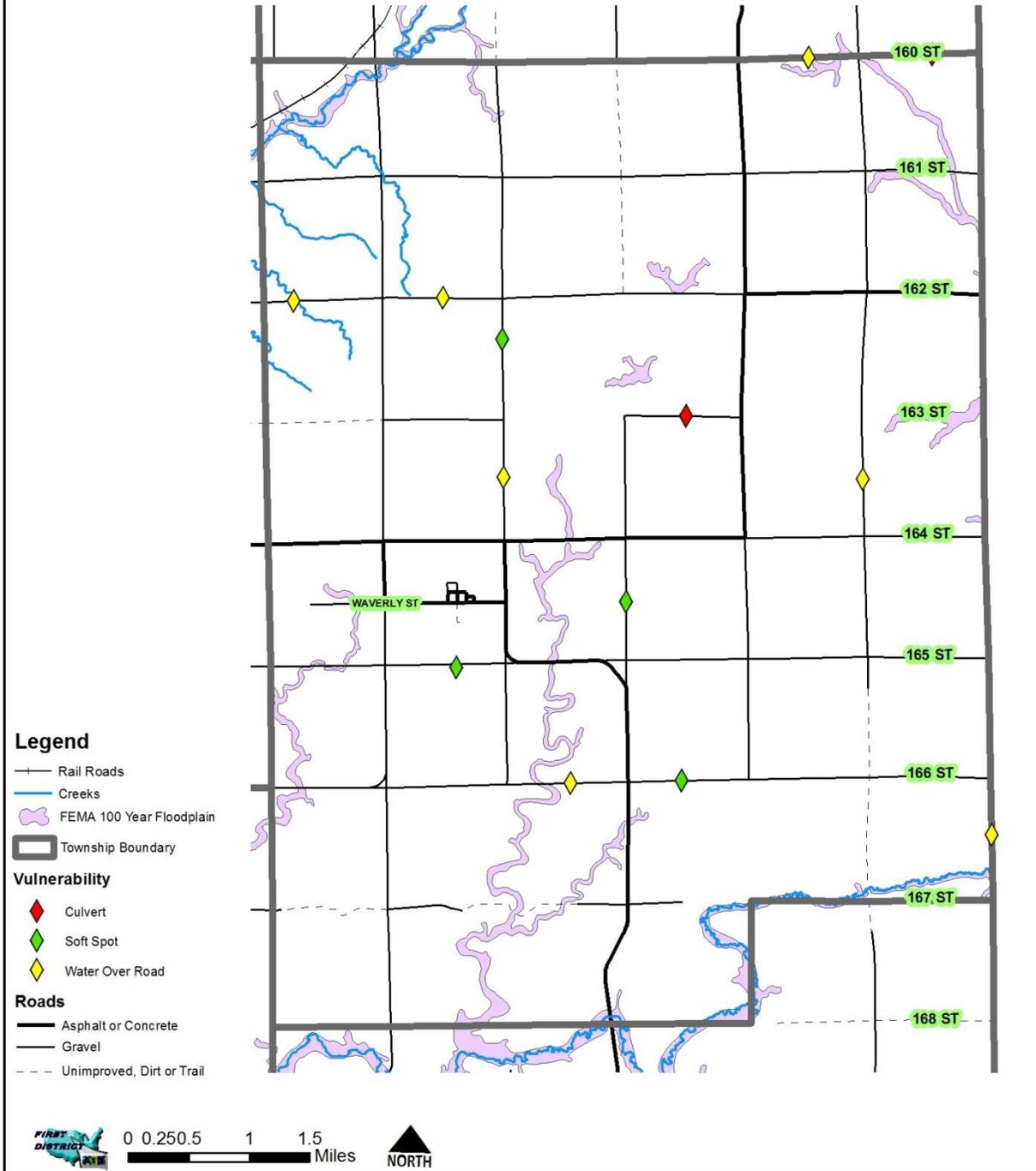






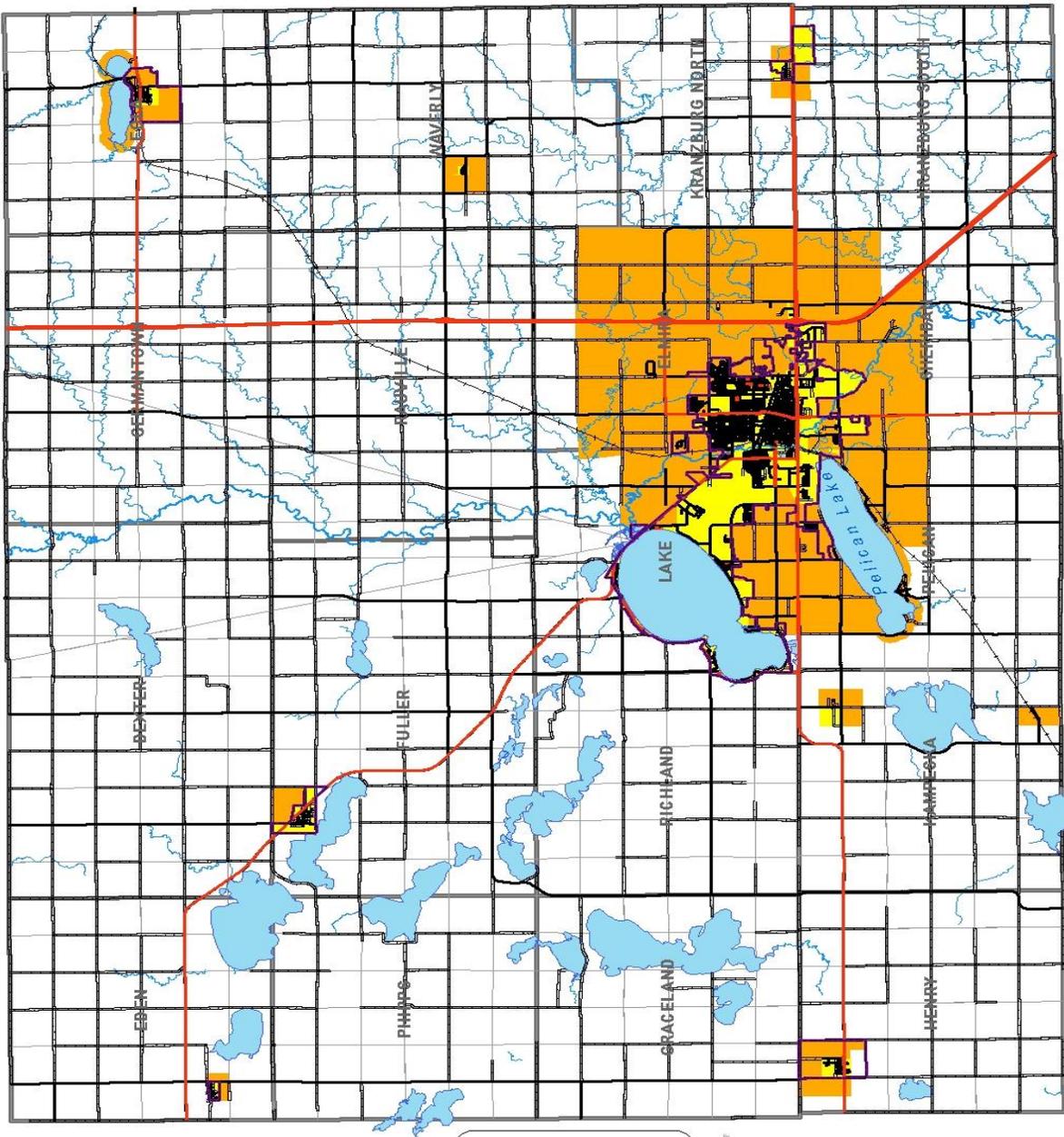
# WAVERLY TOWNSHIP

## HAZARD VULNERABILITY / MITIGATION PROJECT SITES



**Appendix F**  
**Comprehensive Land Use Maps**

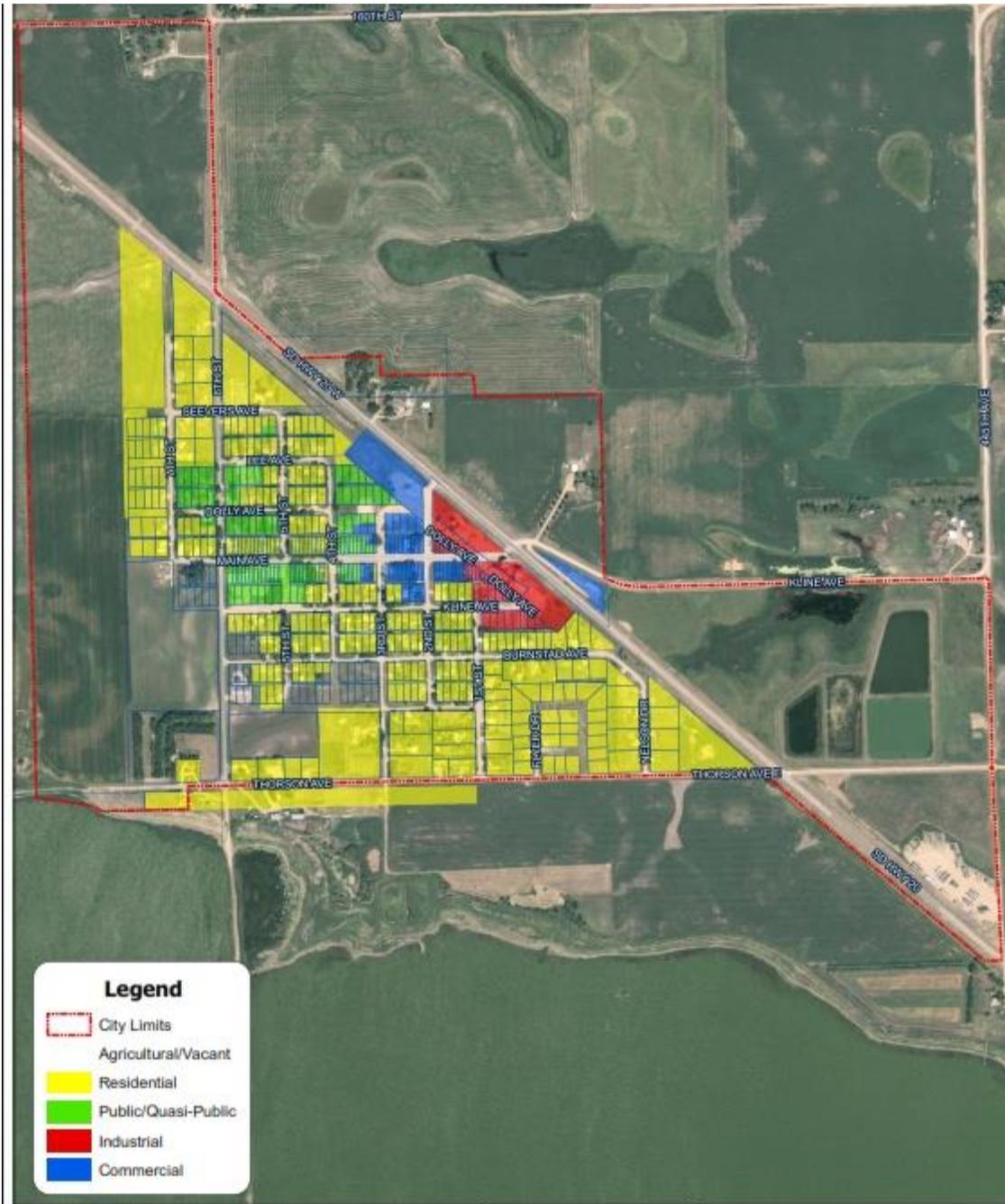
# Codrington County Future Land Use Map



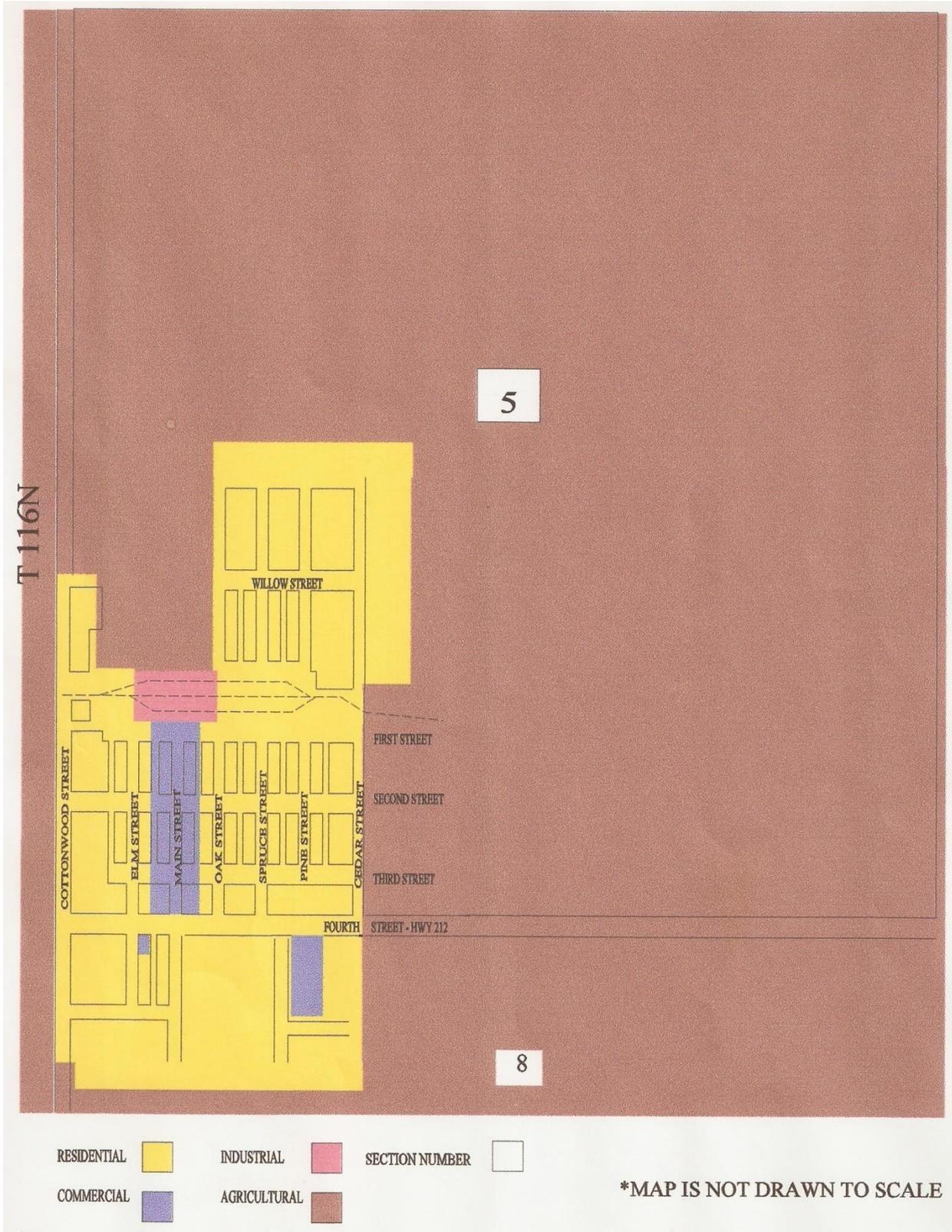
**Codrington County  
Comprehensive Land Use Plan  
Future Land Use Map  
1997-2010**

- Municipal Boundaries
- Areas of Development Stability
- Areas of Development Advantage
- Areas of Development Transition

# Town of Florence Future Land Use Map



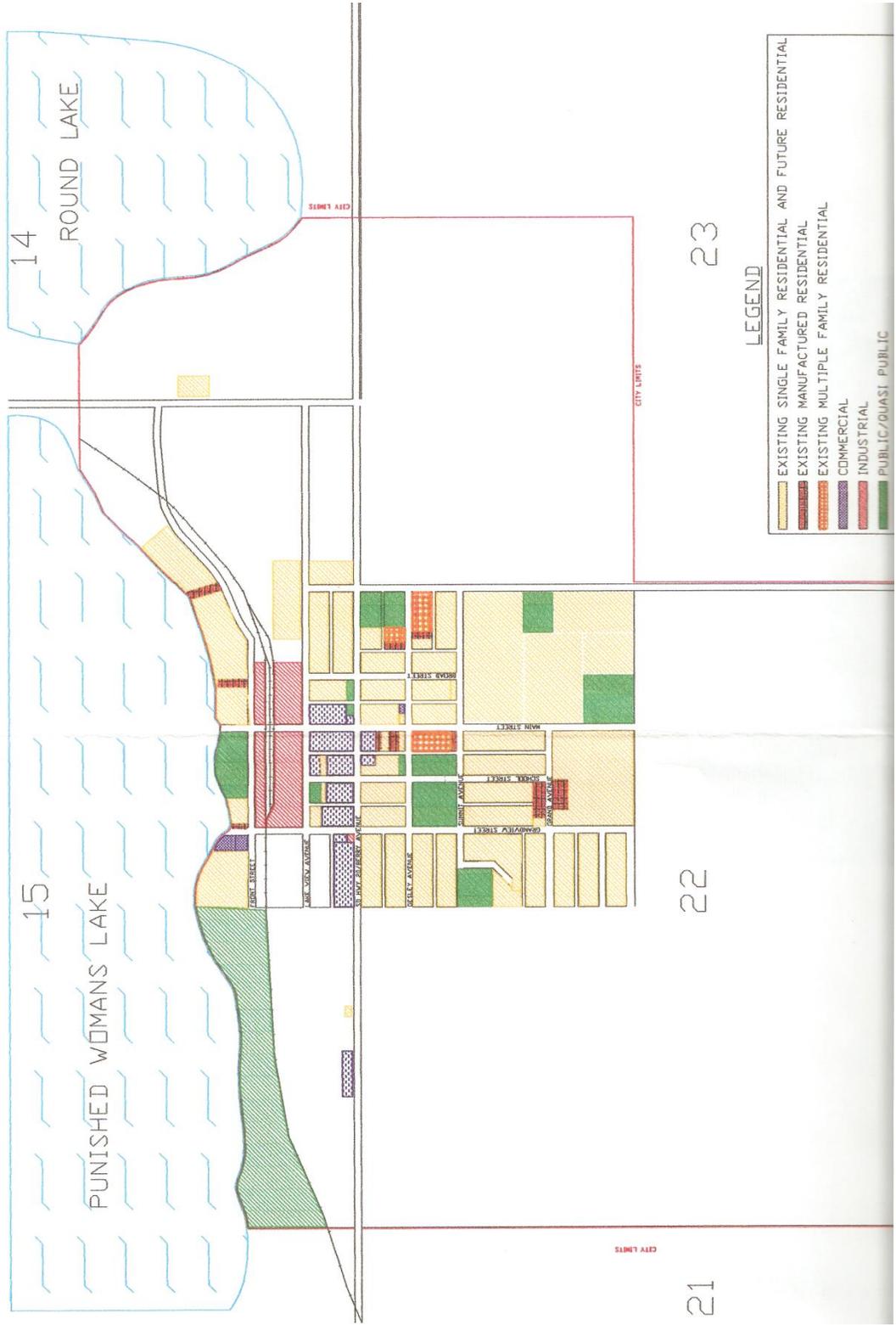
# Town of Henry Future Land Use Map



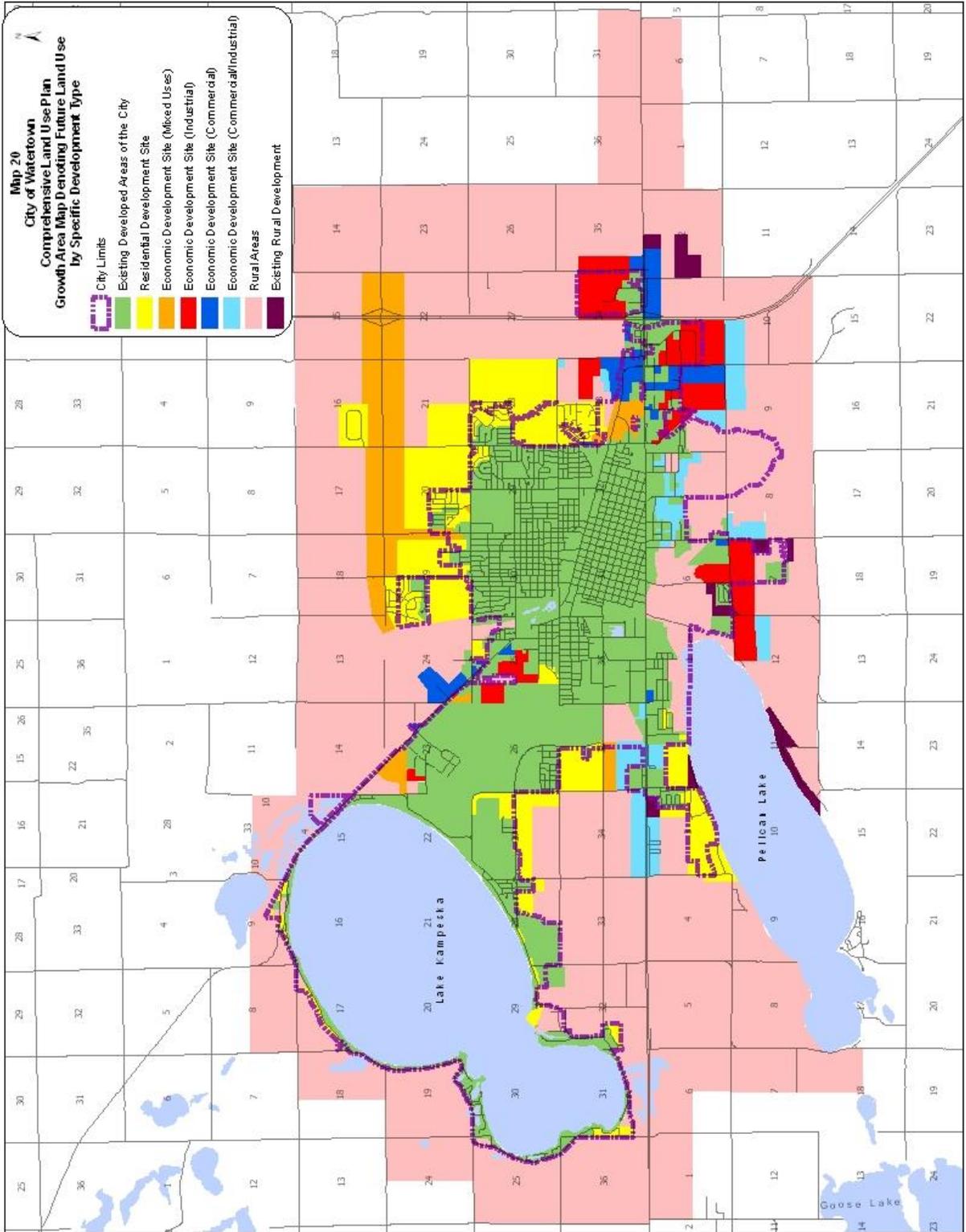


# Town of South Shore Future Land Use Map

## TOWN OF SOUTH SHORE COMPREHENSIVE LAND USE PLAN FUTURE LAND USE MAP "B" (1996-2010)



# City of Watertown Future Land Use Map



**Appendix G**  
**Review of 2017 PDM Mitigation Project Implementation**

<b>COMMUNITY</b>	<b>POTENTIAL MITIGATION PROJECTS</b>	<b>HAZARD</b>	<b>INCLUDED IN 2022 PLAN?</b>	<b>STATUS</b>
Town of Florence	Upgrade waterline size throughout the town.	Fire	No	Completed.
Town of Florence	Construction of Water Tower/Tank.	Fire	No	Completed.
Town of Henry	Drainage improvements throughout the town (cleaning and opening drainage areas).	Flooding	Yes	Ongoing
Town of Henry	Additional supplies for fire department.	Fire	Yes	Ongoing
Town of Kranzburg	Repair existing storm warning siren.	Severe Weather Hazards	No	Completed
Town of Kranzburg	Construct improvements to the wastewater lagoons.	Flooding	Yes	Ongoing
Town of South Shore	Raise E Lake Front Drive (at least 3 ft) near elevator.	Flooding	No	Completed
Town of South Shore	Purchase back-up generator for water system.	Severe Weather Hazards	No	Completed
Town of Wallace	Add culvert to maintain and drain slough on south edge of Town.	Flooding	No	Completed

City of Watertown	Construct dam on Big Sioux Fiver south of Mahoney Creek tributary.	Flooding	Yes	Ongoing
City of Watertown	Reconstruct bridge on 20 <sup>th</sup> Ave South.	Flooding	No	Completed
City of Watertown	Raise lift stations at Sandy Shores, City Park, and Memorial Park.	Flooding	No	Completed
City of Watertown	Raise or relocate gas meters above BFE around Lake Kampeska.	Flooding	No	Completed
City of Watertown	Drainage and curb improvements on 19 <sup>th</sup> Street.	Flooding	No	Completed
City of Watertown	Replacement and update of all weather sirens.	Severe Weather Hazards	No	Complete

## Appendix H - References

City of Watertown Comprehensive Land Use Plan – First District Association of Local Governments, 2010.

City of Watertown Zoning and Subdivision Ordinance – City of Watertown, 2011.

Codington County Comprehensive Land Use Plan and Zoning Ordinance – First District Association of Local Governments, 2012.

Codington County Mitigation Plan, 2012.

Codington County Hazardous Materials Plan – First District Association of Local Governments, 2021.

Discovery Report – Codington County, South Dakota – FEMA Region VIII and State of South Dakota Emergency Management Office, 2016.

Flood Control for Watertown and Vicinity, Watertown, SD – Value Engineering Report. 2009.

Local Mitigation Planning Handbook – Federal Emergency Management Agency, 2013.

NFIP Flood Insurance Rate Maps and Community Status Book Report.

State of South Dakota Hazard Mitigation Plan. South Dakota Office of Emergency Management, 2019.

Town of Florence Comprehensive Land Use Plan, Zoning and Subdivision Ordinances – First District Association of Local Governments, 2010.

Town of Henry Comprehensive Land Use Plan and Zoning Ordinance – First District Association of Local Governments, 2014.

Town of Kranzburg Comprehensive Land Use Plan and Zoning Ordinance – First District Association of Local Governments, 2002.

Town of South Shore Comprehensive Land Use Plan and Zoning Ordinance – First District Association of Local Governments, 2013.