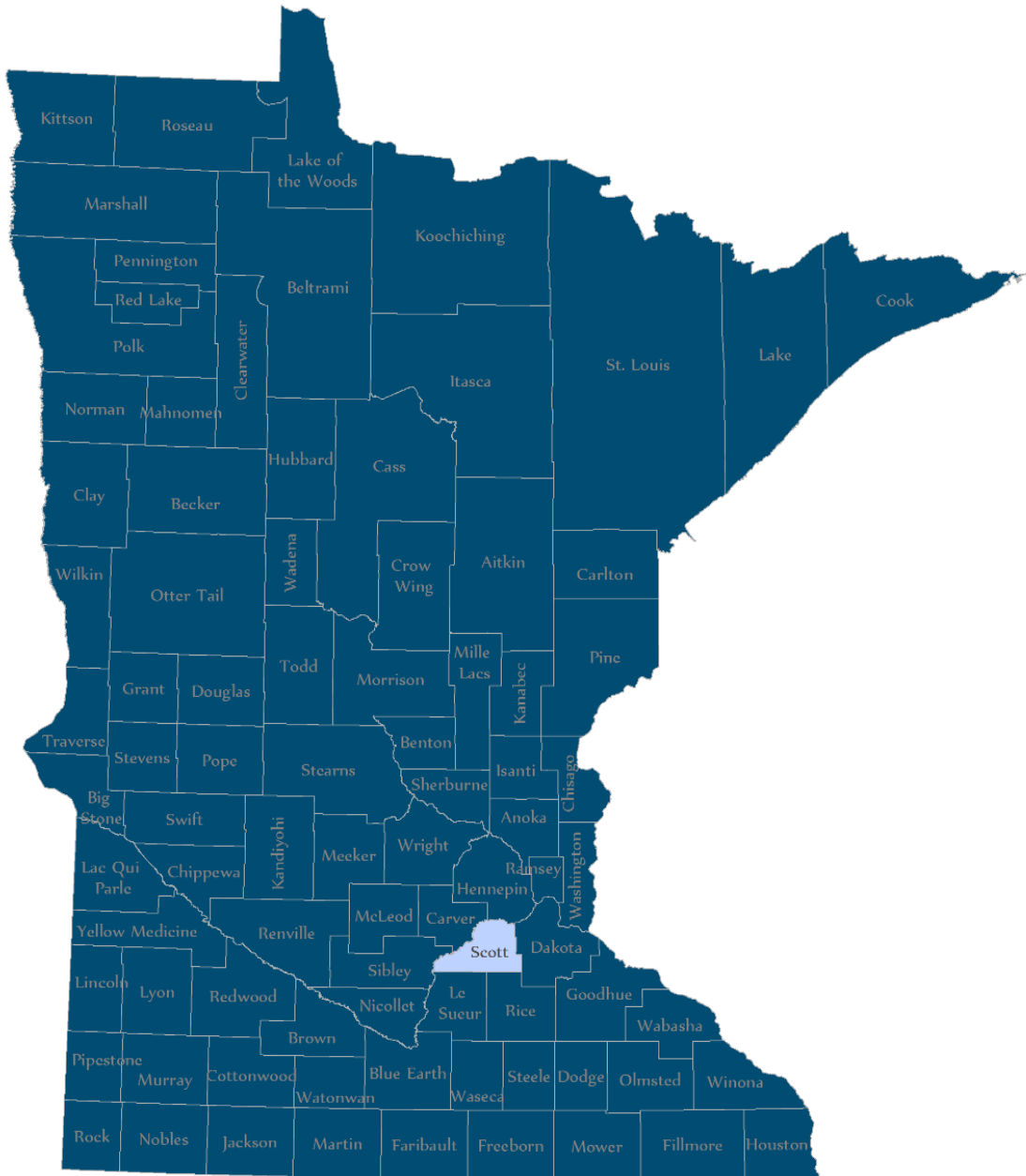


# Multi-Hazard Mitigation Plan

## Scott County, Minnesota, 2016



*This page is intentionally left blank*

# Multi-Hazard Mitigation Plan

## Scott County, Minnesota

# 2016

*Contact:*

Ron Holbeck, Deputy Emergency Management Director  
Scott County Law Enforcement Center  
301 Fuller Street South  
Shakopee, MN 55379

952-496-8181  
rholbeck@co.scott.mn.us  
www.co.scott.mn.us

*Prepared By:*

Geospatial Analysis Center  
Swenson College of Science and Engineering  
University of Minnesota Duluth  
140 Engineering Building  
1303 Ordean Court  
Duluth, MN 55812

Stacey Stark, Director  
slstark@d.umn.edu  
(218) 726-7438

*This page is intentionally left blank*



## Table of Contents

Table of Contents.....	5
List of Figures .....	7
List of Tables.....	8
Section 1 – Introduction.....	9
1.1 Introduction .....	9
1.1.1 Scope.....	9
1.1.2 Hazard Mitigation Definition .....	10
1.1.3 Benefits of Mitigation Planning .....	10
1.2 State Mitigation Plan Overview .....	11
Section 2 – Public Planning Process.....	13
2.1 Steering Committee Information.....	13
2.2 Review of Existing Plans .....	14
2.3 Planning Process Timeline and Steps.....	15
Section 3 – Scott County Profile.....	17
3.1 General County Description .....	17
3.2 Environmental Characteristics.....	17
3.3 Hydrography .....	18
3.3.1 Groundwater.....	18
3.3.2 Lakes.....	18
3.3.3 Rivers .....	19
3.3.4 Wetlands .....	19
3.4 Climate .....	19
3.4.1 Climate Change .....	19
3.5 Demographics.....	21
3.6 Economy .....	23
3.7 Community Services & Infrastructure .....	24
3.7.1 Health Care Providers .....	26
3.7.2 Public Safety Providers/Government Services .....	26
3.7.3 Utilities/Communications.....	28
3.7.4 Transportation .....	28
3.8 Land Use and Ownership .....	28
Section 4 – Risk Assessment.....	30

4.1	Hazard Identification/Profile.....	31
4.1.1	Hazard Identification .....	31
4.1.2	Vulnerability Assessment by Jurisdiction .....	32
4.1.3	Calculated Priority Risk Index.....	33
4.1.4	Hazard Profiling Concept of Planning.....	36
4.1.5	GIS and Hazus-MH.....	36
4.1.6	National Climatic Data Center (NCDC) Records.....	37
4.1.7	FEMA Declared Disasters .....	37
4.2	Vulnerability Assessment .....	40
4.2.1	Asset Inventory.....	40
4.2.2	Facility Replacement Costs .....	44
4.3	Future Development.....	44
4.4	Hazard Profiles .....	45
4.4.1	Summer Storms (Tornadoes, Windstorms, Lightning, Hail).....	45
4.4.2	Flash Flood and Riverine Flood.....	53
4.4.3	Severe Winter Storms – Blizzards, Ice Storms.....	68
4.4.4	Extreme Cold.....	72
4.4.5	Extreme Heat.....	73
4.4.6	Drought.....	75
4.4.7	Wildfire.....	77
4.4.8	Landslides and Soil Erosion.....	80
4.4.9	Structure Fires .....	84
4.4.10	Infectious Diseases .....	84
4.4.11	Ground and Surface Water Supply Contamination .....	87
4.4.12	Hazardous Materials .....	89
4.4.13	Terrorism .....	92
4.4.14	Dam Failure.....	92
	Section 5 – Mitigation Strategy .....	97
5.1	Community Capability Assessment.....	97
5.1.1	National Flood Insurance Program (NFIP).....	97
5.1.2	Plans and Ordinances .....	98
5.2	Mitigation Goals .....	98
5.3	Mitigation Actions and Projects .....	102

5.3.1 Hazard Mitigation Actions.....	104
5.3.2 Mitigation Actions by Community .....	126
Section 6 – Plan Maintenance.....	127
6.1 Monitoring, Evaluation, and Updating the Plan .....	127
6.2 Implementation.....	127
6.3 Continued Public Involvement.....	128
APPENDICES.....	131
Appendix A Scott County Maps.....	1
Appendix B Scott County Critical Facilities .....	1
Appendix C Scott County Hazard Events.....	1
Appendix D Adopting Resolutions.....	1
Appendix E Steering Committee Meetings.....	1
Appendix F Public Meeting Notices and Meeting Notes.....	1
Appendix G Mitigation Actions by Jurisdiction.....	1
Appendix H Completed Mitigation Actions from 2009 Plan.....	1
Appendix I Works Cited .....	1
Appendix J Scott County Plans & Programs in Place.....	1

## List of Figures

Figure 1. Scott County Population by Census Block, 2010.....	22
Figure 2. Critical Facilities in Scott County .....	25
Figure 3. Fire Departments and Fire Response Times in Scott County.....	27
Figure 4. FEMA-Declared Disasters and Emergencies in Minnesota, 1957-2015.....	38
Figure 5. Critical Facilities in Shakopee .....	41
Figure 6. Critical Facilities in Savage.....	42
Figure 7. Critical Facilities in Prior Lake.....	43
Figure 8. Damage from Tornado in Belle Plaine, MN, June 10, 2012 (Scott County Sheriff's Office Facebook page).....	45
Figure 9. Tornado Touchdowns and Paths, Scott County, 1950-September 2015.....	47
Figure 10. Most Recent Severe Wind and Hail Storms in Scott County .....	49
Figure 11. Electric Utility Reported Power Outages by Month (2008-2013) .....	52
Figure 12. Causes of Electric-Utility Reported Outages (2008-2013) .....	53
Figure 13. Flood Damage on County Road 16, Shakopee, June 27, 2014 (Noess, 2014) .....	55
Figure 14. Valleyfair Floodwaters, Shakopee, 2014 (KARE-Sky 11, 2014).....	55
Figure 15. Distribution of Estimated Economic Loss for Scott County in 100-Year Flood .....	59
Figure 16. Census Block #271390802011003 and 100-Year Floodplain in Savage.....	61
Figure 17. Census Block #271390809052004 and 100-Year Floodplain by Prior Lake.....	62
Figure 18. Census Block #271390809061005 and 100-Year Floodplain by Prior Lake.....	63
Figure 19. Census Block #271390809032014 and 100-Year Floodplain by Prior Lake.....	64
Figure 20. Census Block #271390803012005 and 100-Year Floodplain in Shakopee .....	65
Figure 21. Savage Essential Facility in 100-Year Floodplain.....	66
Figure 22. Armistice Day Blizzard, 1940 .....	69

Figure 23. Wildfires by Acres Burned (1985-April 2015) and Peat Soil Areas in Scott County .....	79
Figure 24. Mudslide in Blakeley (KSTP.com, 2014).....	81
Figure 25. Landslide Damage to a Historic Jordan Brewery (Feyder, 2014).....	81
Figure 26. Jordan Water Tower and Eroding Bluff (imagery from 2012) .....	82
Figure 27. Scott County Groundwater Contamination Susceptibility and Public Wells .....	88
Figure 28. Top Events Affecting Petroleum Transport by Truck and Rail (1986-2014).....	91
Figure 29. Dams in Scott County.....	95

## List of Tables

Table 1. Multi-Hazard Mitigation Steering Committee.....	13
Table 2. Planning Documents used for MHMP Planning Process.....	14
Table 3. Scott County Hazard Mitigation Update Meetings.....	16
Table 4. Scott County Population by Community, 2010 .....	21
Table 5. Scott County Population Change (1940-2010) .....	23
Table 6. Scott County Population Projections (2015-2045) .....	23
Table 7. Annual Average Employment by Major Industry Sector, Scott County .....	24
Table 8. FEMA MHIRA Natural Hazards in the 2014 Minnesota State Hazard Mitigation Plan .....	32
Table 9. FEMA MHIRA Other Hazards in the 2014 Minnesota State Hazard Mitigation Plan.....	32
Table 10. Hazards identified in the 2009 Scott County Multi-Hazard Mitigation Plan .....	33
Table 11. Summary of Calculated Priority Risk Index (CPRI) Categories and Risk Levels.....	34
Table 12. Hazards Ranked by Jurisdiction using the CPRI .....	35
Table 13. National Climatic Data Center Historical Hazards .....	37
Table 14. FEMA-Declared Major Disasters in Scott County (1953-2015) .....	38
Table 15. FEMA-Declared Emergencies in Scott County (1974-2015) .....	39
Table 16. Historical Hazard Mitigation Funding in Scott County.....	40
Table 17. Scott County Critical Infrastructure and Facilities .....	40
Table 18. Scott County Total Building Exposure.....	44
Table 19. Historic Tornado Events in Scott County, 1950-September 2015 .....	46
Table 20. Storms producing hail of greater than 1 inch diameter in Scott County, 1950-September 2015 .....	51
Table 21. Scott County Historical Floods, 1997-September 2015 .....	56
Table 22. Historical Flood Crests for USGS gauging station on the Minnesota River near Jordan.....	57
Table 23. Scott County Total Economic Loss from 100-Year Flood.....	58
Table 24. Scott County Census Blocks with the Greatest Estimated Losses in the 100-Year Floodplain .....	60
Table 25. Scott County Essential Facilities within estimated 100-Year Flood Boundary .....	66
Table 26. Notable Winter Weather Events in Scott County .....	70
Table 27. Scott County Fire Department Runs, Dollar Losses, and Deaths, 2009-2014.....	84
Table 28. Hazardous Materials Spills in Scott County, 2007-2015 .....	89
Table 29. Dam Data for Scott County .....	93
Table 30. NFIP Participation in Scott County.....	97
Table 31. Goals, Strategies, and Objectives for Natural Hazards from the 2014 Minnesota State Hazard Mitigation Plan .....	99
Table 32. All Mitigation Actions for Scott County.....	106

# Section I – Introduction

## I.1 Introduction

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

Hazard mitigation planning and preparedness will be the most effective instrument to diminish losses by reducing the impact of disasters upon people and property. Although mitigation efforts will not eliminate all disasters, each county shall endeavor to be as prepared as possible for a disaster.

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

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

Scott County is vulnerable to a variety of potential disasters. These hazards, both natural and human-caused, threaten loss of life and property in the county. Such hazards as tornadoes, flooding, wildfires, blizzards, straight-line winds, ice storms, and hazardous material spills have the potential for inflicting vast economic loss and personal hardship. In 2013, Minnesota had some of the highest weather-related disaster claims in the country (MN Environmental Quality Board, 2014).

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

### I.1.1 Scope

The Scott County Deputy Emergency Management Director and the University of Minnesota Duluth Geospatial Analysis Center have combined efforts to update the 2009 Scott County Multi-Hazard Mitigation Plan.

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

The University of Minnesota Duluth Geospatial Analysis Center (GAC) performed the hazard risk assessment for 100-year floods using the Hazus-MH GIS tool. In recognition of the importance of planning in mitigation activities, FEMA created **Hazards USA Multi-Hazard** (Hazus-MH), a powerful geographic information system (GIS)-based disaster risk assessment tool. This tool enables communities of all sizes to predict estimated losses from floods, hurricanes, earthquakes, and other related phenomena and to measure the impact of various mitigation practices that might help reduce those losses. The Minnesota Homeland Security and Emergency Management (HSEM) office has determined that Hazus-MH should play a critical role in Minnesota's risk assessments, and therefore the 100-year flood hazard analysis is introduced in this plan.

This is a multi-jurisdictional plan that covers Scott County, including the cities of Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, and Shakopee. The Scott County risks and mitigation activities identified in this plan also incorporate the concerns and needs of townships, school districts, and other entities participating in this plan.

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

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

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

### **1.1.2 Hazard Mitigation Definition**

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

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

### **1.1.3 Benefits of Mitigation Planning**

The benefits of hazard mitigation planning include the following:

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

## **I.2 State Mitigation Plan Overview**

FEMA currently has three mitigation grant programs that are administered by the State of Minnesota: the Hazard Mitigation Grant Program (HMGP), the Pre-Disaster Mitigation program (PDM), and the Flood Mitigation Assistance (FMA) program. The HMGP, PDM and FMA are administered through the Department of Public Safety, Division of Homeland Security and Emergency Management.

*This page is intentionally left blank*



## Section 2 – Public Planning Process

### 2.1 Steering Committee Information

The Scott County multi-hazard mitigation steering committee is headed by the Scott County Deputy Emergency Management Director, who is the primary point of contact. University of Minnesota Duluth staff under contract with Scott County includes Stacey Stark (GAC Director), Steve Graham (GAC Research Analyst) and Adam Pine (Department of Geography, Urban, Environment and Sustainability Studies). Members of the Scott County MHMP steering committee include representatives from the public, private, and governmental sectors. Table 1 identifies the steering committee individuals and the organizations they represent.

Table 1. Multi-Hazard Mitigation Steering Committee

Organization	Name	Participant Title
Scott County Emergency Management	Ron Holbeck	Deputy Emergency Management Director
Scott County Emergency Management	Chris Weldon	Emergency Management Director (through Oct. 2015)
Scott County Emergency Management	Adam Pirri	Emergency Management Director (after Oct. 2015)
Scott County Emergency Management	Dick Turner	Emergency Management Planner
Scott County Loss Control & Safety	Rhonda Laxen	Manager
Scott County Public Health	Lisa Brodsky	Public Health Director
Scott County GIS	Matt McLees	Sr. GIS Analyst
Scott County GIS	Tony Monsour	Principal GIS Analyst
Scott County Natural Resources	Paul Nelson	Manager
Scott County Dispatch	Sean Young-Stephens	911 Dispatcher
Scott County Transit & Fleet	John Swanson	Supervisor
Mdewakanton Public Safety	Kurt Fondrick	Firefighter
New Prague Fire Dept.	Brent Sticha	
Belle Plaine Police Dept.	Tom Stolee	Chief of Police
Jordan Police Department	Brett Empey	Chief of Police
Elko New Market Police Dept.	Steve Mortenson	Chief of Police
City of Savage Emergency Management	Joel McColl	Director
Shakopee Police Department	Craig Robson	Captain
Prior Lake Police Department	Mark Elliot	Chief
Prior Lake Police Department	Randy Hofstad	Lieutenant
Helena Township	DeAnn Croatt	Clerk
Belle Plaine Township	Bob Koenig	Supervisor
Blakeley Township	John Busse	Supervisor

Organization	Name	Participant Title
Blakeley Township	Maureen Busse	Clerk
Sand Creek Township	Rita Tauer	Clerk
Sand Creek Township	Cy Wolf	Chair

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

## 2.2 Review of Existing Plans

Scott County and its local communities utilized a variety of planning documents to direct community development. These documents include comprehensive plans, water plans, and emergency operations plans. The planning process also incorporated the existing natural hazard mitigation elements from previous planning efforts. Table 2 lists the plans, studies, reports, and ordinances used in the development of the plan.

*Table 2. Planning Documents used for MHMP Planning Process*

Author(s)	Year	Title	Description	Where Used
Scott County Community Development Division	2009 (amended 2013)	Scott County 2030 Comprehensive Plan Update	This plan covers strategic challenges, land use & growth management, transportation, parks & trails, and water & natural resources.	Section 3
Minnesota Division of Homeland Security and Emergency Management	2014	Minnesota All-Hazard Mitigation Plan Update	Statewide hazard mitigation plan.	Section 4
Scott County	2015	Scott County Emergency Operations Plan	A guide for emergency operations, it is intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.	Section 4
FEMA	2013	Resilience Report for Scott County	The Resilience Report provides information to help local officials, floodplain managers, planners, emergency managers, and others better understand their risk, take steps to mitigate those risks, and communicate those risks to their citizens and local businesses. This Resilience Report provides the community a reference for management and mitigation of floods and other risks.	Section 4

## 2.3 Planning Process Timeline and Steps

In order to update the 2009 Scott County Multi-Hazard Mitigation Plan, UMD consultants worked in coordination with the Scott County Deputy Emergency Management Director, State of Minnesota Hazard Mitigation officials, and members of the steering committee. The goals of the updating process were to include more recent data documenting the critical infrastructure and hazards faced by Scott County, reformat and reorganize the plan to reflect definitions of hazards as expressed in the 2008 State of Minnesota Multi-Hazard Identification and Risk Assessment Plan, and reflect current hazard mitigation priorities in Scott County. Therefore, the new plan includes not only new data documenting the types of hazards faced by Scott County residents and Emergency Planning officials, but also new thinking about how to best address these hazards.

This plan is a multi-jurisdictional plan that covers the Scott County and the cities of Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, and Shakopee. The Scott County risks and mitigation activities identified in this plan incorporate the concerns and needs of townships, school districts, and other entities participating in this plan.

After a meeting took place over the phone on August 11 with staff from Scott County Emergency Management and GAC, an in-person meeting occurred which included the Scott County MHMP steering committee. It was held on August 27, 2015 at the Regional Training Facility in Jordan and served as an introductory kick-off to the plan update. The steering committee was provided with an overview of the purpose, process and timeline for the Scott County Multi-Hazard Mitigation Plan update, as well as the role and responsibilities of steering committee members. Appendix E provides documentation of steering committee meeting summaries, including participant sign-in sheets and presentation slides.

After the initial meeting, steering committee members were also engaged in providing feedback on plans and programs in place as they relate to hazards facing the county. This information was used to inform the development of mitigation strategies in the updated plan.

New hazard mitigation actions were discussed for inclusion in the plan using the STAPLE+E process (see *Section 5.3 Mitigation Actions and Projects*). For more information on the planning process, see sections 5 and 6.

Public input was sought through meetings and direct conversations (see *Appendix F: Public Meeting Notices and Meeting Notes*). Two public comment meetings were held in Scott County, described in Table 3. These meetings were facilitated by UMD consultants and attended by the Scott County Deputy Emergency Management Director. Meetings were publicized using the county's website and social media. The meeting information was posted 3 times on Scott County social media: The first post (November 17) reached 2,107 on Facebook, and two people commented that they would be attending. The second post (November 24) reached 1,641 people and received no comments, but the post was shared by two people and liked by 4 others. The most recent post was Tuesday, December 1<sup>st</sup>, and it reached 193 people. A press release was sent on November 17<sup>th</sup> to 8 area media outlets (7 newspapers and 1 radio station).

Two Esri Story Maps were made documenting past hazard events in the county. Story maps combine mapping and analysis with multi-media content such as images, videos, text, and hyperlinks. Data layers such as the 100-year floodplain and potential economic loss produced with the FEMA Hazus-MH tool

were integrated with poignant imagery from past events, in the hope that the story map would serve as a helpful tool for visually ‘reminding’ residents about hazards, to encourage their participation in future mitigation. One story map documents the history of natural hazards in Scott County from 2010 to 2015 (<http://arcg.is/lgklswD>) and the other examines county flooding, with interactive data layers of the 100-year floodplain, potential economic loss in a 100-year flood, and the census blocks with the highest potential loss (<http://arcg.is/1knldjT>). Links to these web maps were posted on Scott County’s website and the Scott County Sheriff’s Office Facebook page.

A draft of the plan was provided for public access on the Scott County Emergency Management website (<http://www.co.scott.mn.us/PublicSafetyJustice/CountySheriff/emhs/Pages/Hazard-Mitigation-Plan--Updated-Draft.aspx>). At these meetings members of the public learned about the hazard mitigation process, received an update on the pace of updating the 2009 plan, and discussed new mitigation actions that could be added to the 2016 plan.

*Table 3. Scott County Hazard Mitigation Update Meetings*

Meeting Type	Date	Location
Steering Committee	8/11/2015	Telephone meeting
Steering Committee	8/27/2015	Regional Training Facility, Jordan, MN
Public	12/7/2015	Scott County Law Enforcement Center, Shakopee, 2:00 pm
Public	12/7/2015	Regional Training Facility, Jordan, MN, 6:00 pm

At the close of these meetings, the UMD consultants worked with the Scott County Deputy Emergency Management Director and members of the steering committee to incorporate comments from the public hearings into the Multi-Hazard Mitigation Plan.

## Section 3 – Scott County Profile

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

### 3.1 General County Description

Scott County is located in southeastern Minnesota, just south of the Minneapolis/St. Paul metropolitan area. To the west lies Carver and Sibley Counties, and to the south is Le Sueur County and Rice County. Hennepin County is on the northern border of the county, and to the east is Dakota County. Scott County covers 368 square miles (235,520 acres) and the county's estimated population in 2010 was 129,928. Shakopee is the county seat and the largest city in the county. The Shakopee Mdewakanton Sioux Community is also located in Scott County, and presently owns more than 3,760 acres of land, all of which are located within or near the original 250-acre reservation established for the Tribe in the 1880s.

The 7 cities in Scott County are Belle Plaine, Elko New Market, Jordan, New Prague, Prior Lake, Savage and Shakopee. The 11 townships are Belle Plaine, Blakeley, Cedar Lake, Credit River, Helena, Jackson, Louisville, New Market, Saint Lawrence, Sand Creek, and Spring Lake.

The largest employment sectors in Scott County (2013) are Leisure/Hospitality (23% of the county work force) and Education/Health Services (18%). The percent of the county's population living below the poverty level in 2013 was 5.5%, compared to an 11.5% average for the state of Minnesota.

### 3.2 Environmental Characteristics

Scott County's surface is dominated by glacial till, except along the Minnesota River, which is composed of alluvium and terrace deposits. There are also areas near the river where the bedrock is at or near the surface. The abundance of glacial till, a material with low permeability because of the silts and clays that fill in the spaces between larger grains, provides a layer of protection for the county's aquifers that lie in the sedimentary rock below, except by the river where bedrock is near the surface. Groundwater is susceptible to contamination in these areas. This is important as all Scott County drinking water comes from groundwater supplies.

Centuries of erosive action by the Minnesota River and its tributaries have left unique bluff features across areas of Scott County, most notably in Blakely Township. Bluff areas offer unique views and contain the majority of the natural communities and rare species identified by Minnesota Department of Natural Resources (DNR) natural resource inventories. Bluff features present many challenges for stormwater management and erosion control as the areas around them become developed. It is important that these areas are managed appropriately to preserve their unique features, including natural communities and rare species. In addition, incorporating the preservation of bluffs into development provides aesthetic views while maintaining the area's unique history and sense of place.

Prairie du Chien dolostone is close to the present land surface along the Minnesota River terrace in the northern part of Scott County. Along much of this terrace, bedrock is covered by 20- to 30-foot thick deposits of sand and gravel. Therefore, more bedrock resources might become available if the sand and gravel were removed. Much of the area is urbanized. Bedrock aggregate resources in Scott County can be divided into the 3 sub-regions:

1. Scott northwest - Prairie du Chien dolostone underlies the Minnesota River terrace in northwestern Scott County. In this sub-region, the dolostone is comparatively thin (50 to 85 feet), and is underlain at shallow depths by Jordan Sandstone. Several large quarries have operated or are currently operating in the Prairie du Chien in this sub-region, and much of the resource is already mined.
2. Scott north-central - Prairie du Chien dolostone underlies the terrace south of the Minnesota River and ranges from 70 to 90 feet thick. Most of the area has not been quarried because it is an area of urban development (Shakopee). There are, however, active or former quarries in the less developed areas at either end of the sub-region.
3. Scott northeast - Prairie du Chien bedrock in this sub-region also underlies a terrace of the Minnesota River. Most of the remaining resource is present at the margins of 2 quarries that have been stripped free of overburden. The overburden was apparently thicker than 10 feet over most of the area prior to mining. These quarries are being encroached upon by urban development.

### **3.3 Hydrography**

The lakes, streams, and groundwater of Scott County are some of its most significant resources. Water quality has become one of the most important environmental issues facing the county and state. Water is used for domestic and residential purposes, industry, agriculture and recreation. The health, safety and welfare of the public are directly linked to the county's water supply and steps should be taken to eliminate or minimize negative impacts on this resource.

The majority of Scott County is located in the Minnesota River-Shakopee watershed, within the Minnesota River Basin. A small portion of the southeastern corner of the county contains parts of the Mississippi River/Lake Pepin watershed and the Cannon River watershed, which are both part of the Lower Mississippi River Basin.

Basic hydrography in Scott County is mapped in Figure A-I in Appendix A.

#### **3.3.1 Groundwater**

All Scott County drinking water comes from groundwater. The abundance of glacial till provides a layer of protection for the county's aquifers that lie in the sedimentary rock below, except by the river where bedrock is near the surface. Groundwater is susceptible to contamination in these areas.

#### **3.3.2 Lakes**

According to the Minnesota DNR, there are 152 lakes in the county greater than 2 acres in size, the largest of which is 957 acres (Lower Prior Lake). These lakes cover 7,855 of the county's 235,520 acres (3.3%).

Impaired waters are an increasing problem as Scott County has many lakes, creeks and rivers that are on the Minnesota Pollution Control Agency Impaired Waters lists, including the Minnesota River, Sand Creek, Porter Creek, Vermillion River, Credit River, Cedar Lake, Spring Lake, Upper Prior Lake, Lower Prior Lake and Fish Lake (Minnesota Pollution Control Agency, 2014). Impaired waters have become a priority issue because they do not meet state water quality standards, they affect growth and health of communities and economies, and the Clean Water Act has a mandate requiring every state to address impairments.

### **3.3.3 Rivers**

The Minnesota River forms the northern and western boundary of Scott County. A tributary of the Mississippi River, the Minnesota River is 332 miles long, draining a watershed of approximately 17,000 square miles. The Credit River, a 22-mile long tributary of the Minnesota River, flows through the eastern end of the County, close to the town of Savage. It originates at a lake in Elko New Market. The 60-mile Vermillion River begins in eastern Scott County just north of Elko New Market. It flows into the Mississippi River south of Hastings, Minnesota. Sand Creek flows through central Scott County and the city of Jordan, where it has resulted in severe flooding in the past.

### **3.3.4 Wetlands**

Wetlands mapped by the National Wetlands Inventory cover 36,393 acres (56 square miles) in Scott County. Important benefits of wetlands include: storage area for excess water during flooding; filtering of sediments and nutrients before they enter lakes, rivers and streams; and fish and wildlife habitat.

Wetlands in Scott County include 7 types, including seasonally flooded basins and flats, wet meadows, shallow marshes, deep marshes, shrub swamps, wooded swamps, and bogs (Figure A - 1).

Invasive plants have invaded many wetlands in Minnesota. These plants can take over entire native communities and threaten native wetland ecosystems. Some of the area's most common invasive species include common buckthorn, purple loosestrife, garlic mustard, and Eurasian watermilfoil. Zebra mussels have also been documented in Upper Prior and Lower Prior Lakes (MN DNR, 2015).

## **3.4 Climate**

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

The average annual precipitation in Shakopee is 30" and the average annual snowfall is 44." The average high temperature in July is 86° F and the average low in January is 3° F (Intellicast, 2015).

### **3.4.1 Climate Change**

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

According to the 2015 Minnesota Weather Almanac,

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

Winter temperatures in Minnesota have been warming nearly twice as fast as annual average temperatures, a trend that has been noticed throughout the Midwest. There has also been a distinct spread of warmer lows into the northern portion of the state, and 7 of the top 10 warmest years in Minnesota since record-keeping began in 1895 have occurred within the last 15 years (Minnesota Department of Health, 2015). Various studies have also concluded that the frequency and intensity of precipitation in the Midwest has increased, with more storm events leading to flooding.

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

*Warming trends, climate volatility, extreme weather events, and environmental change are already affecting the economies and cultures of rural areas. Many rural communities face considerable risk to their infrastructure, livelihoods, and quality of life from observed and projected climate shifts... These changes will progressively increase volatility in food commodity markets, shift the ranges of plant and animal species, and, depending on the region, increase water scarcity, exacerbate flooding and coastal erosion, and increase the intensity and frequency of wildfires across the rural landscape (Hales, et al., 2014).*

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

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

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

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



### 3.5 Demographics

Shakopee is the largest city in Scott County (pop. 37,076) and the designated county seat. There are 7 cities and 11 townships within the county.

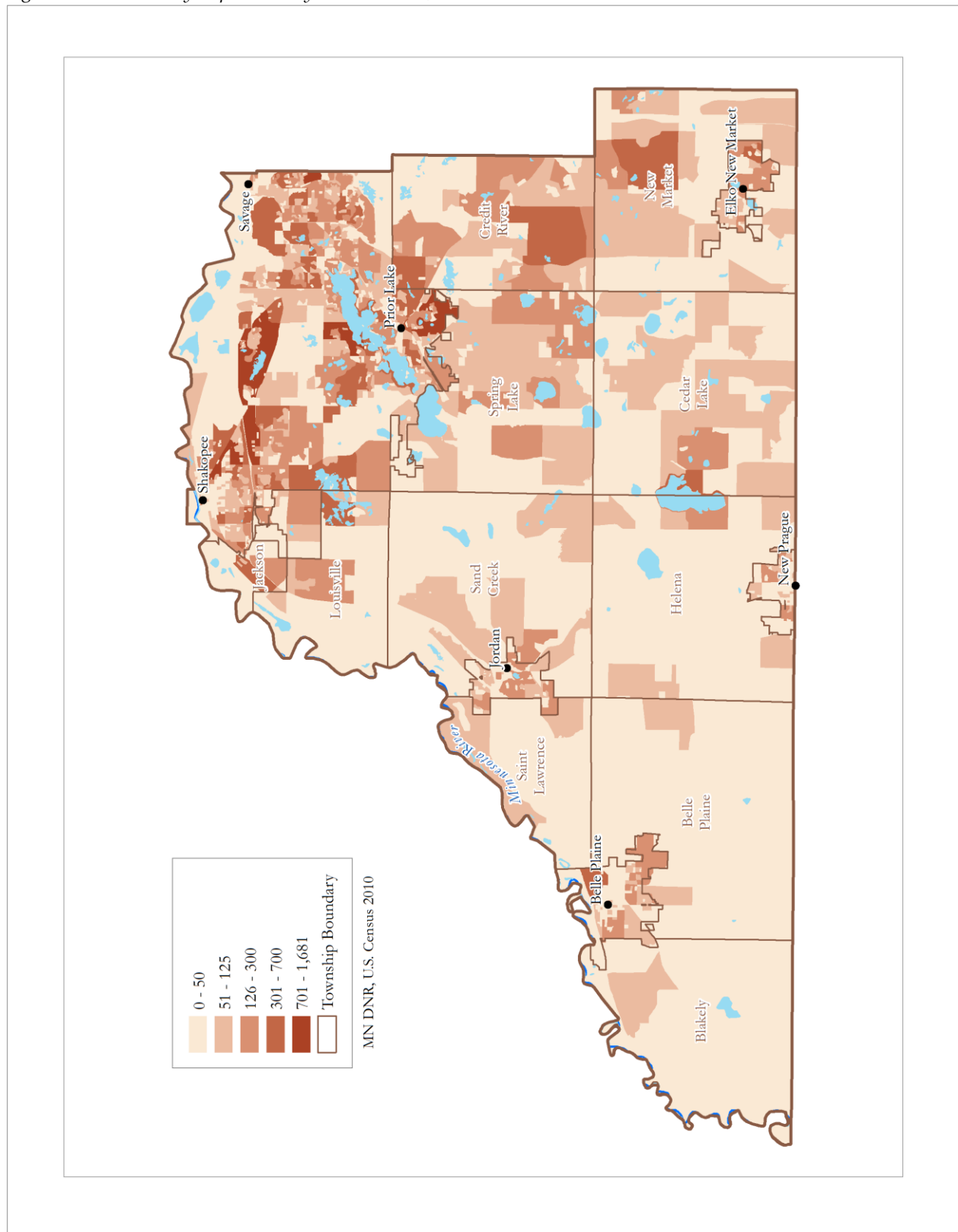
Table 4 summarizes population by community according to the 2010 U.S. Census. Figure 1 shows Scott County population density by census block.

*Table 4. Scott County Population by Community, 2010*

<b>Community</b>	<b>2010 Population</b>	<b>% of County</b>
Belle Plaine	6,661	5.13%
Elko New Market	4,110	3.16%
Jordan	5,470	4.21%
New Prague	4,280	3.29%
Prior Lake	22,796	17.55%
Savage	26,911	20.71%
Shakopee	37,076	28.54%
Belle Plaine Township	878	0.68%
Blakeley Township	418	0.32%
Cedar Lake Township	2,779	2.14%
Credit River Township	5,096	3.92%
Helena Township	1,648	1.27%
Jackson Township	1,464	1.13%
Louisville Township	1,266	0.97%
New Market Township	3,440	2.65%
St. Lawrence Township	483	0.37%
Sand Creek Township	1,521	1.17%
Spring Lake Township	3,631	2.79%
<b>Total:</b>	<b>129,928</b>	

Source: U.S. Census Bureau, 2015

Figure 1. Scott County Population by Census Block, 2010



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

In 2010, Scott County had a population of 129,928 residents, averaging 365 persons per square mile of land area. Shakopee, the largest city in the county and the county seat, has a population of 37,076.

Scott County's population is rapidly increasing, rising 55% between 1990 and 2000, and rising another 45% from 2000 to 2010. Since 1940, the population has risen by 734%. Between 2000 and 2010 Scott County was the fastest growing county in Minnesota, and one of the fastest growing in the nation. Table 5 below shows the population change in Scott County between 1940 and 2010.

*Table 5. Scott County Population Change (1940-2010)*

1940	1950	1960	1970	1980	1990	2000	2010	Change 1940- 2010	Change 2000- 2010
15,585	16,486	21,909	32,423	43,784	57,846	89,498	129,928	+734%	+45%

Source: U.S. Census Bureau, 2013

Scott County's population is projected to grow by 29% between 2015 and 2045. Table 6 below shows population projections for Scott County until 2045.

*Table 6. Scott County Population Projections (2015-2045)*

2015	2020	2025	2030	2035	2040	2045	Projected Change 2015-2045
150,175	159,962	166,764	174,848	183,073	189,529	193,355	+29%

Source: Minnesota State Demographic Center, Minnesota Planning, 2015

### 3.6 Economy

Scott County is dominated by the Leisure and Hospitality industry, with 23% of jobs in the county. Trade/Transportation/Utilities and Education/Health Services are also major components of the county's economy. Major employers include Shutterfly, Seagate Technologies and Fabcon. The county has a strong commercial and industrial base as well as a concentration of entertainment attractions, such as Canterbury Park Race Track, The Landing at Minnesota River Heritage Park, Elko Speedway, Mystic Lake Casino, the Renaissance Festival, and ValleyFair Amusement Park (Minneapolis St. Paul Regional Economic Development Partnership, 2015).

The number of jobs in the county rose by over 11% between 2003 and 2013. Table 7 provides an overview of the annual average employment by major industry sector in Scott County.

Table 7. Annual Average Employment by Major Industry Sector, Scott County

Industry	Number of Jobs (2003)	Number of Jobs (2013)
Natural Resources and Mining	193	178
Construction	4,202	2,988
Manufacturing	4,482	4,819
Trade, Transportation, Utilities	6,718	7,777
Information	274	312
Financial Activities	893	1,001
Professional /Business Services	3,505	3,901
Education and Health Services	5,621	7,829
Leisure and Hospitality	4,966	9,602
Public Administration	NA	2,376
Other Services	1,360	1,738
<b>Total Number of Jobs:</b>	<b>38,267</b>	<b>42,523</b>

Source: Minnesota Dept. of Employment and Economic Development. Note: data discrepancies between segment values and totals exist due to data suppression for confidentiality.

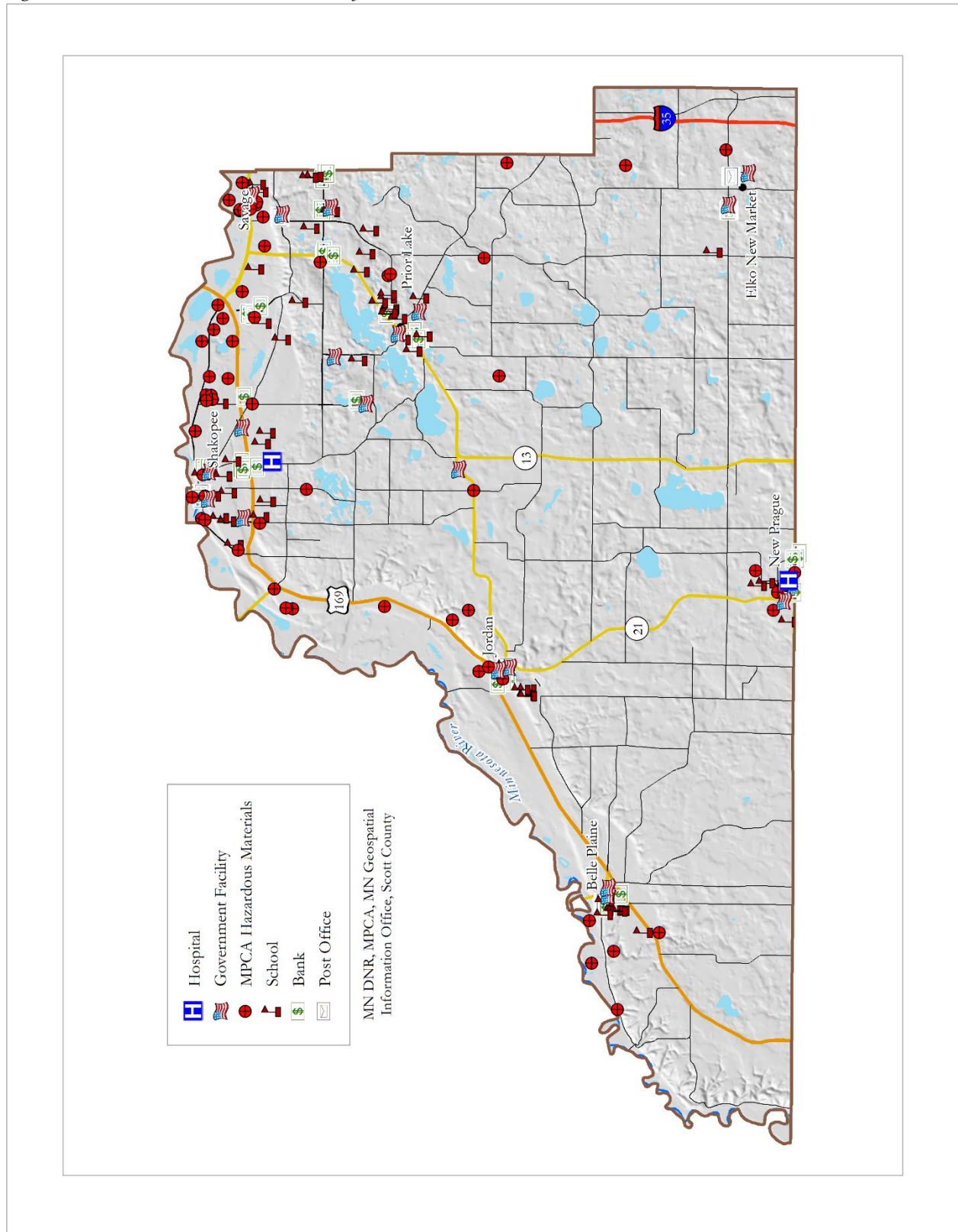
The 2013 median household income was \$86,112, compared to a Minnesota average of \$59,836. The median household income in Scott County increased 3.1% from 2009 to 2013. The percent of the county's population living below the poverty level in 2013 was 5.5%, compared to 11.5% for the state of Minnesota.

The Minnesota Department of Employment and Economic Development reported that 78% of the workforce in Scott County was employed in the private sector in 2013.

### 3.7 Community Services & Infrastructure

The following section provides an overview on community services and infrastructure within Scott County. Examples of community services include healthcare and public safety, while examples of community infrastructure include power utilities, water and sewer facilities, and the transportation network. Figure 2 below shows critical facilities in the county, and tables of all critical facilities can be found in Appendix B.

Figure 2. Critical Facilities in Scott County



### 3.7.1 Health Care Providers

There are 2 hospitals in Scott County, the Mayo Clinic Health System in New Prague and the St. Francis Regional Medical Center in Shakopee. The Mayo Clinic Health System includes a 25-bed critical care access hospital with a level III trauma center, a primary care clinic, and an express care clinic. It also operates a clinic in Belle Plaine.

The St. Francis Regional Medical Center maintains clinics in Shakopee, Savage, Jordan and Prior Lake, in addition to a hospital in Shakopee with 86 private rooms.

Prior Lake also has the Shakopee Dakota Mystic Clinic and Urgent Care facility.

Fairview operates clinics in Prior Lake and Savage.

Scott County has ambulance services through the following EMS providers:

- **Allina:** Serves Shakopee, Savage, Prior Lake, and the eastern half of Jordan.
- **North Memorial:** Serves Elko New Market and New Prague
- **Ridgeview:** Serves Belle Plaine

Figure A - 13 in Appendix A depicts health services within Scott County.

### 3.7.2 Public Safety Providers/Government Services

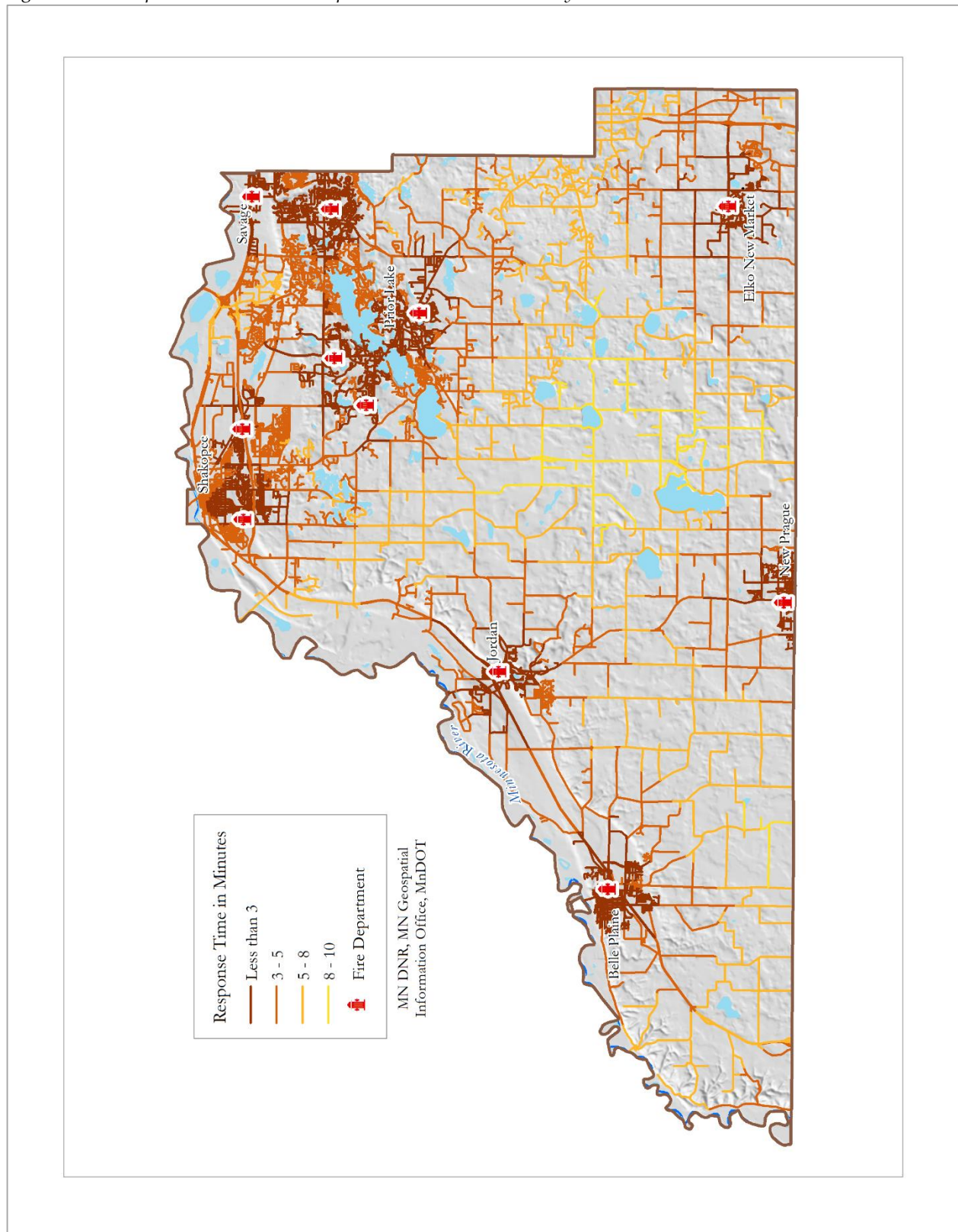
The Sheriff's Office is located at the law enforcement center in Shakopee. The following cities have their own police departments: Belle Plaine, Elko New Market, Jordan, New Prague, Prior Lake, Savage and Shakopee.

Figure A - 4 in Appendix A depicts government and emergency facilities, including city halls, fire departments, police departments, sheriff's department, and the Scott County Courthouse.

Figure 3 shows fire departments and fire response times in Scott County. These drive times were created using ArcGIS Network Analyst and MnDOT road data. Speed limits from the MnDOT highway speed limit database were used when available. According to this model, all areas of the county are within 10 minutes of a fire department.



Figure 3. Fire Departments and Fire Response Times in Scott County



### **3.7.3 Utilities/Communications**

There are 6 electricity providers within Scott County: Master Electric Company Inc., Minnesota Valley Electric Cooperative, the New Prague Utilities Commission, Shakopee Public Utilities Commission, Dakota Electric Service, and Xcel Energy.

Greater Minnesota Gas, Inc., based in the city of Le Sueur, provides natural gas services to Scott County.

Established in 2004, the Allied Radio Matrix for Emergency Response (ARMER) Program, administered in coordination with the Minnesota Statewide Radio Board, manages the implementation of a 700/800 megahertz (MHz) shared digital trunked radio communication system. In Scott County, there are 8 ARMER towers.

### **3.7.4 Transportation**

The county transportation system is composed of roads, highways, public transit, railroads and trails. The system is designed to serve all residents, businesses, industries and tourists.

The existing roadway system reflects the concentration of urban development in the north. This area has the greatest concentration of roads and highest traffic volumes. TH 169 frames the western and northern border of the county and I-35 borders a portion of the eastern part of the county. County highways resemble a grid pattern connecting the cities. Because of the transportation constraints caused by the Minnesota River, river crossings are a significant component of the highway system for Scott County.

According to Minnesota law, any structure or combination of structures over a ten-foot span length is considered a bridge. Most of the bridges in the county are multiple box culvert structures. The County is responsible for the inspection of 128 bridges in the County. 36 are on municipal roads, 27 on township roads and 65 are on County highways.

All bridges within the county are inspected every 2 years, with some inspected annually. Bridge ratings are made for each component of a bridge: deck, superstructure, substructure, channel & channel protection, and culvert condition. The ratings range from 0 to 9, with 9 being in excellent condition. Bridge ratings fall into 4 categories: Adequate, Functionally Obsolete, Structurally Deficient, and Closed.

Railroads in Scott County serve regional agriculture and industrial uses. Two carriers currently operate in Scott County: the Union Pacific Railroad (owner of two lines) and the Canadian Pacific Railroad.

Blue Xpress provides commuters with express bus service between Scott County and downtown Minneapolis. The Minnesota Valley Transit Authority includes service to Prior Lake, Savage and Shakopee. Scott County has vanpool services and Transit Link dial-a-ride bus services available through the Metropolitan Council.

## **3.8 Land Use and Ownership**

Scott County covers a total of 368 square miles (235,520 acres). Land in Scott County is primarily used for agricultural production. Most of the larger farm holdings are located in the county's southwestern corner. There are also expansive agricultural areas in Helena, Sand Creek, and St. Lawrence townships.



However, Scott County has experienced the strongest development growth to the north and east where there is close proximity to major highways that access the Twin Cities region.

In 2012, 847 farms existed in the county, covering 141,232 acres (60% of the county). Of this farming land, 79% is cropland and 9% is classified as “woodland.” The rest is classified as “Other uses.” The number of farms in the county increased by 7% between 2007 and 2012, while the number of acres farmed increased by 20% (Census of Agriculture, 2012).

According to Minnesota DNR data, the number of feedlots in Scott County as of April 15, 2015 was 256, 10 of which have more than 1,000 animal units. Feedlots in Scott County are mapped in Figure A - 27 (*Appendix A: Scott County Maps*).

Agricultural areas in the state such as those in Scott County may need to undergo transformative changes to keep pace with climate change, though the country’s agricultural system is expected to be fairly resilient overall due to “the system’s flexibility to engage in adaptive behaviors such as expansion of irrigated acreage, regional shifts in acreage for specific crops, crop rotations, changes to management decisions (such as choice and timing of inputs and cultivation practices), and altered trade patterns compensating for yield changes” (Hales, et al., 2014).

Land ownership categories from the 2008 U.S. Geological Survey GAP (Gap Analysis Program) are shown in Figure A - 8 (*Appendix A: Scott County Maps*). Land cover is also mapped in Figure A - 7.

*This page is intentionally left blank*

## Section 4 – Risk Assessment

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

Basing risk assessments on the best information available is important in developing effective mitigation actions that benefit communities. Geographic Information System (GIS) tools are not only helpful in producing maps, but they also show structures at risk and may determine damage estimates for potential hazard scenarios. MN Homeland Security and Emergency Management (HSEM) mitigation staff encourages the use of GIS tools in risk assessments because they produce good information to be used in the risk assessment process. In recognition of the importance of planning in mitigation activities, FEMA created **Hazards USA Multi-Hazard** (Hazardus-MH), a powerful GIS-based disaster risk assessment tool. This tool enables communities to predict estimated losses from floods, hurricanes and other related phenomena and to measure the impact of various mitigation practices that might help reduce those losses. Hazardus-MH was used by UMD Geospatial Analysis Center staff in the flood hazard risk assessment (see section 4.4.2).

This assessment identifies the characteristics and potential consequences of a disaster, how much of the community could be affected by a disaster, and the impact on community assets. A risk assessment consists of 3 components — hazard identification and prioritization, risk profile, and vulnerability profile. The last step is the risk ranking for each jurisdiction.

### 4.1 Hazard Identification/Profile

#### 4.1.1 Hazard Identification

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

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

Natural hazards are identified in the FEMA publication “Multi-Hazard Identification and Risk Assessment – A Cornerstone of the National Mitigation Strategy,” also known as MHIRA. FEMA Region V developed a list based on state mitigation plans in the region. The list was divided into natural (Table 8) and other hazards (Table 9) as was done in the 2014 Minnesota State Hazard Mitigation Plan.

Table 8. FEMA MHIRA Natural Hazards in the 2014 Minnesota State Hazard Mitigation Plan

Flooding	Hail	Drought
Dam/Levee Failure	Lightning	Extreme Heat
Wildfire*	Winter Storms	Extreme Cold
Windstorms	Erosion	Earthquakes
Tornadoes	Land Subsidence (Sinkholes & Karst)	

\*Addressed in the State Mitigation Plan because Minnesota is a heavily forested state compared to other states in Region V.

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

Table 9. FEMA MHIRA Other Hazards in the 2014 Minnesota State Hazard Mitigation Plan

Terrorism	Nuclear Generating Plant Incidents	Ground and Surface Water Supply Contamination*
Infectious Disease Outbreak	Hazardous Materials Incidents	
Fires (Structures and Vehicles)	Transportation Incidents	

\*Addressed in the State Hazard Mitigation Plan because Minnesota has made a high investment in its prized resource, water.

#### 4.1.2 Vulnerability Assessment by Jurisdiction

The steering committee met multiple times to review and update the hazards faced by residents of Scott County, update the existing mitigation actions published in the 2009 Multi-Hazard Mitigation Plan, and propose new mitigation actions.

To engage in this process the committee drew on a number of data sources. First, the committee examined the hazards identified in the 2009 Hazard Mitigation Plan (Table 10). These existing mitigation actions were discussed and adjusted to reflect the definitions of natural hazards used in the State of Minnesota 2014 Multi-Hazard Identification and Risk Assessment list of natural hazards. This was done in order to assure that the risks faced by Scott County were categorized the same way as the priority hazards established by the State of Minnesota.

Table 10. Hazards identified in the 2009 Scott County Multi-Hazard Mitigation Plan

Natural Hazards			
Drought	Earthquake	Extreme Temperatures	Flooding/Dam Failure
Hail	High Winds	Ice/Snow Storm	Landslide/Mudslide
Land Subsidence	Lightning	Wildfire	
Manmade Hazards			
Hazardous Materials	Illegal Methamphetamine Labs	Pandemic/Epidemic	Terrorism
Urban Structure Fire			

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

This plan draws on a variety of data sources including the State of Minnesota and Homeland Security Emergency Management Critical Infrastructure Strategy for the State of Minnesota (2010), FEMA's Local Mitigation Planning How-to Guide Integrating Manmade Hazards into Mitigation Planning (2003), and the State of Minnesota Multi Hazards Identification Risk Assessment.

The committee ranked hazards based on a Calculated Priority Risk Index, or CPRI. The methodology of the CPRI is outlined below. The CPRI rankings for each hazard are listed by jurisdiction in Table 12.

#### 4.1.3 Calculated Priority Risk Index

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

##### Definitions of CPRI Categories

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

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

**Warning Time** – plays a factor in the ability to prepare for a potential disaster and to warn the public. The assumption is that more warning time allows for more emergency preparations and public information.

**Duration** – relates to the span of time local, state, and/or federal assistance will be necessary to prepare, respond, and recover from a potential disaster event.

Table 11. Summary of Calculated Priority Risk Index (CPRI) Categories and Risk Levels

CPRI Category	DEGREE OF RISK			Assigned Weighting Factor
	Level ID	Description	Index Value	
Probability	Unlikely	Extremely rare with no documented history of occurrences or events. Annual probability of less than 0.001	1	45%
	Possible	Rare occurrences with at least one documented or anecdotal historic event. Annual probability that is between 0.01 and 0.001.	2	
	Likely	Occasional occurrences with at least two or more documented historic events. Annual probability that is between 0.1 and 0.01.	3	
	Highly Likely	Frequent events with a well-documented history of occurrence. Annual probability that is greater than 0.1.	4	
Magnitude/Severity	Negligible	Negligible property damages (less than 5% of critical and non-critical facilities and infrastructure). Injuries or illnesses are treatable with first aid and there are no deaths. Negligible quality of life lost. Shutdown of critical facilities for less than 24 hours.	1	30%
	Limited	Slight property damages (greater than 5% and less than 25% of critical and non-critical facilities and infrastructure). Injuries or illnesses do not result in permanent disability and there are no deaths. Moderate quality of life lost. Shut down of critical facilities for more than 1 day and less than 1 week.	2	
	Critical	Moderate property damages (greater than 25% and less than 50% of critical and non-critical facilities and infrastructure). Injuries or illnesses result in permanent disability and at least one death. Shut down of critical facilities for more than 1 week and less than 1 month.	3	
	Catastrophic	Severe property damages (greater than 50% of critical and non-critical facilities and infrastructure). Injuries or illnesses result in permanent disability and multiple deaths. Shut down of critical facilities for more than 1 month.	4	
Warning Time	Less than 6 hours	Self-explanatory.	4	15%
	6 to 12 hours	Self-explanatory.	3	
	12 to 24 hours	Self-explanatory.	2	
	More than 24 hours	Self-explanatory.	1	
Duration	Less than 6 hours	Self-explanatory.	1	10%
	Less than 24 hours	Self-explanatory.	2	
	Less than one week	Self-explanatory.	3	
	More than one week	Self-explanatory	4	

CPRI hazard rankings by jurisdiction are listed in Table 12. The cities of Jordan, Belle Plaine and Shakopee adopted the County rankings.

Table 12. Hazards Ranked by Jurisdiction using the CPRI

Natural Hazards	CPRI Score (Scott County)	CPRI Score (Elko New Market)	CPRI Score (Prior Lake)	CPRI Score (Savage)
Coastal Erosion	1.05	1.45	N/A	0.45
Coastal Flooding	1.05	1.0	N/A	0.45
Dam Failure	2.25	1.45	N/A	0.45
Drought	2.4	2.05	1.3	1.5
Earthquakes	1.55	1.75	N/A	0.45
Expansive Soils	2.15	1.2	N/A	0.45
Extreme Cold	2.7	3.0	2.25	2.4
Extreme Heat	2.5	2.85	2.25	2.3
Flash Floods	2.8	2.4	2.75	2.65
Fog	2.4	2.65	2.0	2.6
Hailstorms	2.65	3.4	2.2	2.3
Land Subsidence	1.9	2.1	N/A	0.95
Landslide	2.9	1.45	2.05	1.35
Levee Failure	2.65	1.45	N/A	1.35
Lightning	2.85	3.4	2.65	2.6
River Floods	3.1	1.45	N/A	3.25
Severe Winter Storms	2.95	3.2	3.15	2.85
Sinkholes	2.25	2.8	1.85	1.5
Soil Erosion & Dust	2.0	2.5	N/A	1.35
Thunderstorms	3.05	2.8	3.1	2.85
Tornadoes	3.0	3.7	2.5	3.05
Wildfires	2.35	2.7	2.2	1.65
<b>Man-made Hazards</b>				
Agro-Terrorism	2.25	1.75	N/A	N/A
Air Transportation Incident	3.0	2.8	1.85	1.55
Animal/Plant/Crop Disease	2.5	2.8	N/A	0.25
Bioterrorism	2.55	2.35	1.85	1.4
Chemical Terrorism	2.55	2.35	1.85	1.4
Conventional Terrorism	2.35	2.35	2.3	1.4
Cyber-Terrorism	2.8	2.7	2.3	1.25
Enemy Attack	2.15	2.25	N/A	0.25
Energy Failure	3.15	2.7	2.3	1.3
Fixed Hazardous Materials	2.25	2.7	1.7	1.3
Fixed Radiological Incident	2.0	1.75	N/A	0.25

Ground and Water Supply Contamination	2.75	2.8	2.8	1.3
Highway Transportation Incident	2.7	2.75	1.6	2.8
Human Disease Incident	2.65	2.5	1.45	1.4
Human Disease Pandemic	2.65	N/A	1.9	1.4
Pipeline Transportation Incident	2.4	2.7	1.85	2.95
Public Disorder	2.0	2.6	2.2	1.1
Radiological Terrorism	2.45	1.75	N/A	0.25
Radiological Transportation	2.5	2.7	N/A	0.25
Special Events	2.6	2.3	2.2	1.1
Structural Failure	2.45	2.8	2.4	1.25
Structural Fire	1.7	2.95	3.2	2.5
Transportation-Hazardous Materials	2.7	3.05	2.3	2.85
Utility/Communication/Infrastructure Failure	3.0	3.05	0.9	2.7
Waterway Incident	2.1	1.65	2.65	2.8

#### 4.1.4 Hazard Profiling Concept of Planning

The risk assessments identify the characteristics and potential consequences of a disaster, how much of the community could be affected by a disaster, and the impact on community assets. A risk assessment consists of 3 components—hazard identification, risk profile, and vulnerability profile. The last step is the risk ranking for each jurisdiction. Scott County jurisdictions all agreed to the same ranking of hazards in their communities as the County.

#### 4.1.5 GIS and Hazus-MH

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

Hazus-MH was used to estimate the damages incurred for a 100-year flood event and for general asset assessment. Hazus-MH also generates a combination of site-specific and aggregated loss estimates for the entire county due to a 100-year flood event. Aggregate inventory loss estimates, which include building stock analysis, are based upon the assumption that building stock is evenly distributed across each census block. Therefore, it is possible that overestimates of damage will occur in some areas while underestimates will occur in other areas. With this in mind, total losses tend to be more reliable over larger geographic areas (groups of many blocks) than for individual census blocks. It is important to note that Hazus-MH is not intended to be a substitute for detailed engineering studies. Rather, it is intended to serve as a planning aid for communities interested in assessing their risk to flood-, earthquake-, and hurricane-related hazards. This documentation does not provide full details on the processes and procedures completed in the development of this project. It is only intended to highlight the major steps that were followed.



Site-specific analysis is based upon loss estimations for individual structures. For flooding, analysis of site-specific structures takes into account the depth of water in relation to the structure. Hazus-MH also considers the actual dollar exposure to the structure for the costs of building reconstruction, content, and inventory. However, damages are based upon the assumption that each structure will fall into a structural class, and structures in each class will respond in a similar fashion to a specific depth of flooding. Site-specific analysis is also based upon a point location rather than a polygon, therefore the model does not account for the percentage of a building that is inundated. These assumptions suggest that the loss estimates for site-specific structures as well as for aggregate structural losses need to be viewed as approximations of losses that are subject to considerable variability rather than as exact engineering estimates of losses to individual structures.

#### 4.1.6 National Climatic Data Center (NCDC) Records

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

The NCDC data included 458 reported events in Scott County between 1950 and September 2015. However, some weather event categories only had available data going back as recent as 1996. No records before 1950 were available. A summary table of events related to each hazard type is included in the hazard profile sections that follow. A full table listing all events, including additional details, is included in Appendix C. NCDC hazard categories used in this plan are listed in Table 13.

Table 13. National Climatic Data Center Historical Hazards

Hazard	
Tornado	Hail
Thunderstorm Wind	Flood/Flash Flood
Winter Weather/ Winter Storm/Blizzard	Cold/Wind Chill
Excessive Heat/Heat	Lightning

#### 4.1.7 FEMA Declared Disasters

Another historical perspective is derived from FEMA-declared disasters. 10 major disaster and 3 emergency declarations in Scott County have been made between 1957 and 2015 (Figure 4).

Figure 4. FEMA-Declared Disasters and Emergencies in Minnesota, 1957-2015

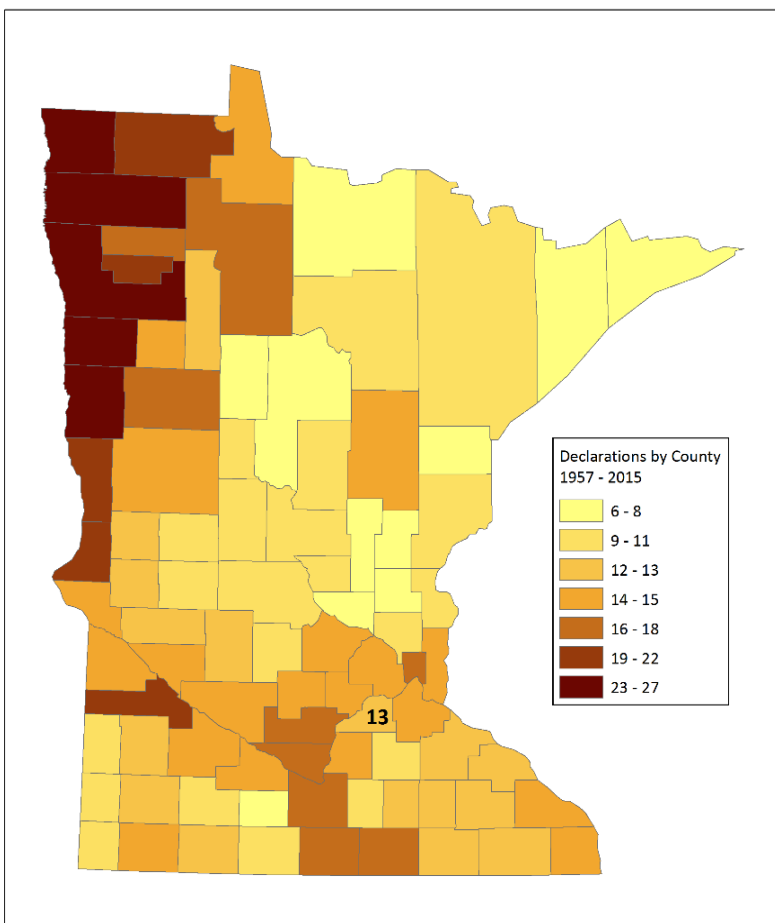


Table 14 and Table 15 show the details of the disasters including payments for Public Assistance (PA) and Individual Assistance (IA), listed under the flooding and severe storm profiles. No declarations were made for the other storms listed in the NCDC database. Reviewing the federal payments for damages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

Table 14. FEMA-Declared Major Disasters in Scott County (1953-2015)

Incident	Declaration Date and Disaster Number	Incident Period	Total PA Obligated by FEMA for Disaster in Minnesota	Total PA Obligated by FEMA for Disaster in Scott County	Individual Assistance in Minnesota	Individual Assistance in Scott County
Severe Storms, Straight-line Winds, Flooding, Landslides, Mudslides	7/21/2014 DR-4182	6/11/2014 – 7/11/2014	\$15,995,142	\$2,659,888	None	None
Severe Storms, Flooding	5/10/2011 DR-1982	3/16/2011 - 5/25/2011	\$20,633,792	\$283,172	Unknown	None
Flooding	4/19/2010 DR-1900	3/1/2010 - 4/26/2010	\$12,740,604	\$31,156	None	None

Incident	Declaration Date and Disaster Number	Incident Period	Total PA Obligated by FEMA for Disaster in Minnesota	Total PA Obligated by FEMA for Disaster in Scott County	Individual Assistance in Minnesota	Individual Assistance in Scott County
Flooding	5/16/2001 DR-1370	3/23/2001 - 7/3/2001	\$36,227,572	\$89,584	\$3,650,492	\$1,172
Severe Storms, Straight-line Winds, Tornadoes	6/23/1998 DR-1225	5/15/1998- 6/28/1998	\$30,805,556	Unknown	Unknown	None
Severe Storms, Flooding	4/8/1997 DR-1175	3/21/1997- 5/24/1997	\$230,488,750	Unknown	Unknown	Unknown
Flooding, Severe Storms, Tornadoes	6/11/1993 DR-993	5/6/1993- 8/25/1993	\$98,169,850	Unknown	Unknown	Unknown
Severe Storms, Tornadoes, Flooding	8/6/1987 DR-797	7/20/1987- 8/5/1987	Unknown	Unknown	Unknown	Unknown
Flooding	4/18/1969 DR-255	4/18/1969	Unknown	Unknown	Unknown	Unknown
Flooding	4/11/1965 DR-188	4/11/1965	Unknown	Unknown	Unknown	Unknown

\* Data provided by FEMA Region V on December 2, 2014, MN HSEM on December 10, 2014, and <https://www.fema.gov/media-library/assets/documents/28331> accessed on October 28, 2015. Values are estimates collected at the time of the disaster.

Table 15. FEMA-Declared Emergencies in Scott County (1974-2015)

Incident	Declaration Date and Disaster Number	Incident Period	Individual Assistance in Minnesota	Public Assistance (all affected areas)
Flooding	3/19/2010 EM-3310	3/1/2010 – 4/26/2010	Unknown	Unknown
Hurricane Katrina Evacuation	9/13/2005 EM-3242	8/29/2005 – 10/1/2005	\$0	\$2,470,003
Drought	6/17/1976 EM-3013	6/17/1976	Unknown	Unknown

\*Note the Public Assistance totals are for ALL counties affected in the disaster. Data accessed October 28, 2015 at [https://www.fema.gov/disasters/grid/state-tribal-government/57?field\\_disaster\\_type\\_term\\_tid\\_1=All](https://www.fema.gov/disasters/grid/state-tribal-government/57?field_disaster_type_term_tid_1=All)

Table 16 depicts the historical projects in Scott County resulting from hazard mitigation funding.

Table 16. Historical Hazard Mitigation Funding in Scott County

Year	Project Description	Sub-Grantee	Federal Share
2010	Minnesota Valley Electric Coop – Replace overhead line with underground	Minnesota Valley Cooperative Light & Power Assoc.	\$769,013
2007	Scott County – All Hazard Mitigation Plan	Scott County	\$30,000
	<b>Total HMA Funding – Scott County</b>		<b>\$799,013</b>

## 4.2 Vulnerability Assessment

### 4.2.1 Asset Inventory

The Hazus-MH defaults, critical facilities, and essential facilities have been updated based on the most recent available data sources. The Hazus-MH default essential facilities have been updated based on current data available from the state and county. The essential facility updates (schools, medical facilities, fire stations, and police stations) were integrated into the Hazus-MH input database. Other critical facilities identified by the county were geocoded and overlaid with the Hazus-MH flood model output.

Critical facilities are defined by the Department of Homeland Security in the Automated Critical Asset Management System (ACAMS). Scott County has used the 18 sectors included in ACAMS to identify their critical infrastructure and key resources. Table 17 below identifies the critical facilities that were included in the analysis. Essential facilities are a subset of critical facilities. Names and locations of all critical facilities are found in Appendix B. Figure 5 below maps the critical facilities in Shakopee, while Figure 6 depicts critical facilities in Savage. Figure 7 maps critical facilities in Prior Lake.

Table 17. Scott County Critical Infrastructure and Facilities

ACAMS Category	Number of Facilities	ACAMS Category	Number of Facilities
Agriculture and Food	3	Government Facilities	47
Banking and Finance	42	Healthcare and Public Health	28
Chemical and Hazardous Materials	62	Information Technology	0
Commercial Facilities	46	Manufacturing	4
Communications	2	National Monuments and Icons	10
Dams	22	Nuclear	0
Defense Industrial Base	0	Postal and Shipping	8
Emergency Services	20	Transportation	0
Energy	3	Water	22

Figure 5. Critical Facilities in Shakopee

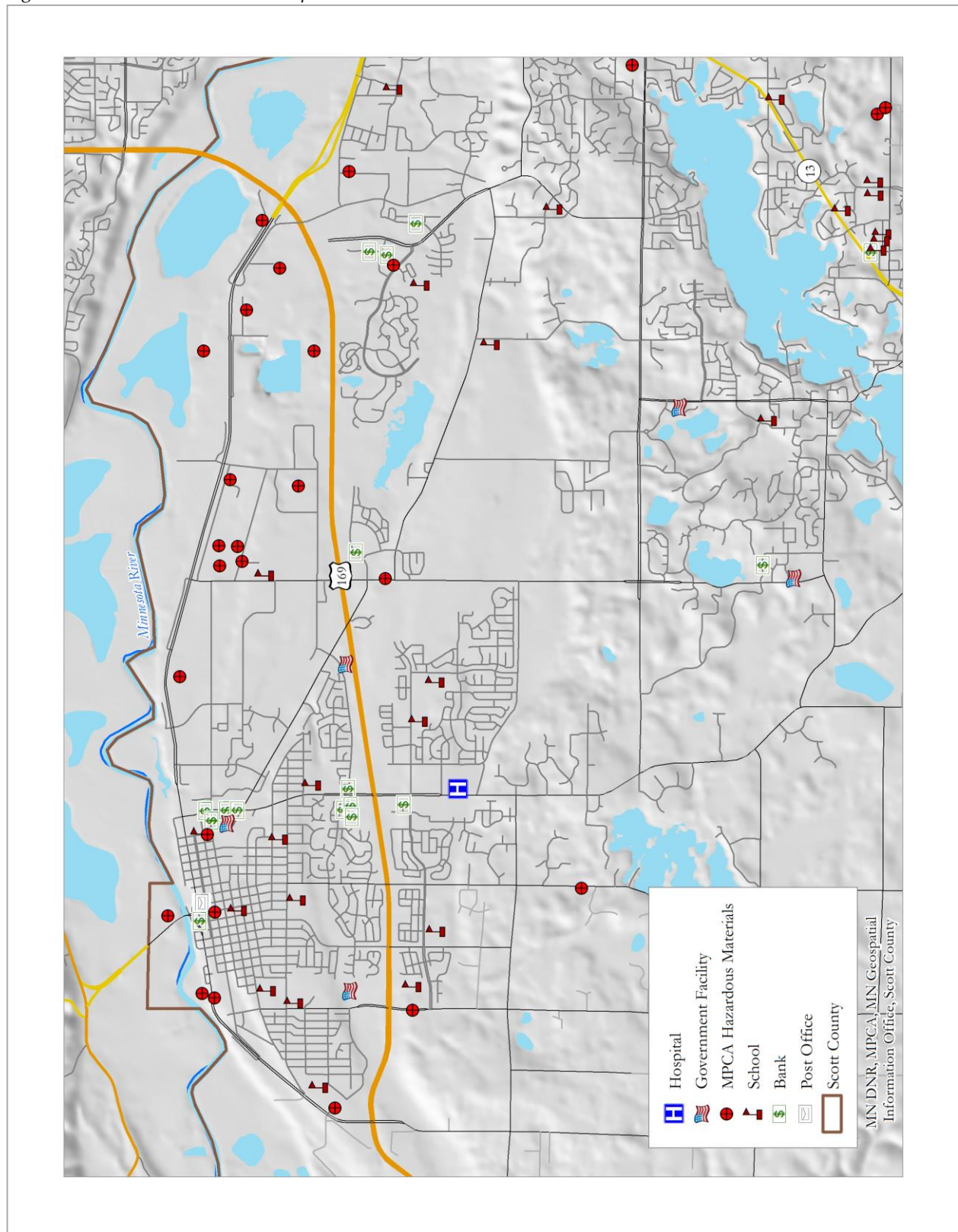




Figure 6. Critical Facilities in Savage

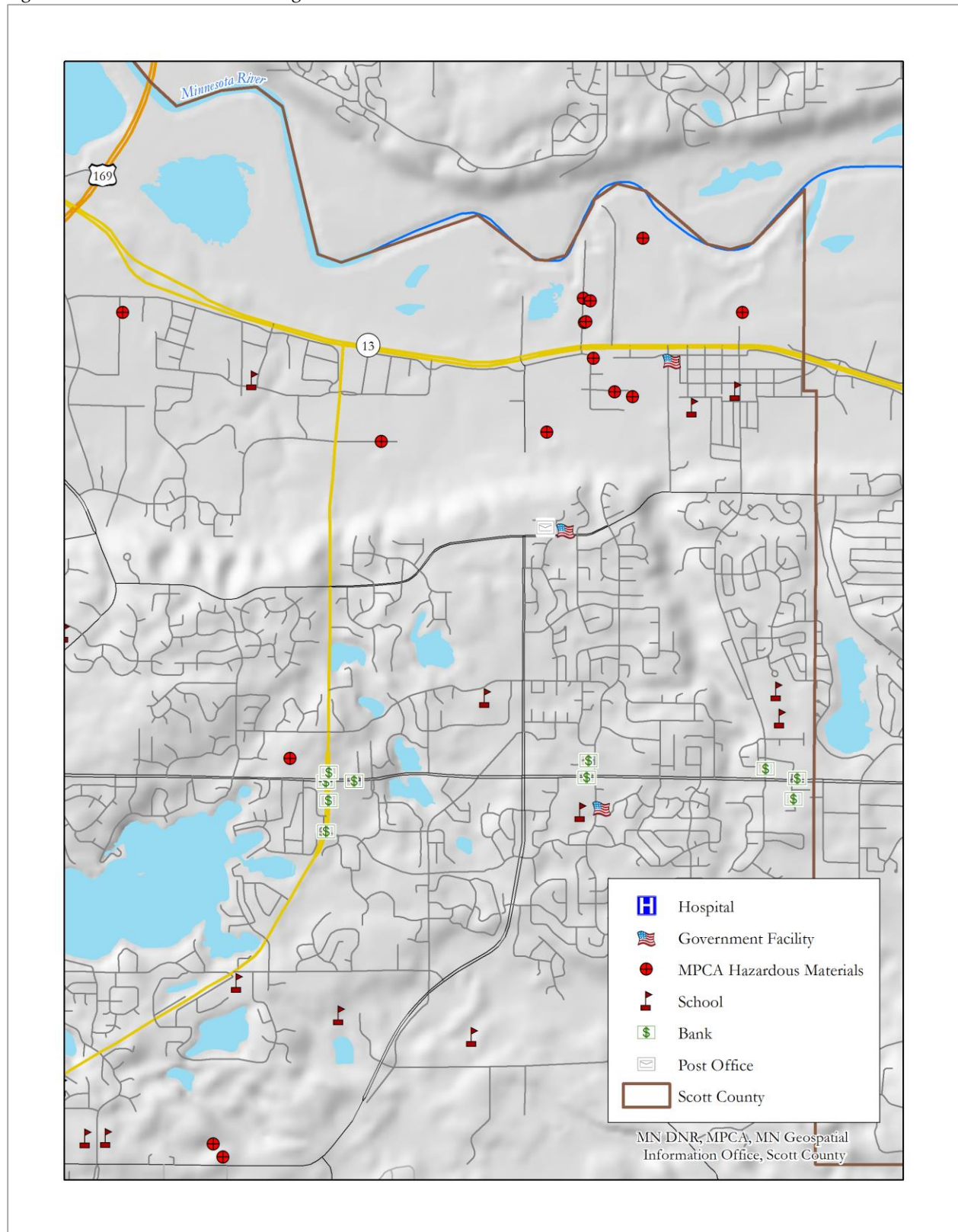
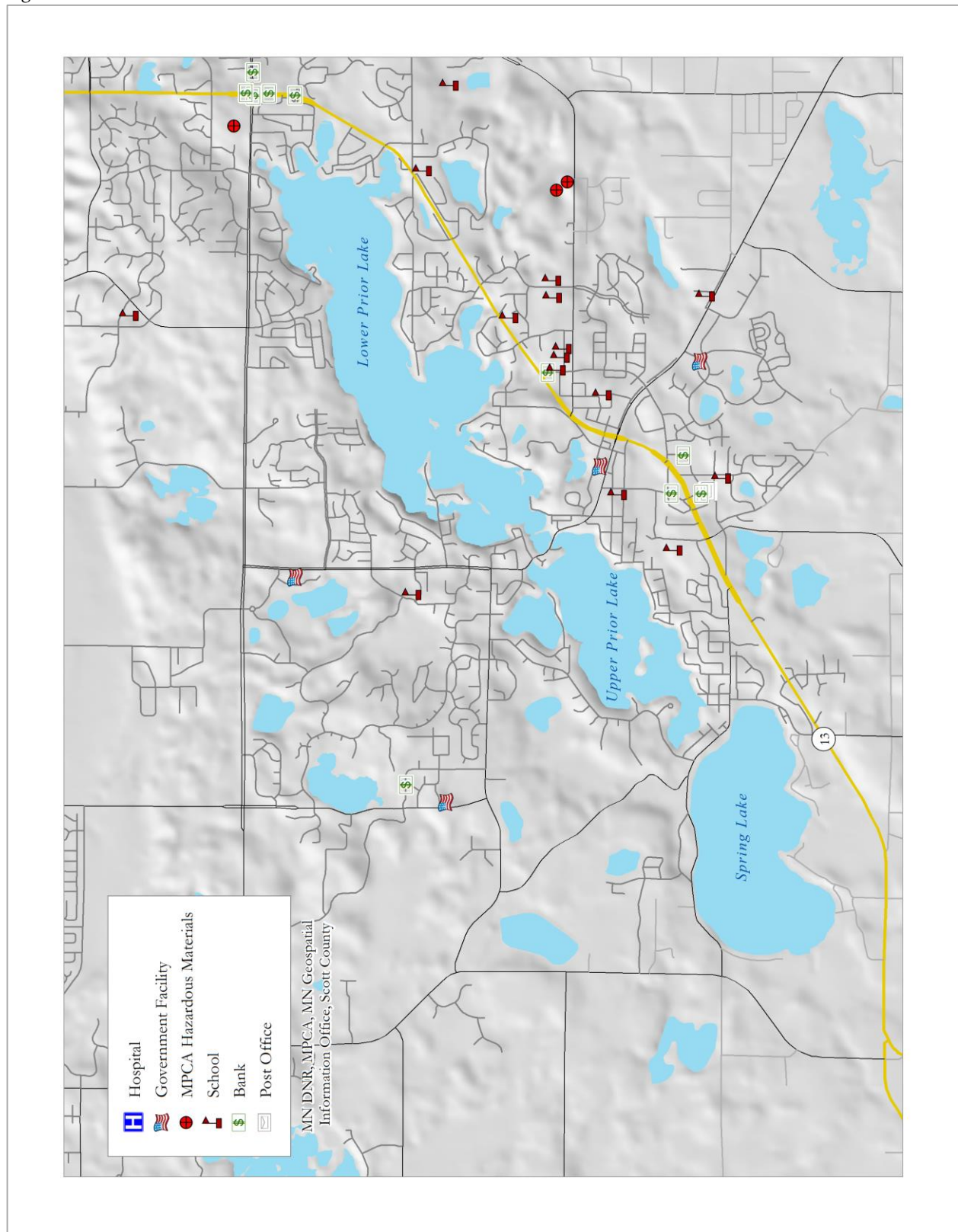


Figure 7. Critical Facilities in Prior Lake



#### 4.2.2 Facility Replacement Costs

Hazus-MH MR4 contains the base aggregated general building stock used for estimating building exposure. Hazus-MH MR4 contains aggregated general building stock updated to Dun & Bradstreet 2006 and building valuations were updated to R.S. Means 2006. Building counts based on census housing unit counts are available for RES1 (single-family dwellings) and RES2 (manufactured housing) classifications instead of actual building counts.

Facility replacement costs and total building exposure are identified in Table 18, which also includes the estimated number of buildings within each occupancy class as calculated by Hazus general building stock.

Table 18. Scott County Total Building Exposure

General Occupancy	Estimated Total Buildings	Total Building Exposure
Agriculture	1,157	\$1,754,000
Commercial	1,105	\$2,496,000
Education	55	\$563,000
Government	429	\$1,630,000
Industrial	466	\$7,247,000
Religious/Non-Profit	102	\$302,000
Residential	44,007	\$55,478,000
<b>Total:</b>	<b>47,321</b>	<b>\$69,470,000</b>

#### 4.3 Future Development

Because Scott County is vulnerable to a variety of natural and technological hazards, the county government—in partnership with the state government—must make a commitment to prepare for the management of these types of events. Scott County is committed to ensuring that county elected and appointed officials become informed leaders regarding community hazards so that they are better prepared to set and direct policies for emergency management and county response.

Due to the recession and economy over the last 5 years, there have not been any changes in development, settlement patterns, and commercial land use patterns in Scott County since the last Multi-Hazard Mitigation Plan.

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



## 4.4 Hazard Profiles

### 4.4.1 Summer Storms (Tornadoes, Windstorms, Lightning, Hail)

#### Tornadoes

Tornadoes are defined as violently-rotating columns of air extending from thunderstorms to the ground, with wind speeds between 40-300 mph. They develop under 3 scenarios: (1) along a squall line; (2) in connection with thunderstorm squall lines during hot, humid weather; and (3) in the outer portion of a tropical cyclone. Funnel clouds are rotating columns of air not in contact with the ground; however, the column of air can reach the ground very quickly and become a tornado.

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

Figure 8. Damage from Tornado in Belle Plaine, MN, June 10, 2012 (Scott County Sheriff's Office Facebook page)



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

#### Tornado History in Scott County

According to the NCDC, 15 tornadoes were reported in Scott County between 1950 and September of 2015, causing no deaths or injuries, and \$550,000 dollars in property damage. Tornado classification ranged from F0/EF0 to F2 on the Fujita Scale. The most recent tornado occurred in June of 2012 (Figure 8), causing \$250,000 in property damage.

Figure 9 below shows tornado touchdown points and tracks in Scott County from 1950-September 2015. Historic tornado events in the county are listed in Table 19.

*Table 19. Historic Tornado Events in Scott County, 1950-September 2015*

<b>Location or County</b>	<b>Date</b>	<b>Magnitude</b>	<b>Deaths</b>	<b>Injuries</b>	<b>Property Damage</b>
Blakeley	6/10/2012	EF0	0	0	\$250,000
St Patrick	6/26/2010	EF0	0	0	0
Belle Plaine	8/3/2002	F0	0	0	0
New Market	6/11/2001	F1	0	0	\$50,000
Belle Plaine	5/9/2001	F0	0	0	0
New Prague	5/9/2001	F0	0	0	0
New Prague	5/9/2001	F0	0	0	0
New Market	5/9/2001	F0	0	0	0
Blakeley	7/30/1999	F0	0	0	0
Belle Plaine	7/30/1999	F1	0	0	0
Lydia	7/30/1999	F0	0	0	0
Savage	6/5/1999	F0	0	0	0
Savage	8/22/1998	F0	0	0	0
Lydia	7/21/1995	F1	0	0	0
Scott County	5/21/1977	F2	0	0	\$250,000

Source: National Climatic Data Center



## Tornadoes and Climate Change

Tornadoes and other severe thunderstorm phenomena frequently cause as much annual property damage in the U.S. as do hurricanes, and often cause more deaths. Although recent research has yielded insights into the connections between global warming and the factors that cause tornados and severe thunderstorms, such as atmospheric instability and increases in wind speed with altitude (Del Genio, Yao, & Jonas, 2007), these relationships remain mostly unexplored, largely because of the challenges in observing thunderstorms and tornadoes and simulating them with computer models (National Climate Assessment Development Advisory Committee, 2013).

According to Harold Brooks of NOAA's National Severe Weather Laboratory, there is increasing variability in the "start" of tornado season. The number of days with more than 30 EFI or greater tornadoes is increasing, while the number of days with at least 1 EFI or greater tornadoes is decreasing. Thus, tornadoes are occurring on fewer days, but *more* are occurring on outbreak days.

Tornadoes have not been recorded in Minnesota in the winter months of December, January and February (MN DNR, 2014). However, the state of Wisconsin has recorded 3 tornadoes in January and 6 in December during the period of 1844-2013 (National Weather Service Weather Forecast Office, 2014) including a recent January tornado in 2008.

## Windstorms

FEMA defines winds in excess of 58 miles per hour, excluding tornadoes, as windstorms. Straight-line winds and windstorms are used interchangeably in the plan. This hazard is treated as a different category than tornadoes (which may also include high winds). Windstorms are among the nation's most severe natural hazards in terms of both lives lost and property damaged.

Severe winds can damage and destroy roofs, toss manufactured homes off their pier foundations, and tear light-framed homes apart. There are several different types of windstorms. A "downburst" is defined as a strong downdraft with an outrush of damaging winds on or near the earth's surface. Downbursts may have wind gusts up to 130 mph and are capable of the same damage as a medium-sized tornado. A "gust front" is the leading edge of the thunderstorm downdraft air. It is most prominent near the rain-free cloud base and on the leading edge of an approaching thunderstorm and is usually marked by gusty, cool winds and sometimes by blowing dust. The gust front often precedes the thunderstorm precipitation by several minutes. Straight-line winds, when associated with a thunderstorm, are most frequently found with the gust front. These winds originate as downdraft air reaches the ground and rapidly spreads out, becoming strong horizontal flow.

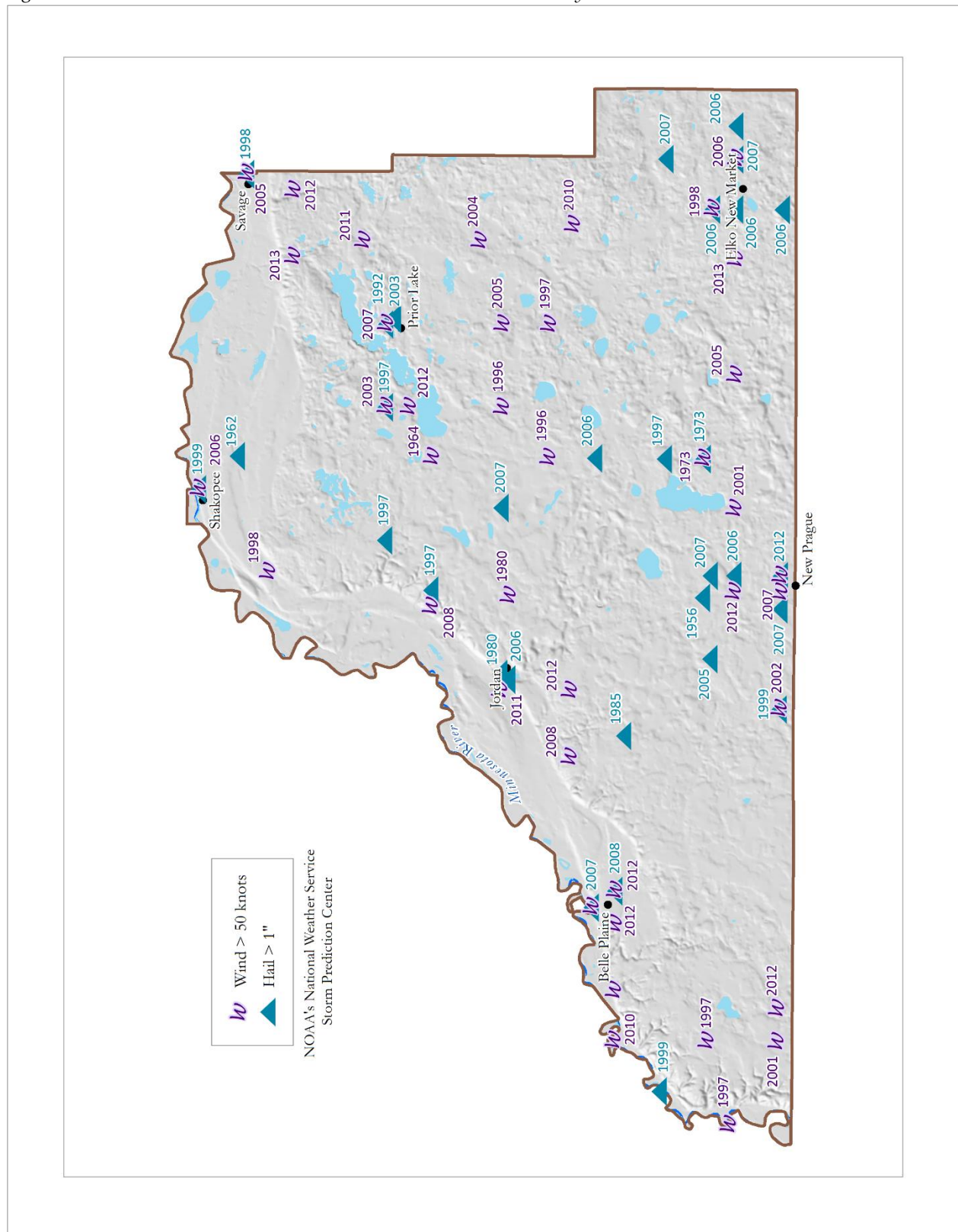
## Windstorm History in Scott County

Scott County frequently experiences winds blowing at over 50 knots. According to NCDC records there have been 133 thunderstorm wind events reported between 1950 and September 2015, with wind speeds of up to 90 knots. These winds can inflict damage to buildings and in some cases overturn high-profile vehicles.

The most recent severe wind and hail storms in Scott County are shown in Figure 10.



Figure 10. Most Recent Severe Wind and Hail Storms in Scott County



## Windstorms and Climate Change

Lack of high-quality long-term data sets make assessment of changes in wind speeds very difficult (Kunkel, et al., 2013). One analysis generally found no evidence of significant changes in wind speed distribution. Other trends in severe storms, including the numbers of hurricanes and the intensity and frequency of tornadoes, hail, and damaging thunderstorm winds are uncertain. Since the impact of more frequent or intense storms can be larger than the impact of average temperature, climate scientists are actively researching the connections between climate change and severe storms (National Climate Assessment Development Advisory Committee, 2013).

## Lightning

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

The hazard posed by lightning is significant. High winds, rainfall, and a darkening cloud cover are the warning signs for possible cloud-to-ground lightning strikes. While many lightning casualties happen at the beginning of an approaching storm, more than half of lightning deaths occur after a thunderstorm has passed. Lightning has been known to strike more than 10 miles from the storm in an area with clear sky above.

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

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

## Lightning History in Scott County

The NCDC has recorded 4 lightning events in Scott County, resulting in one injury in 1996. No deaths were reported.

## Lightning and Climate Change

The projected possible intensity and frequency of tornadoes, hail, and damaging thunderstorm winds, the conditions associated with lightning, are uncertain (National Climate Assessment Development Advisory Committee, 2013). Severe rain events are becoming more common and may include an additional risk of lightning.

## Hail

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

depending on the strength of the updraft. The NWS uses the following descriptions when estimating hail sizes: pea size is ¼-inch, marble size is ½-inch, dime size is ¾-inch, quarter size is 1-inch, golf ball size is 1 ¾-inches, and baseball size is 2 ¾-inches. Individuals who serve as volunteer “storm spotters” for the NWS are located throughout the state, and are instructed to report hail dime size (¾-inch) or greater. Hailstorms can occur throughout the year; however, the months of maximum hailstorm frequency are typically between May and August. Although hailstorms rarely cause injury or loss of life, they can cause significant property damage.

### Hail History in Scott County

Hail is a particular concern in Scott County due to the damage it can inflict on agriculture. Table 20 shows storms producing hail greater than 1 inch diameter in Scott County.

Table 20. Storms producing hail of greater than 1 inch diameter in Scott County, 1950-September 2015

Date	Hail Size (inches)	Injuries	Date	Hail Size (inches)	Injuries	Date	Hail Size (inches)	Injuries
6/29/2015	1.5	0	8/24/2006	1.75	0	8/15/1997	1.75	0
6/22/2015	1.75	0	8/24/2006	2.75	0	8/15/1997	1.75	0
7/7/2014	1.75	0	8/24/2006	1.75	0	7/13/1997	1.75	0
6/17/2012	1.75	0	8/24/2006	4.25	0	7/13/1997	1.75	0
5/29/2008	1.75	0	8/24/2006	3	0	7/1/1997	2	0
8/13/2007	1.5	0	8/24/2006	1.75	0	7/1/1997	1.25	0
7/3/2007	1.75	0	8/24/2006	1.75	0	6/28/1997	2	0
6/20/2007	1.75	0	6/24/2006	1.5	0	6/30/1994	1.75	0
6/20/2007	1.25	0	8/9/2005	1.75	0	6/30/1994	1.75	0
6/20/2007	1.75	0	7/14/2003	1.25	0	8/1/1992	1.75	0
6/20/2007	2.75	0	6/11/2001	1.75	0	5/30/1985	1.75	0
6/20/2007	1.5	0	6/6/1999	1.75	0	4/20/1985	1.75	0
6/20/2007	1.75	0	6/5/1999	3	0	4/29/1981	1.75	0
6/20/2007	1.75	0	6/5/1999	2.75	0	8/19/1980	1.75	0
6/20/2007	1.75	0	6/26/1998	1.75	0	5/23/1977	1.75	0
8/24/2006	3	0	5/15/1998	1.75	0	7/29/1973	2.5	0
8/24/2006	3	0	5/15/1998	2	0	7/17/1956	1.75	0
8/24/2006	1.75	0	8/15/1997	1.75	0	6/19/1956	3	0

Source: National Climatic Data Center

### Hail and Climate Change

According to the Federal Advisory Committee Draft National Climate Assessment (NCA), trends in severe storms, including the numbers of hurricanes and the intensity and frequency of tornadoes, hail, and damaging thunderstorm winds are uncertain. Since the impact of more frequent or intense storms can be larger than the impact of average temperature, climate scientists are actively researching the connections between climate change and severe storms (National Climate Assessment Development Advisory Committee, 2013).

The occurrence of very heavy precipitation has increased in Minnesota in recent decades and future projections also indicate this will continue (International Climate Adaptation Team, 2013). While it is unknown if this precipitation will occur during severe storms that produce hail, the possibility has not been ruled out.

### Vulnerability

Summer storms affect Scott County each year, so there is a 100% probability that the county and its jurisdictions will be affected. According to the 64-year NCDC record, there is a 52% chance of a significant hailstorm any year in Scott County and a 30% chance in each year that there will be a hailstorm that produces hail greater than 1 inch in size.

The county has experienced tornadoes in 8 of the 64 years on record. According to these statistics, there is a 12.5% chance of a tornado affecting Scott County each year. The magnitude of summer storms each year is unpredictable and within Scott County the vulnerability of jurisdictions to summer storms does not vary geographically. The vulnerability of each jurisdiction to severe summer storms has not changed due to any development in the last 5 years.

### Severe Summer Storms and Electrical Outages

According to NOAA data, the natural hazards that caused the greatest overall property loss in Minnesota between 1996 and 2014 were thunderstorms and lightning, at \$86.3 million per year. The state also experienced 23 electric transmission outages from 1992 to 2009, 5 of which were due to heat waves and thunderstorms. On average, the number of people affected annually by all electric outages during 2008 to 2013 in Minnesota was 449,995, with a high of 1,460,810 in 2011 (U.S. Department of Energy, 2015). Figure 11 below shows the seasonality of electric outages by month for the years 2008-2013, and Figure 12 shows the causes of outages in the state between 2008 and 2013, with the largest cause being weather/falling trees.

Figure 11. Electric Utility Reported Power Outages by Month (2008-2013)

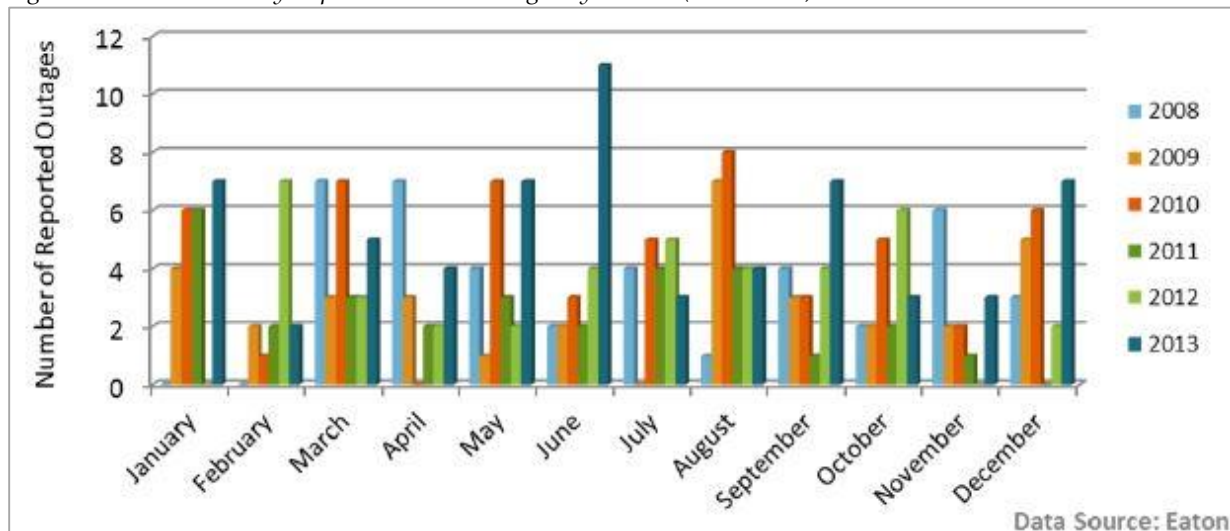
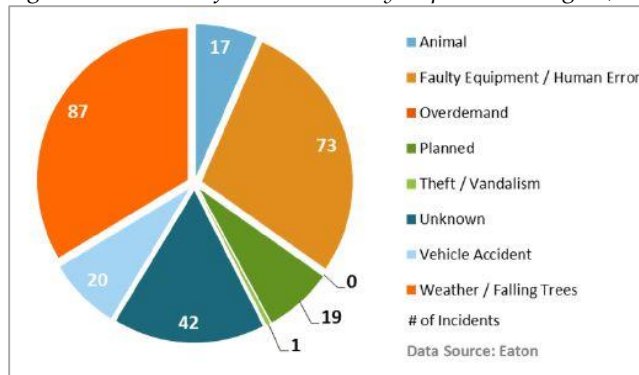




Figure 12. Causes of Electric-Utility Reported Outages (2008-2013)



### Plans and Programs in Place

**Public Warning and Notification** – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Scott County utilizes the CodeRED Mass Notification System.

**Stormwater Ordinance** – Scott County maintains a stormwater ordinance.

**SKYWARN Program** – Scott County participates in SKYWARN. These volunteers help keep their local communities safe by providing timely and accurate reports of severe weather to their local National Weather Service office.

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

**Emergency Operations Plan** – Scott County maintains an Emergency Operations Plan, which is designed as a guide for emergency operations. It is intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions, including debris clearance.

#### 4.4.2 Flash Flood and Riverine Flood

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

localized areas, but they can be quite severe. Urban flooding is a type of upstream flood, which involves the overflow of storm drain systems and can be the result of inadequate drainage combined with heavy rainfall or rapid snowmelt. Upstream or flash floods can occur at any time of the year in Minnesota, but they are most common in the spring and summer. 14 flash floods have been recorded in Scott County since 1997.

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

Nationwide, floods caused 4,586 deaths from 1959 to 2005 while property and crop damage averaged nearly \$8 billion per year (in 2011 dollars) from 1981-2011 (Georgakakos, et al., 2014).

During the past several decades, agencies have used the “100-year floodplain” as the design standard for projects funded by the federal government. However, today floods of that magnitude are occurring far more often than once per century (Natural Resources Defence Council, 2015). In recognition of increasing risks, in January of 2015 the President issued an executive order that updates flood protection standards that guide federally-funded projects in or near floodplains or along coastlines. These new standards require federally-funded projects to either build 2 feet above the 100-year flood elevation for standard projects and three feet above for critical buildings like hospitals and evacuation centers; or build to the 500-year flood elevation (The White House, 2015).

### Flood History in Scott County

The heavy rains of August 18-20, 2007 resulted in major flood damage throughout southeastern Minnesota, including Scott County. A 24-hour rainfall record was broken in the state, with over 15 inches falling near Hokah in Houston County. Hundreds of homes and businesses were impacted, and reports of stream flooding, urban flooding, mudslides, and road closures were numerous throughout southern Minnesota.

On June 28, 1998 heavy rainfall resulted in the severe flooding of Sand Creek in the town of Jordan, described as the worst flooding since 1963. 2 bridges were washed out. Because of the rapid response of volunteers and emergency personnel in erecting a wall with 38,000 sandbags, flooding damage was minimized. The Jordan NWS cooperative observer reported 6.80 inches of rain between the 24<sup>th</sup> and the 27<sup>th</sup> with over 4 inches falling on the 26<sup>th</sup>. Members of the steering committee in 2016 continue to note the potential harm of Sand Creek flooding in Jordan, but that USACE studies have not found cost-effective solutions.

Flash flooding was widespread on October 4, 2005. Streets and residential basements flooded and water retention ponds overflowed their walls in Shakopee. Several gravel alleys and streets were washed out. A classroom had to be relocated at the Sweeney Elementary School when it sustained water damage from the flooding.

Spring flooding in 2010 resulted in the Highway 101 Bridge over the Minnesota River in Shakopee closing. The NCDRC reported \$400,000 in property damage. In late November of 2015, a new County Road 101 bridge opened between Scott and Carver counties. The former bridge was underwater 4 times between 2010 and 2015, with resulting closures lasting from a few days to a several weeks. Its new replacement is built above the 100-year floodplain (Star Tribune, 2015).

On July 13, 2013 a flash flood occurred in Shakopee resulting in \$500,000 in property damage.

9 of the 10 FEMA disaster declarations in Scott County have included flooding. The most recent disaster declaration occurred in the summer of 2014, due to flooding, winds, storms, landslides and mudslides. According to NCDRC data, the flood resulted in a total of \$9 million in property damage. Scott County received over \$2.5 million in public assistance from FEMA.

*Figure 13. Flood Damage on County Road 16, Shakopee, June 27, 2014 (Noess, 2014)*



The June 2014 flood resulted in landslides, washed out roads in Shakopee (Figure 13), Blakeley, Prior Lake and Belle Plaine, and record high levels on the Minnesota River (Belle Plaine Herald, 2015). Flooding also created farm field gullies, washed-out culverts, and stream bank erosion (Shakopee Valley News, 2015). Homeowners in low-lying areas and close to Prior Lake had to canoe to their homes in some cases. Residents in the Watersedge Trail neighborhood placed 10,000 sandbags in 3 hours with the help of 300

volunteers. Prior Lake shattered records when it reached nearly 907 feet in July – a no-wake restriction resulted for most of the boating season (Carlson, 2015). One house was estimated to be surrounded by up to 3,000 sandbags. One potential danger with sandbags, however, is high winds can create waves that crest the wall and knock it over (Blume, 2014).

*Figure 14. Valleyfair Floodwaters, Shakopee, 2014 (KARE-Sky 11, 2014)*



The NCDRC reported that mudslides in Blakeley closed train tracks in the area, impacting Union Pacific and Canadian Pacific rail operations. Highways 6, 41, and 101 were closed due to high water levels on the Minnesota River. The entire town of Blakeley was evacuated due to the high river levels. Getting in and out of town became nearly impossible due to fallen trees and damaged roads (McDonough, 2014). Landslides and mudslides also occurred around Blakeley (see Section 4.4.8 Landslides and Soil Erosion).

The township of Louisville, north of Jordan and west of Prior Lake, had 2 homes surrounded by floodwaters during the height of the flood, and Highway 169 provided the only access from Scott County. In Shakopee, 3 rides were shut down at Valleyfair due to floodwaters that spilled into the park and across its parking lots (Figure 14).

Table 21 below lists Scott County's historical floods from 1997-September 2015 as recorded by the NCDC. Although no deaths or injuries were recorded with these floods, property damage from 6 of the floods resulted in over \$11 million in losses.

Table 21. Scott County Historical Floods, 1997-September 2015

Location or County	Date	Type	Deaths	Injuries	Property Damage
Belle Plaine	6/19/2014	Flash Flood	0	0	0
Blakeley	6/18/2014	Flood	0	0	\$9,000,000
Shakopee	7/13/2013	Flash Flood	0	0	\$500,000
St Patrick	3/21/2011	Flood	0	0	0
Belle Plaine	8/13/2010	Flash Flood	0	0	0
Shakopee	6/26/2010	Flash Flood	0	0	0
Blakeley	6/26/2010	Flash Flood	0	0	\$50,000
Prior Lake	6/26/2010	Flash Flood	0	0	0
Shakopee	3/20/2010	Flood	0	0	\$400,000
Shakopee	3/19/2010	Flood	0	0	0
St Patrick	3/17/2010	Flood	0	0	0
Deer Park	3/13/2010	Flood	0	0	0
Jordan	3/12/2010	Flood	0	0	0
Shakopee	8/8/2009	Flash Flood	0	0	0
Jordan	3/19/2007	Flood	0	0	\$900,000
Jordan	6/16/2006	Flash Flood	0	0	0
Scott County	10/4/2005	Flood	0	0	0
Scott County	10/4/2005	Flash Flood	0	0	0
Scott County	9/4/2005	Flash Flood	0	0	0
Scott County	8/3/2002	Flash Flood	0	0	\$200,000
Scott County	5/1/2001	Flood	0	0	0
Scott County	4/1/2001	Flood	0	0	0
Savage	8/22/1998	Flash Flood	0	0	0
Scott County	6/28/1998	Flood	0	0	0
Belle Plaine	7/25/1997	Flash Flood	0	0	0
Prior Lake	7/22/1997	Flash Flood	0	0	0
Scott County	5/1/1997	Flood	0	0	0
Scott County	4/1/1997	Flood	0	0	0
Scott County	3/15/1997	Flood	0	0	0

Source: National Climatic Data Center

The National Oceanic and Atmospheric Administration (NOAA) Advanced Hydrologic Prediction Service provides information from gauge locations at points along various rivers across the United States. One USGS gauging station is located in the county near Jordan on the Minnesota River. Its flood crest data for the top 10 gauge heights is recorded in Table 22 below.

*Table 22. Historical Flood Crests for USGS gauging station on the Minnesota River near Jordan*

<b>Date</b>	<b>Gauge Height (feet)</b>	<b>Stream flow (cfs)</b>
4/11/1965	33.89	117,000
6/24/1993	33.52	92,200
6/25/2014	33.25	76,600
4/18/2001	33.11	87,100
9/30/2010	33.07	74,700
4/14/1969	32.85	84,600
4/12/1997	32.24	82,300
3/28/2011	31.81	72,300
4/16/1952	28.31	60,600
4/11/1951	28.00	64,100

### Vulnerability and Hazus-MH Hazard Analysis

Hazus-MH was used to estimate the damages incurred for a 100-year flood in Scott County using a 10-meter DEM (digital elevation model) to create a flood depth grid from a digital Q3 (digitized paper flood insurance rate map).

Scott County-specific building data was sourced from parcel tax databases and building location point databases, including building valuations and occupancy class. Building counts were aggregated from the individual parcel records to the relevant census administrative boundaries. There are an estimated 47,321 buildings in the region with a total replacement value (excluding contents) of \$11.3 billion (2010 dollars). Approximately 93% of the buildings (and 77% of the building value) are associated with residential housing. Using the Scott County updated general building stock, the Hazus model reported an estimated 361 buildings will be at least moderately damaged. This is over 58% of the total number of buildings in the scenario. There are an estimated 78 buildings that will be completely destroyed.

The total economic loss estimated for the flood is \$140 million dollars, which represents 6% of the total replacement value of the scenario buildings. Building losses are broken into 2 categories: direct building losses and business interruption losses. Direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. Business interruption losses are associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood. The total building-related losses in the Hazus model was \$139 million dollars. 1% of the estimated losses were related to business interruption in the region. Residential occupancies made up 56% of the total loss.

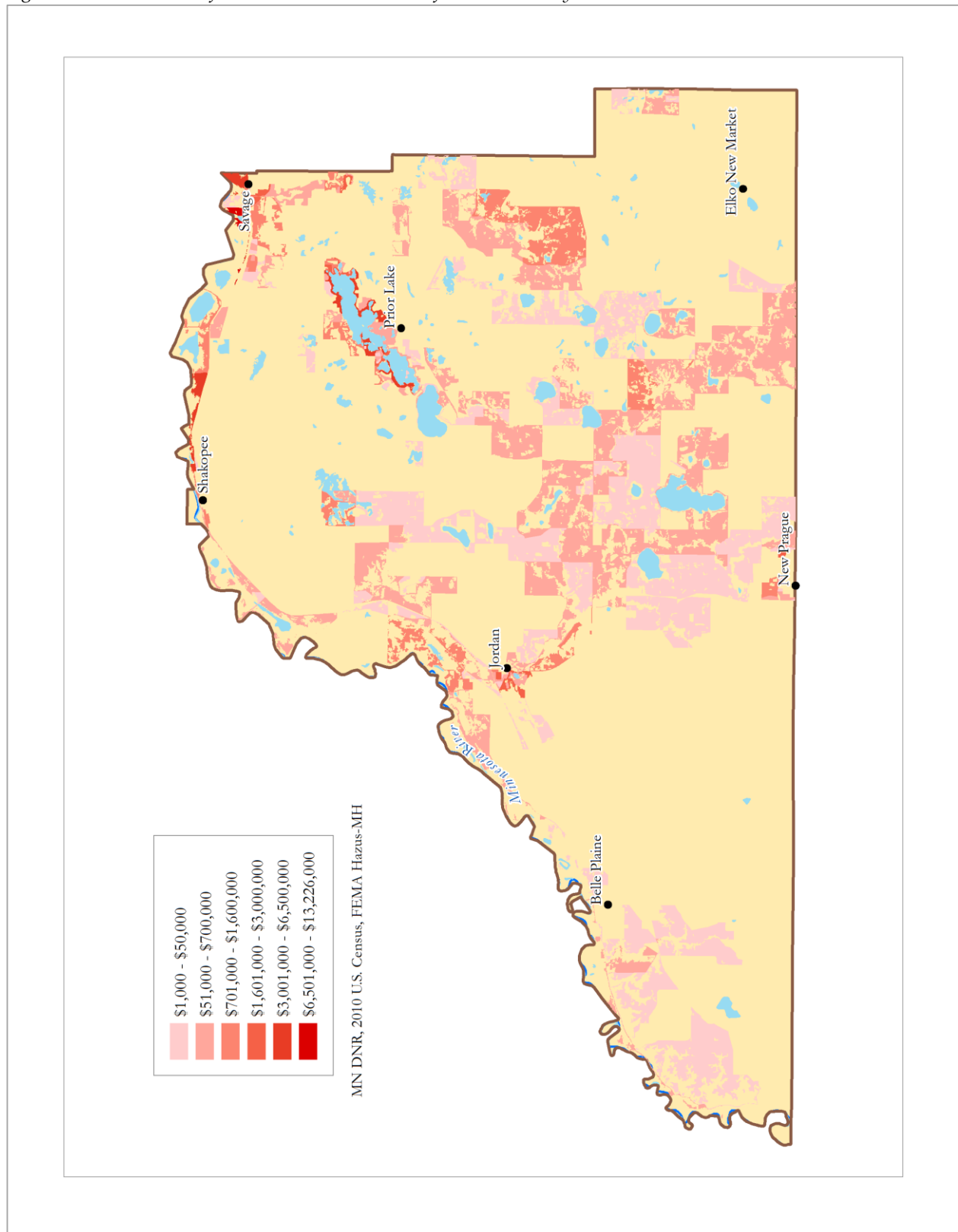
The reported building counts should be interpreted as degrees of loss rather than an exact number of buildings exposed to flooding. These numbers were derived from aggregate building inventories which are assumed to be dispersed evenly across census blocks. Hazus-MH requires that a predetermined amount of square footage of a typical building sustain damage in order to produce a damaged building count. If only a minimal amount of damage to buildings is predicted, it is possible to see zero damaged building counts while also seeing economic losses. The total estimated number of damaged buildings, total building losses, and estimated total economic losses are shown in Table 23. The distribution of economic losses for Scott County is depicted in Figure 15.

*Table 23. Scott County Total Economic Loss from 100-Year Flood*

<b>General Occupancy</b>	<b>Estimated Total Buildings</b>	<b>Total Damaged Buildings</b>	<b>Total Building Exposure (In \$1000s)</b>	<b>Total Economic Loss (In \$1000s)</b>	<b>Building Loss (In \$1000s)</b>
Agricultural	1,157	0	\$206,273	\$5,461	\$1,754
Commercial	1,105	7	\$589,815	\$10,438	\$2,496
Education	55	0	\$573,101	\$3,385	\$563
Government	429	2	\$539,024	\$8,983	\$1,630
Industrial	466	14	\$551,664	\$30,507	\$7,247
Religious/Non-Profit	102	0	\$122,966	\$2,071	\$302
Residential	44,007	415	\$8,667,064	\$78,885	\$55,478
<b>Total</b>	<b>47,321</b>	<b>438</b>	<b>\$11,249,907</b>	<b>\$139,730</b>	<b>\$69,470</b>



Figure 15. Distribution of Estimated Economic Loss for Scott County in 100-Year Flood



Census blocks of concern should be reviewed in more detail to determine the actual percentage of facilities that fall within the flood hazard areas. The aggregate losses reported in this study may be overstated because values are distributed evenly in a census block. The 5 census blocks showing the highest estimated loss values are shown in Table 24, with their spatial extents shown in

Figure 16, Figure 17, Figure 18, Figure 19, and Figure 20.

*Table 24. Scott County Census Blocks with the Greatest Estimated Losses in the 100-Year Floodplain*

<b>Census Block Number</b>	<b>Total Estimated Loss</b>	<b>City</b>
271390802011003	\$13,226,000	Savage
271390809052004	\$6,343,000	Prior Lake
271390809061005	\$5,109,000	Prior Lake
271390809032014	\$4,687,000	Prior Lake
271390803012005	\$4,476,000	Shakopee



Figure 16. Census Block #271390802011003 and 100-Year Floodplain in Savage

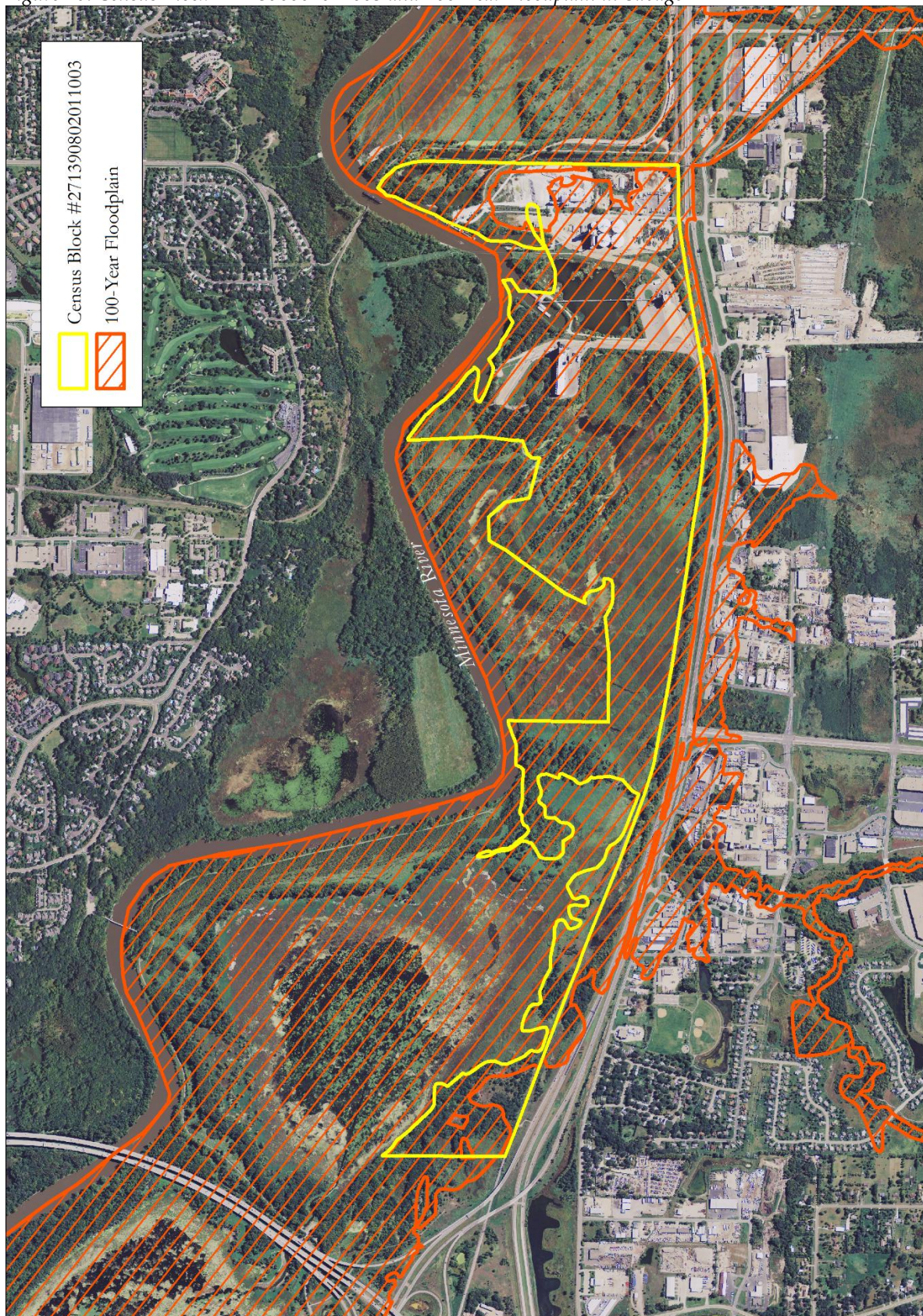




Figure 17. Census Block #271390809052004 and 100-Year Floodplain by Prior Lake

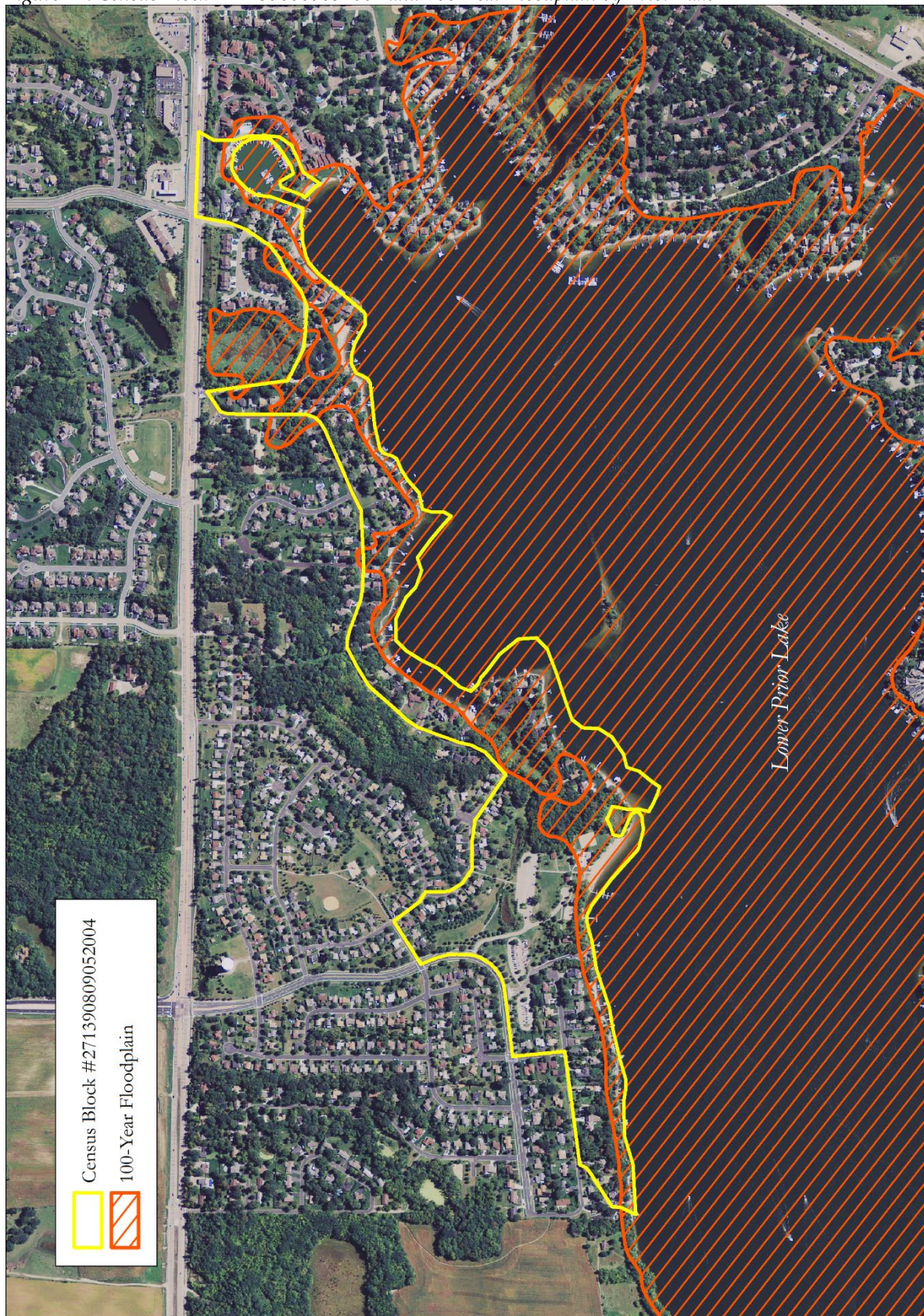




Figure 18. Census Block #271390809061005 and 100-Year Floodplain by Prior Lake

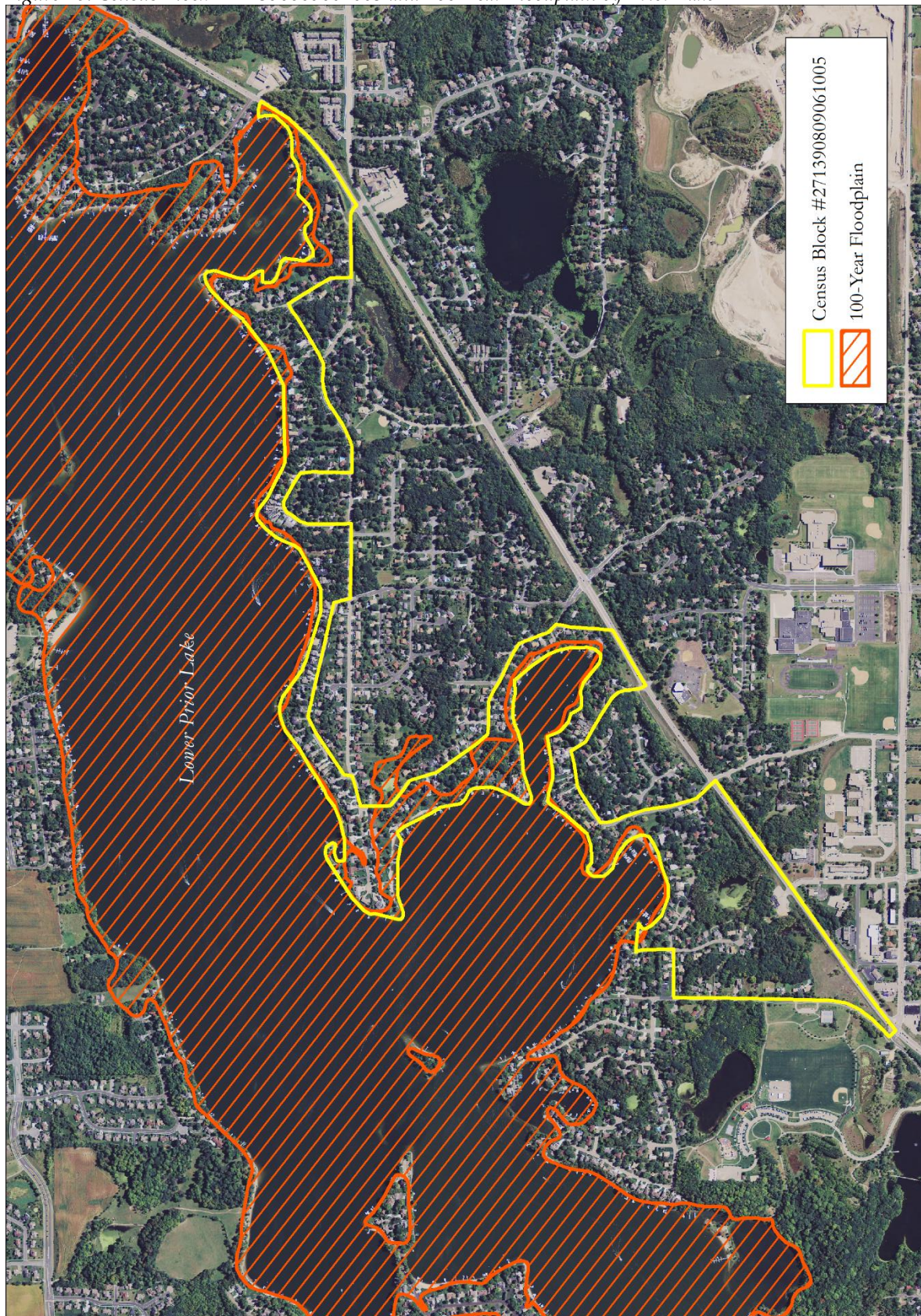


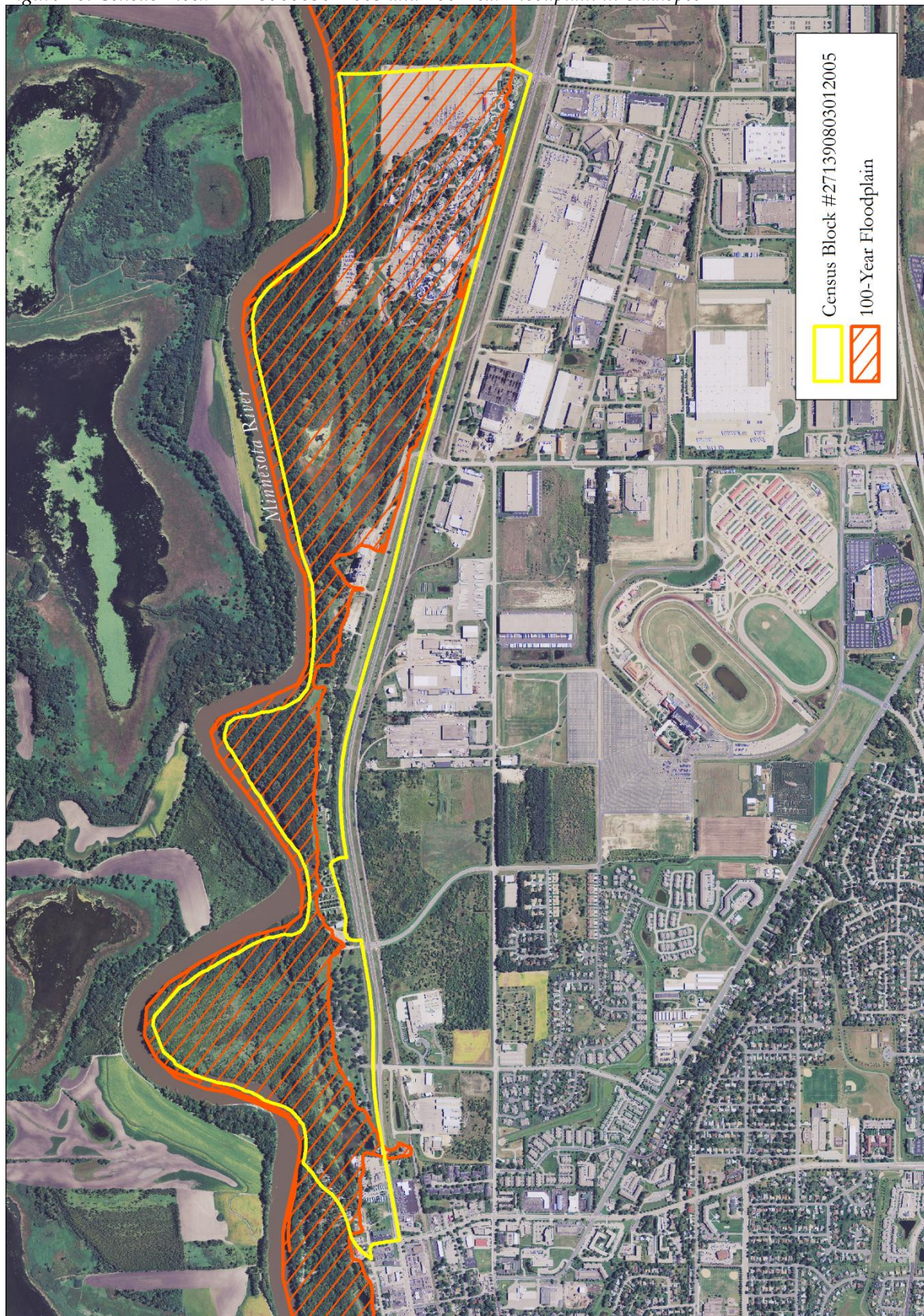


Figure 19. Census Block #271390809032014 and 100-Year Floodplain by Prior Lake





Figure 20. Census Block #271390803012005 and 100-Year Floodplain in Shakopee





### Hazus-MH Essential Facility Loss Analysis

Essential facilities encounter the same impacts as other buildings within the flood boundary: structural failure, extensive water damage to the facility, and loss of facility functionality (i.e. a damaged police station will no longer be able to serve the community). One of the essential facilities (care facilities, fire stations, police stations, and schools) included in the Hazus-MH analysis falls within the flood boundary: the Savage Fire Department (Station 1), with the model predicting “at least moderate” damage in addition to loss of use (Table 25 and Figure 21).

Table 25. Scott County Essential Facilities within estimated 100-Year Flood Boundary

Type	Name	Site Address	City
Fire Station	Savage Fire Department (Station 1)	12305 Quentin Ave	Savage

Figure 21. Savage Essential Facility in 100-Year Floodplain



### *Hazus-MH Shelter Requirement Analysis*

Hazus-MH estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. Hazus-MH also estimates those displaced people that may require accommodations in temporary public shelters. The model estimates 996 households may be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, the model estimates 1,812 people (out of a total population of 129,928) may seek temporary shelter in public shelters.

### *Hazus-MH Debris Generation Analysis*

Hazus estimates the amount of debris that may be generated by the flood. The model breaks debris into 3 general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 24,072 tons of debris would be generated. Of the total amount, Finishes composes 36% of the total and Structural composes 37% of the total. If the debris tonnage is converted into an estimated number of truckloads, it would require 963 truckloads (@25 tons/truck) to remove the debris generated by the flood.

### *Flooding and Climate Change*

As Minnesota's climate changes, the quantity and character of precipitation is changing. Average precipitation has increased in the Midwest since 1900, with more increases in recent years. The Midwest has seen a 45% increase in very heavy precipitation (defined as the heaviest 1% of all daily events) from 1958 to 2011 (National Climate Assessment Development Advisory Committee, 2013). This precipitation change has led to amplified magnitudes of flooding. Increased precipitation may also show seasonal changes, trending toward wetter springs and drier summers and falls. An example of a recent year with this character was 2012, when many MN counties were eligible for federal disaster assistance for drought, while others were eligible for flooding, and 7 were eligible for both in the same year (Seeley, 2013). In 2007, 24 Minnesota counties received drought designation, while 7 counties were declared flood disasters. In 2012, 55 Minnesota counties received federal drought designation at the same time 11 counties declared flood emergencies. In addition, the yearly frequency of the largest storms – those with 3 inches or more of rainfall in a single day – has more than doubled in just over 50 years. In the past decade, such dramatic rains have increased by more than 7% (MN Environmental Quality Board, 2014).

Southeastern Minnesota has experienced three 1000-year floods in the past decade: in September 2004, August 2007, and September 2010 (Meador, 2013). The 2004 flood occurred when parts of south-central Minnesota received over 8 inches of precipitation. Faribault and Freeborn counties received over 10 inches in 36 hours. The deluge led to numerous reports of stream flooding, urban flooding, mudslides, and road closures (MN DNR, 2004). During the 2007 event, 15.10 inches fell in 24 hours in Houston County, the largest 24-hour rainfall total ever recorded by an official National Weather Service reporting location. The previous Minnesota record was 10.84 inches in 1972. The resulting flooding from the 2007 rainfall caused 7 fatalities (MN DNR, 2007). In September 2010, a storm on the 22-23<sup>rd</sup> resulted in more than 6 inches of rain falling over 5,000 square miles in southern Minnesota. Rainfall totals of more than 8 inches were reported in portions of 10 counties. The heavy rain, falling on soils

already sodden from a wet summer, led to numerous reports of major rural and urban flooding. For many monitoring locations in southern Minnesota, stream discharge resulting from the deluge was the highest ever seen during an autumn flood (Minnesota Climatology Working Group, 2010).

June 2014 was the wettest month on record in Minnesota, with a state-averaged rainfall of 8.03 inches. This broke the previous record of 7.32 inches, which occurred in both July 1897 and June 1914. Rainfall totals for much of the state ranked above the 95<sup>th</sup> percentile when compared with the historical record; in some cases the totals tripled that of the historical rainfall average for June. Scott County received between 10-12 inches of rain during June 2014 (MN DNR, 2014). A presidential disaster declaration was declared due to the severe storms, winds, flooding, landslides, and mudslides (DR-4182), which included 37 Minnesota counties and 3 Indian Reservations.

### Plans and Programs in Place

*Public Warning and Notification* – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Scott County utilizes the CodeRED Mass Notification System.

*Watershed Management Organizations* – Each Watershed Management Organization in the county has some type of technical assistance and cost share/incentive program that provides assistance to landowners for managing conservation issues (including controlling or fixing erosion, practices that moderate runoff, or practices that build resiliency) on private lands. These programs provide ways to fix things and mitigate or increase resiliency on a small individual landowner scale.

*Local Water Management Plan* – Each city in the county has a Local Water Management Plan and the county has one for unincorporated areas. There are also 4 Water Management Organizations with jurisdiction over different parts of the County. Each has a state-approved Comprehensive Water Resources Management Plan.

*No-Wake Ordinance* – Scott County has a no-wake ordinance for Prior Lake and McMahon Lake to protect shorelines during high-water periods.

*Floodplain Ordinance* – Scott County maintains a floodplain ordinance.

*Stormwater Ordinance* – Scott County maintains a stormwater ordinance.

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

*Blakeley Township* – The township supports Scott County's erosion control and natural resource protection. The township also supports removing homes in the floodplain and the avoidance of building homes on bluffs, and has engaged in several rip rap projects.

### 4.4.3 Severe Winter Storms – Blizzards, Ice Storms

Blizzards are storms that contain heavy snowfall, strong winds, and cold temperatures. The combination of these elements creates blinding snow with near zero visibility, deep snowdrifts, and life-threatening



wind chill temperatures. Blizzards are the most dramatic and destructive of all winter storms that occur within Scott County, and are generally characterized as storms bearing large amounts of snow accompanied by strong winds. They have the ability to completely immobilize travel in large areas and can be life-threatening to humans and animals in their path. According to the National Weather Service (NWS), there is no fixed temperature requirement for blizzard conditions, but the life-threatening nature of low temperatures in combination with blowing snow and poor visibility increases dramatically when temperatures fall below 20° F. Blizzards typically occur between October and April; however, they occur most frequently from early November to late March.

Figure 22. Armistice Day Blizzard, 1940



The greatest numbers of blizzards historically have occurred in the months of January, followed by March and November, respectively. Scott County, along with all areas of Minnesota, is susceptible to blizzards.

Damages from blizzards can range from human and livestock deaths to significant snow removal costs. Stranded drivers can make uninformed decisions, such as leaving the car to walk in conditions that put them at risk.

Because of the blinding potential of heavy

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

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

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

Communications and power can be disrupted for days while utility companies work to repair extensive damage. Ice forming on exposed objects generally ranges from a thin glaze to coatings more than 1 inch thick. Even small accumulations of ice on sidewalks, streets, and highways may cause extreme hazards to Scott County motorists and pedestrians. Sleet does not stick to trees and wires, but sleet of sufficient

thickness does cause hazardous driving conditions. Heavy sleet is a relatively rare occurrence, defined as an accumulation of ice pellets covering the ground to a depth of ½-inch or more.

Ice and sleet storms typically occur from October through April. The NWS notes that over 85% of ice storm-related deaths are the result of traffic accidents. According to the NCDC, 2 ice storms occurred in the county in 1996 and 1 in 1998, but no deaths or injuries were reported.

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

### Severe Winter Storm History in Scott County

The total of notable events defined as heavy snows, blizzards, winter weather, ice storms and winter storms in Scott County recorded by the NCDC for the period from 1996 to September 2015 is 64. An overview of some of the most notable winter storm events can be found in Table 26 below.

Table 26. Notable Winter Weather Events in Scott County

Date	Type	Cost	Deaths	Injuries	Description
December 2012	Winter Storm	0	0	0	Snow developed across the county on December 8 <sup>th</sup> . The snow became heavier toward morning, with heavier bands of snow between 8 am and 3 pm. By early evening, totals ranged from 10 to 14 inches across the county.
December 2010	Blizzard	0	0	0	Snowfall amounts averaged 18 inches across the county, along with whiteout conditions in the southern part which caused plows to be pulled off the road for several hours.
December 2009	Blizzard	0	0	0	The local county highway department reported white-out conditions for several hours across Scott County. Wind speeds increased to 25-35 mph, with gusts of 40 mph. This created blizzard conditions that continued until winds subsided during the early afternoon. Total snowfall amounts ranged from 5 to 7 inches across the county.

### Severe Winter Storms and Climate Change

Historically, winter storms have had a large impact on public safety in Minnesota. This will continue, with a possible increase in snowstorm frequency and annual total snowfall. Winter weather is often a cause

of power outages. Pressures on energy use, reduced reliability of services, potential outages and the potential rise in household costs for energy are major climate change risks to public health.

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

### Vulnerability

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

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

### Severe Winter Storms and Electrical Outages

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

### Plans and Programs in Place

*Public Warning and Notification* – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Scott County utilizes the CodeRED Mass Notification System.

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

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

*Warning Sirens* – Scott County has several warning sirens.

#### **4.4.4 Extreme Cold**

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

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

Medical costs related to extreme heat and cold can be enormous: in 2005 the total was \$1.5 billion nationwide, or more than \$16,000 per patient (Union of Concerned Scientists, 2009).

Below zero temperatures occur almost every winter in Minnesota for a period of time. January is the coldest month, with daytime highs averaging 20° F and nighttime lows averaging 2° F. However, these averages do not tell the whole story. Maximum temperatures in January have been as high as 61° F and minimums as low as 36° F below zero.

Extreme cold temperatures affect the county nearly every year. Extremely cold air settled over Minnesota on January 31<sup>st</sup> of 1996, and remained entrenched through February 4<sup>th</sup>. A new record low temperature for Minnesota was set in the town of Tower on February 2, 1996, at -60° F. Numerous record low temperatures were set during the period at St. Cloud, Rochester and the Twin Cities. Minneapolis/St. Paul set 3 new record low temperatures as well as recording the 2<sup>nd</sup> coldest day on record on February 2, 1996. A mean temperature of -25° F was measured that day with a high of -17° F and a low of -32° F in the Twin Cities. This was within 2 degrees of tying the all-time record low temperature set in the Twin Cities and the coldest temperature recorded this century. Many central and southern Minnesota locations set new record low temperatures the morning of the 2<sup>nd</sup>. The governor closed all schools that day.

In February of 2014, nearly all of Minnesota was between 10-15° F colder than normal (1981-2010 period) (High Plains Regional Climate Center, 2014). The winter of 2013-2014 was the sixth coldest on record in Minnesota (The Weather Channel, 2014), with schools in the Twin Cities canceling 5 times in January due to dangerous wind chills. It was the coldest winter in the Twin Cities in 35 years, with an average temperature for December-February of 9.7° F (MN DNR, 2014). Many areas in the state also experienced higher than average precipitation through the winter and spring months.

#### **Extreme Cold History in Scott County**

January is the coldest month on average in Shakopee. The lowest temperature ever recorded there occurred in 1951, when it fell to -43° F (Intellicast, 2015). According to the High Plains Regional Climate

Center, the average minimum temperature in Jordan (from 1942-March 2013) for the month of January is 3° F, with an average annual snowfall of 30" (High Plains Regional Climate Center, 2013).

The National Climatic Data Center (NCDC) recorded 3 extreme cold/wind chill events during the winter of 2013-2014. No deaths or injuries were reported.

### Extreme Cold and Climate Change

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

### Vulnerability

Extreme cold temperatures affect the county nearly every year. The amount of snow and ice, number of blizzard conditions, and days of sub-zero temperatures each year are unpredictable

Within Scott County the risk of extreme cold does not vary geographically. Citizens living in climates such as these must always be prepared for situations that put their lives or property at risk. It is not always the depth of the cold, but an unprepared individual with a vehicle breakdown or unmaintained garage that are at risk. Rural citizens not connected to city gas lines are more vulnerable to issues with extreme cold. The vulnerability of each jurisdiction to extreme cold has not changed due to any development in the last 5 years.

### Plans and Programs in Place

*Public Warning and Notification* – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Scott County utilizes the CodeRED Mass Notification System.

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

#### 4.4.5 Extreme Heat

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

Extreme heat events are linked to a range of illnesses, even death, and can exacerbate pre-existing chronic conditions such as cardiovascular, respiratory, liver, and neurological diseases, endocrine disorders, and renal disease or failure. Populations who are most vulnerable to extreme heat include

persons over 65 or under 5 years old; living alone, without air-conditioning, or residing on the topmost floor of a building; and with an income at or below the poverty line. People who are exposed to heat because of recreational activities or job-related activities also are more vulnerable, including athletes, construction workers, and landscape/agricultural workers (Adapting to Climate Change in Minnesota: 2013 Report of the Interagency Climate Adaptation Team, 2013).

Medical costs related to extreme heat and cold can be enormous: in 2005 the total was \$1.5 billion nationwide, or more than \$16,000 per patient (Union of Concerned Scientists, 2009).

### Extreme Heat History in Scott County

July is the hottest month on average in Shakopee. The highest temperature ever recorded there occurred in 1988, when it rose to 107° F (Intellicast, 2015). According to the High Plains Regional Climate Center, the average July maximum temperature (from 1942-March 2013) in Jordan was 82°F (High Plains Regional Climate Center, 2013).

The National Climatic Data Center has recorded 2 instances of extreme heat in Scott County since 2010. They occurred in July of 2011 and August of 2013. No deaths or injuries were reported.

### Extreme Heat and Climate Change

Minnesota's average temperature has increased more than 1.5°F since recordkeeping began in 1895, with increased warming happening in recent decades (International Climate Adaptation Team, 2013). Annual temperatures in the Midwest have generally been well above the 1901-1960 average since the late 1990s, with the decade of the 2000s being the warmest on record (Kunkel, et al., 2013). 7 of Minnesota's 10 warmest years occurred in the last 15 years. Projected increases are 2° F to 6° F more by 2050 and 5° F to 10° F by 2100 (MN Environmental Quality Board, 2014). The Midwest has experienced major heat waves and their frequency has increased over the last 6 decades (Perera, et al., 2012). For the U.S., mortality increases 4% during heat waves compared with non-heat wave days (Anderson & Bell, 2011). During July 2011, 132 million people across the U.S. were under a heat alert – and on July 20 the majority of the Midwest experienced temperatures in excess of 100° F. Heat stress is projected to increase as a result of climbing summer temperatures and humidity (Schoof, 2012). On July 19, 2011, Moorhead Minnesota set a new state record for the hottest heat index ever, at 134° F. That same day, Moorhead also recorded a new state record for the highest dew point at 88. It was the hottest, most humid spot on the planet that day (Douglas, 2011).

Recent statistics from NOAA show that there are more human fatalities each year due to heat waves than from floods, lightning, tornadoes and winter storms. Many cities have responded by creating Heat Wave Response Plans to ensure that those in marginal health without air conditioning can obtain the relief and care they need, and the Minnesota Department of Health developed the Extreme Heat Toolkit to help educate at-risk populations on how to reduce risks associated with heat waves (Seeley M. , 2015).

Increasing temperatures impacts Minnesota's agricultural industry. Agriculture is highly dependent on specific climate conditions. As a result of increasing temperature, crop production areas may shift to new regions of the state where the temperature range for growth and yield of those crops is optimal. According to the National Climate Assessment, the Midwest growing season has lengthened by almost 2 weeks since 1950 due in large part to earlier timing of the last spring freeze. This trend is expected to



continue. While a longer growing season may increase total crop production, other climate changes, such as increased crop losses and soil erosion from more frequent and intense storms, and increases in pests and invasive species, could outweigh this benefit. There may also be higher livestock losses during periods of extreme heat and humidity. Losses of livestock from extreme heat lead to a challenge in the disposal of animal carcasses. Currently there are only 2 rendering facilities in Minnesota available for livestock disposal. If a rendering facility is not available, lost livestock must be composted on an impervious surface. If losses are high, finding an impervious surface large enough is a challenge. In an attempt to adapt to increased temperatures, livestock areas in Minnesota may shift farther north. As a result of new livestock areas and the resulting manure production, farmers may transition to manure-based fertilizer applications in areas where traditionally only commercial fertilizers have been used, with accompanying environmental advantages and disadvantages (Adapting to Climate Change in Minnesota: 2013 Report of the Interagency Climate Adaptation Team, 2013). In order to minimize the detrimental effects of heat stress on animal metabolism and weight gain, Minnesota farmers have also begun redesigning and retrofitting dairy, hog, and poultry barns with better watering, feeding, and ventilation systems (Seeley M. , 2015).

### Vulnerability

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

### Plans and Programs in Place

*Public Warning and Notification* – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Scott County utilizes the CodeRED Mass Notification System.

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

#### 4.4.6 Drought

A drought refers to an extended period of deficient rainfall relative to the statistical mean for a region. Drought can be defined according to meteorological, hydrological, socioeconomic, and agricultural criteria. Meteorological drought is qualified by any significant deficit of precipitation. Hydrological drought is manifest in noticeably reduced river and stream flow and critically low groundwater tables. The term agricultural drought indicates an extended dry period that results in crop stress and harvest reduction. Socioeconomic drought refers to the situation that occurs when water shortages begin to affect people and their lives. It associates economic goods with the elements of meteorological, agricultural, and hydrological drought. Many supplies of economic goods (e.g., water, food grains, hydroelectric power) are greatly dependent on the weather. Due to natural variations in climate, water supplies are high in some years but low in others. Fluctuating long-term climate variations make drought difficult to predict.

### Drought History in Scott County

National Climatic Data Center records show no droughts in Scott County. However, between 1974 and 1977 dry conditions caused low water levels in wells and record-low stream flows throughout the state.



Late summer forest fires broke out and conflicts arose between domestic well owners and neighboring high capacity well owners.

During the drought of 1987-1989 most crops were lost. The drought affected power production, the forest products industry, public water supplies and fish & wildlife.

For a 3-month period from mid-July through mid-October 2003, a persistent weather pattern resulted in extremely dry weather across Scott County. Precipitation totals were less than 6 inches. Rainfall totals ranked among the lowest on record for many areas of south-central and southeastern Minnesota, and a small portion of west-central Minnesota. Scott County was included in the 2003 U.S. Department of Agriculture designation of 62 counties in Minnesota as primary agricultural disaster areas due to drought.

The hazard rank for drought in Scott County is medium. A drought may not have a severe impact on human life due to decreased water access; however the economic impact on farmers would be significant. A drought would also have a detrimental impact on the local economy due to stunting growth of agriculture crops and negative impacts on livestock. Extended drought conditions may also make an area more prone to wildfire. Droughts can also be closely linked with insect infestation (grasshoppers were well known during the 1988 drought). Trees may be lost due to lack of moisture. In severe instances, a drought may cause wells to dry up entirely.

### Drought and Climate Change

Droughts have been happening throughout Minnesota's history and it is not yet clear how climate change may impact this (International Climate Adaptation Team, 2013). While there was no apparent change in drought duration in the Midwest over the past century (Dai, 2011), the average number of days without precipitation is projected to increase in the future (National Climate Assessment Development Advisory Committee, 2013).

Even in areas where precipitation does not decrease, projected higher air temperatures will cause increased surface evaporation and plant water loss, leading to drier soils. As soil dries out, a larger proportion of the incoming heat from the sun goes into heating the soil and adjacent air rather than evaporating its moisture, resulting in hotter summers under drier climatic conditions (Mueller & Seneviratne, 2012).

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

In 2007, 24 Minnesota counties received drought designation, while 7 counties were declared flood disasters. In 2012, 55 Minnesota counties received federal drought designation at the same time 11 counties declared flood emergencies (MN Environmental Quality Board, 2014).

As of May 2015, over 90% of Minnesota was undergoing severe or moderate drought, due to low snow levels during the 2014-2015 winter and dry spring weather, with precipitation deficits totaling 3-6 inches below average across much of the state since October 2014. Water levels on streams, lakes, and

wetlands were below average, and wildfires were common during April of 2015. Blowing soil was also reported due to high winds and the dried-out landscape (MN DNR, 2015).

### Vulnerability

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

### Plans and Programs in Place

*Watershed Management Organizations* – Each Watershed Management Organization in the county has some type of technical assistance and cost share/incentive program that provides assistance to landowners for managing conservation issues (including controlling or fixing erosion, practices that moderate runoff, or practices that build resiliency) on private lands. These programs provide ways to fix things and mitigate or increase resiliency on a small, individual landowner scale.

*Local Water Management Plan* – Each city in the county has a Local Water Management Plan and the county has one for unincorporated areas. There are also 4 Water Management Organizations with jurisdiction over different parts of the County. Each has a state-approved Comprehensive Water Resources Management Plan.

#### 4.4.7 Wildfire

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

While wildfires are often viewed in a negative light, they are a naturally occurring part of the environment. Wildfires are an important component of healthy forest and prairie ecology, and can be beneficial by reducing dangerously high fuel levels and putting nutrients into the ground that spur new growth. In addition, many flora species require fire for seed germination. However, as people settled this country and began clearing land and building homes, roads, railroads, and campgrounds, new artificial causes of wildfire emerged and their frequency and level of destruction increased.

Causes of wildfires vary from state to state. For example, in Florida, lightning ignites approximately half of all wildfires, while in Minnesota lightning causes less than 5% of all wildfires. These variations are due to climate, vegetation, topography, and weather. People burning debris cause most wildfires in Minnesota. However, wildfires are also caused by vehicle exhaust, sparks from trains and heavy equipment, camping, smoking, and lightning.

Topography affects the movement of air and fire over the ground surface. The slope and shape of terrain can change the rate of speed at which the fire travels. Weather affects the probability of wildfire

and has a significant effect on its behavior. Temperature, humidity and wind affect the severity and duration of wildfires.

Homes threatened by wildfire are primarily those located in the “wildland-urban interface.” This is the zone where homes and subdivisions have been located in wildland areas where natural wildfires can have an impact. While wildfires are necessary for healthy ecosystems, they burn whatever fuel is in their path, whether vegetation or buildings.

One of the most common causes of a home being damaged or destroyed is due to radiant heat. In a wildfire, radiant heat is the heat given off by burning vegetation. The high temperatures of some wildfires can cause the deck, siding, or roof of a home to ignite, because the fire was too near the home. Studies in western wildfires have shown that approximately 85% of homes surviving a major wildfire had 30-50 feet of defensible space around them, coupled with fire-resistant roofing.

Approximately 1,600 wildfires occurred each year in Minnesota on average from 1976-2011 (MN DNR, 2011). Wildfires occur throughout the spring, summer and fall, however, most wildfires in Minnesota take place in March, April, and May. During this period, much of the existing vegetation has been killed due to winter temperatures and is dead, brown and combustible. Also, there is little green vegetation to serve as a barrier for a moving wildfire.

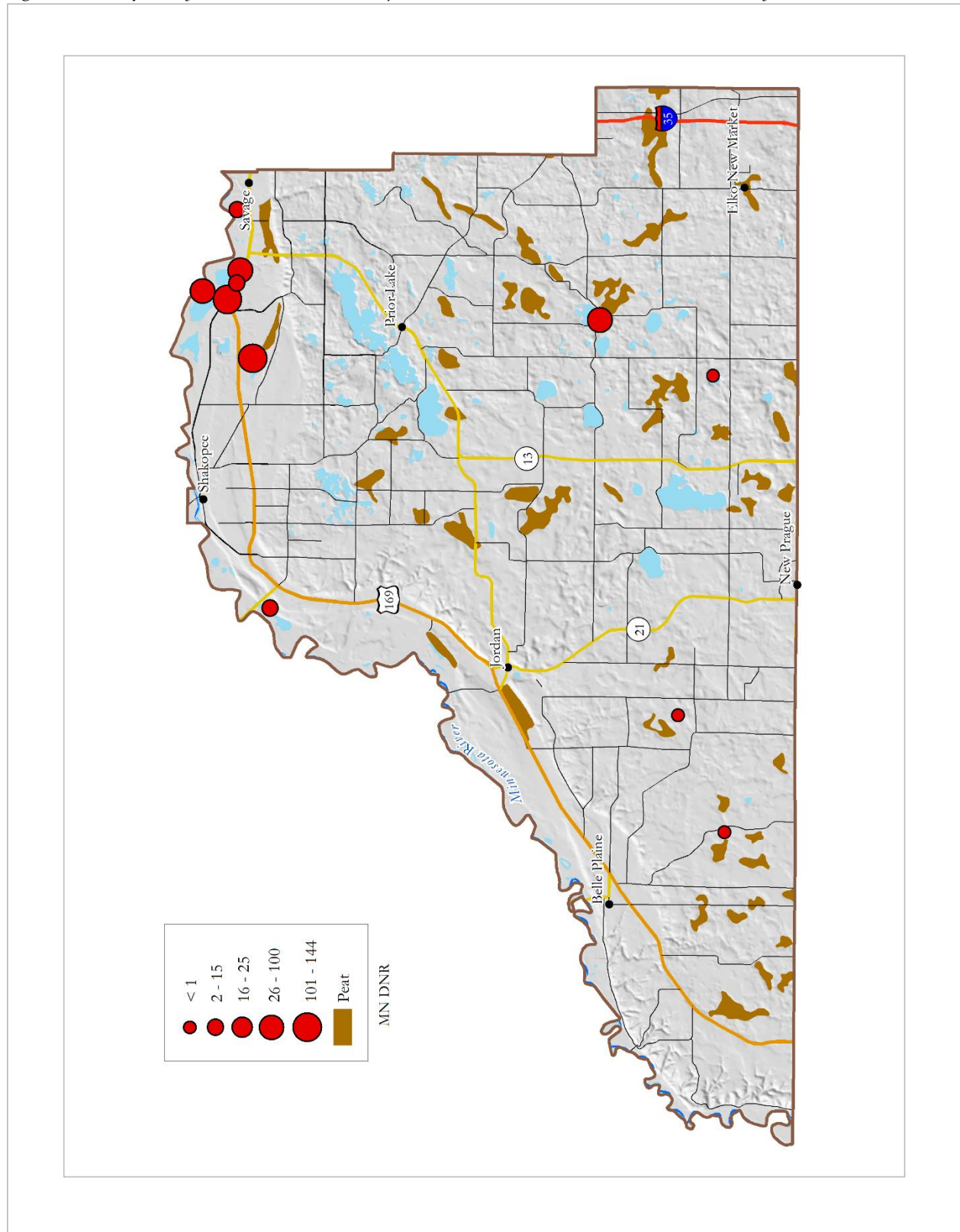
### Wildfire History in Scott County

Wildfire has been ranked as a medium risk by Scott County. Their occurrence is uncommon in the county, and though brush fires occur occasionally, they are also rare. The last wildfire in Scott County was in 2009.

The Minnesota DNR responded to 12 wildfires in Scott County between 1985 and April 2015, all of which were human-caused, burning a total of 514 acres. These include fires not only on state lands, but also rural private lands for which there is not another agency with primary responsibility. Wildfires that are not included in this data are those that occur on federal and Native American lands, and those that are responded to by local fire departments. The largest fire burned 144 acres between Savage and Shakopee in 2009. Its cause was the burning of piled debris. Another large wildfire occurred in April of 2000, when 140 acres burned west of Savage. The cause was incendiary/arson. These fires, along with areas of peat soil, are mapped in Figure 23. The DNR has not responded to any fires in Scott County since 2009.

According to MN DNR data, there are 9,074 acres of peat in Scott County. Peat is partially decayed plant matter found in ancient bogs and swamps. Minnesota has approximately 6 million acres of peatland, the highest total acreage in the contiguous United States. Peat fires are deep-rooted fires that burn underground, lasting for weeks, months, or even years. They can smolder during winter months beneath the snow, surfacing again in the spring to burn above ground. Peat ignites when its moisture content is low, and then it supports combustion rather than flame. Once started, combustion is persistent because peat contains oxygen and needs little or no outside oxygen to continue burning. Peat’s insulating qualities mean the fire loses little heat. As the peat dries, it becomes water repellent. These factors result in long-lasting fires that require extensive operations to extinguish. However, peat fires have not been an issue in Scott County.

Figure 23. Wildfires by Acres Burned (1985-April 2015) and Peat Soil Areas in Scott County



## Wildfire and Climate Change

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

## Vulnerability

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

## Plans and Programs in Place

*Public Warning and Notification* – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Scott County utilizes the CodeRED Mass Notification System.

### 4.4.8 Landslides and Soil Erosion

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

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

### Soil Erosion/Landslides History in Scott County

Some mudslides occurred with the flooding in August 2007 in Scott County, when soils were saturated from prolonged and heavy rains.

Storms in June 2014 resulted in landslides, washed out roads in Shakopee, Blakeley, Prior Lake and Belle Plaine, and record high levels on the Minnesota River (Belle Plaine Herald, 2015). Flooding also created farm field gullies, washed-out culverts, and stream bank erosion (Shakopee Valley News, 2015). A Presidential Disaster Declaration was declared (DR-4182) due to the landslides, mudslides, flooding, winds, and severe storms.



Figure 24. Mudslide in Blakeley (KSTP.com, 2014)



The NCDC reported that mudslides and floodwaters cut off all access to the town of Blakeley (Figure 24). This included train tracks that impacted Union Pacific and Canadian Pacific rail operations. Highways 6, 41, and 101 were closed due to high water levels on the Minnesota River. The entire town of Blakeley was evacuated due to the high river levels. Getting in and out of town became nearly impossible due to fallen trees and

damaged roads, and a seismic monitor device was installed to record ground movements (McDonough, 2014). One resident reported 5" of mud, and with electricity out pumping was not an option, as roads remained closed due to instability (Klein, 2014).

Figure 25. Landslide Damage to a Historic Jordan Brewery (Feyder, 2014)



In Jordan, a 150-year-old brewery was severely damaged by a landslide during the summer of 2014 (Figure 25). According to one report, "Soaked by rain, a massive chunk of a hill tumbled into the brewery building, crashing through a back wall and filling a top-floor apartment with trees, rocks and mud." The building was on the National Register of Historic Places, and is located near downtown Jordan, which is also on the register. The cost of stabilizing the hillside was estimated at over \$7.5 million, none of which is covered by insurance

(Feyder, 2014).

A member of the steering committee noted concern about landslides adjacent to the water tower in Jordan, which sits high atop a bluff on the southern side of the city, east of Hwy 21 and north of Sawmill Road (the same hill that damaged the brewery in 2014). A mitigation action to reinforce the water tower base was included in the 2013 FEMA Resilience Report for Scott County. The actions states that "The water tower base should be reinforced to prevent damage from erosion and flooding. The specific community funding source is unknown."

According to the Jordan Police Chief, the bluff has been eroding towards the water tower for years and falling into Sand Creek below (Figure 26). Though the water tower is not currently compromised, it is believed that eventually it will be an issue. The city of Jordan is currently having an engineering study done to look at the majority of the bluff including the water tower area, with the hopes of gaining a better understanding of the bluff's stability and what it would cost to stabilize it. Erosion on the bluff increased after the June 2014 rain/flood event.

Figure 26. Jordan Water Tower and Eroding Bluff (imagery from 2012)



### Soil Erosion/Landslides and Climate Change

The increased magnitude and frequency of flooding events and storm activity that may result from climate change may in turn increase the risk of soil erosion and landslides. According to University of Washington geologist Dave Montgomery, "If the climate changes in a way that we get a lot more rainfall you would expect to see a lot more landslides" (Phillips, 2014).

In Minnesota, the wettest days are getting wetter. This can contribute to increased erosion in many locations due to flooding and saturation of soils. Reduced ice cover on lakes and shorelines (due to warmer temperatures) could potentially expose shorelines to increased erosion or damage during



weather events when they previously may have been covered with ice (National Climate Assessment Development Advisory Committee, 2013).

According to the 2014 National Climate Assessment, “Increased precipitation intensity also increases erosion, damaging ecosystems and increasing delivery of sediment and subsequent loss of reservoir storage capacity” (Pryor, et al., 2014).

### Vulnerability

As noted above, there has been concern regarding the stability of the hill on which the water tower sits in Jordan. Reinforcing the tower base was included as a mitigation action in the 2013 FEMA Resilience Report for Scott County.

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

Figure A - 29 in Appendix A maps soil erosion around the city of Jordan, also using the Soil Erodibility Factor (K-Factor), with additional layers showing areas of slopes between 12-18% and slopes greater than 18%. Most of the steep slope areas are along Sand Creek.

### Plans and Programs in Place

*Public Warning and Notification* – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Scott County utilizes the CodeRED Mass Notification System.

*Watershed Management Organizations* – Each Watershed Management Organization in the county has some type of technical assistance and cost share/incentive program that provides assistance to landowners for managing conservation issues (including controlling or fixing erosion, practices that moderate runoff, or practices that build resiliency) on private lands. These programs provide ways to fix things and mitigate or increase resiliency on a small, individual landowner scale.

*Local Water Management Plan* – Each city in the county has a Local Water Management Plan and the county has one for unincorporated areas. There are also 4 Water Management Organizations with jurisdiction over different parts of the County. Each has a state-approved Comprehensive Water Resources Management Plan.

*No-Wake Ordinance* – Scott County has a no-wake ordinance for Prior Lake and McMahon Lake to protect shorelines during high-water periods.

*Floodplain Ordinance* – Scott County maintains a floodplain ordinance.

*Stormwater Ordinance* – Scott County maintains a stormwater ordinance.

*Blakeley Township* – The township supports Scott County’s erosion control and natural resource protection. The township also supports removing homes in the floodplain and the avoidance of building homes on bluffs, and has engaged in several rip rap projects.

#### 4.4.9 Structure Fires

FEMA separates structure fires that are human-caused as a manmade hazard. An incendiary attack is the initiation of fire or explosion on or near a target via direct contact or remotely via projectile. The duration of the hazard is generally minutes to hours. The extent of damage is determined by the type and quantity of device/accelerant and materials present at or near the target. The effects of structural fires are generally static other than cascading consequences, incremental structural failure, etc. Mitigation factors include built-in fire detection and protection systems and fire-resistive construction techniques. Inadequate security can allow easy access to target, easy concealment of an incendiary device and undetected initiation of a fire. Non-compliance with fire and building codes as well as failure to maintain existing fire protection systems can substantially increase the effectiveness of a fire weapon.

#### Structure Fire History in Scott County

Table 27 below lists the Scott County Fire Department runs, losses, and deaths between 2009 and 2014.

*Table 27. Scott County Fire Department Runs, Dollar Losses, and Deaths, 2009-2014*

Year	Fire Runs	Other Runs	Total County Dollar Loss	Average \$ Loss/Fire	Fire Deaths
2014	30	3,627	\$3,309,490	\$15,835	0
2013	330	3,384	\$12,823,175	\$56,490	0
2012	326	3,370	\$4,292,035	\$16,382	0
2011	357	3,437	\$1,900,300	\$6,442	0
2010	267	3,766	\$3,305,000	\$14,955	2
2009	302	3,234	\$2,936,180	\$12,034	1

#### Vulnerability

Jurisdictions in Scott County do not vary in their vulnerability to structure fires. The vulnerability of each jurisdiction to structure fires has not changed due to any development in the last five years.

#### Plans and Programs in Place

*Emergency Operations Plan* – Scott County maintains an Emergency Operations Plan which is designed as a guide for emergency operations. It is intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions, including fires.

#### 4.4.10 Infectious Diseases

Infectious disease outbreaks can occur as primary events themselves or as secondary events to another disaster or emergency such as a terrorist attack or natural disaster. If a disease outbreak would occur, deaths, fear and misinformation could trigger civil unrest, lawlessness and panic.

An infectious disease is defined as an organism that has the potential to spread or affect a population in adverse ways. Infectious diseases have the potential to affect any form of life at any time based on local conditions, living standards, basic hygiene, pasteurization and water treatment. Despite medical breakthroughs and technology, infectious diseases continue to pose an important public health problem. Today, the issue of emerging and re-emerging infectious diseases is at the forefront of public health concern. The very young, older adults and hospitalized and institutionalized patients are at increased risk for many infectious diseases. Changes in demographics, lifestyles, technology, land use practices, food production and distribution methods, child care practices and increasing poverty have a role in emerging infections.

The surfacing of diseases such as Severe Acute Respiratory Syndrome (SARS) (for which there is no cure or vaccination), and bio-terrorism threats underscore the need for a good public health system to detect new diseases early and prevent a large scale epidemic. Increased resistance of diseases to various antibiotics is another area of concern. Additionally, since southern Minnesota's economy is heavily impacted by the animal/livestock industry (which can be susceptible to infectious diseases as well), an outbreak could negatively affect the local economy.

Infectious diseases of concern include the following:

*Tuberculosis (TB)* is a disease that is spread from person to person through the air. TB usually affects the lungs, but it can also affect other parts of the body, such as the brain, kidneys or spine. TB germs are put into the air when a person with TB of the lungs or throat coughs or sneezes. When a person inhales air that contains TB germs, he or she may become infected. People with TB infection do not feel sick and do not have any symptoms. However, they may develop TB at some time in the future. The general symptoms of TB include feeling sick or weak, weight loss, fever and night sweats. The symptoms of TB of the lungs include coughing, chest pain and coughing up blood. Other symptoms depend on the part of the body that is affected.

*Hepatitis A* is an enterically transmitted viral disease that causes fever, malaise, diarrhea, nausea, loss of appetite, and abdominal discomfort, followed within a few days by jaundice. The disease ranges in clinical severity from no symptoms to a mild illness lasting 1 or 2 weeks to a severely disabling disease lasting several months. In developing countries, hepatitis A virus is usually acquired during childhood, most frequently as an asymptomatic or mild infection. Transmission can occur through direct person-to-person contact; exposure to contaminated water, ice or shellfish harvested from sewage-contaminated water; or from fruits, vegetables, or other foods that are eaten uncooked, and which can become contaminated during harvesting or subsequent handling.

*West Nile Virus* is a mosquito-transmitted virus that can cause encephalitis. This virus usually circulates between mosquitoes and birds in Africa and Europe. However, in 1999 an outbreak of WN encephalitis was reported in New York City. Since then the virus has spread throughout much of the eastern United States, and was found as close as Madison, Wisconsin, and east-central Iowa in 2002.

*Influenza* is a contagious disease that is caused by the influenza virus. It attacks the respiratory tract in humans (nose, throat and lungs). The flu is different from a cold. It usually comes on suddenly and may

include fever, headache, tiredness (can be extreme), dry cough, sore throat, nasal congestion and body aches.

*Chronic Wasting Disease (CWD)* naturally occurs in North American deer and Rocky Mountain elk; however it can also have rippling effects on livestock. It belongs to a group of infectious diseases known as “transmissible spongiform encephalopathies” (TSEs). It is caused by an abnormal protein called a prion that affects the animal’s brain, and it is invariably fatal. Usually, months to years pass from the time an animal is infected to when it shows signs of the disease.

### Infectious Disease History in Scott County

Minnesota has not had an infectious disease outbreak reach epidemic proportions in decades. Scott County has experienced individual cases of infectious diseases over the last 50 years, which have been considered isolated occurrences or minor exposures.

Infectious diseases are always a risk for Scott County, and must be taken into serious consideration to assist in mitigating their effects to a minimum if and when they occur. Many infectious diseases are preventable and controllable, limiting the vulnerability of Scott County to an epidemic, as long as preventive measures are taken. Prevention and control of infectious diseases involve the collection of accurate assessment data (such as surveillance data for specific conditions), outbreak detection and investigation, and development of appropriate control strategies (both short and long term) based on specific epidemiologic data. These activities require close collaboration between clinical providers (especially infection-control practitioners within hospitals), clinical laboratories, state and local health departments, and federal agencies. Furthermore, a need exists for continued education of industry (particularly food producers and food-service industries), health care students and providers, along with research to improve immunizations, diagnostic methods, and therapeutic modalities. Thus, the prevention of infectious diseases requires multidisciplinary interventions involving public health professionals, medical practitioners, researchers, community-based organizations, volunteer and private groups, industrial representatives, and educational systems.

### Vulnerability

All jurisdictions in Scott County are equally vulnerable to infectious diseases. The vulnerability of each jurisdiction to infectious diseases has not changed due to any development in the last 5 years.

### Plans and Programs in Place

*Public Warning and Notification* – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Scott County utilizes the CodeRED Mass Notification System.

*Emergency Operations Plan* – Scott County maintains an Emergency Operations Plan which is designed as a guide for emergency operations. It is intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions, including public health and medical services.

#### 4.4.11 Ground and Surface Water Supply Contamination

Water supply contamination is the introduction of point and non-point source pollutants into public groundwater and/or surface water supplies. The causes of water contamination are numerous and range from failing septic systems and leaking underground tanks to improper use of household chemicals. Residences near lakes and rivers often have wells that use shallow groundwater that is particularly at risk for contamination.

The most obvious concern about an unsafe water supply is the health risks to humans. Water contamination serves as a source of bacteria, viruses, and parasites that can cause gastrointestinal problems or transmit contagious diseases.

Municipal wastewater collection systems often receive additional water during heavy storms as a result of inflow and infiltration. This may cause the wastewater treatment system to reach its maximum treatment capacity. In this event, untreated excess flow will be directed into waterways, resulting in sewage contamination. Urban runoff is usually collected by a separate storm sewer system and discharged directly into waterways.

#### Water Supply Contamination History in Scott County

There have been no documented issues of water supply contamination in Scott County.

#### Vulnerability

Figure 27 shows public wells and groundwater contamination susceptibility in Scott County. Susceptibility data is based on a 1989 Minnesota Pollution Control Agency statewide evaluation of groundwater contamination susceptibility. The assessment used the following parameters to delineate areas of relative susceptibility: aquifer materials, recharge potential, soil materials, and vadose zone materials. The complete report is available through the MN DNR (MN DNR, 2015). The areas with the highest susceptibility lie along the northern border of the county near the Minnesota River.

#### Plans and Programs in Place

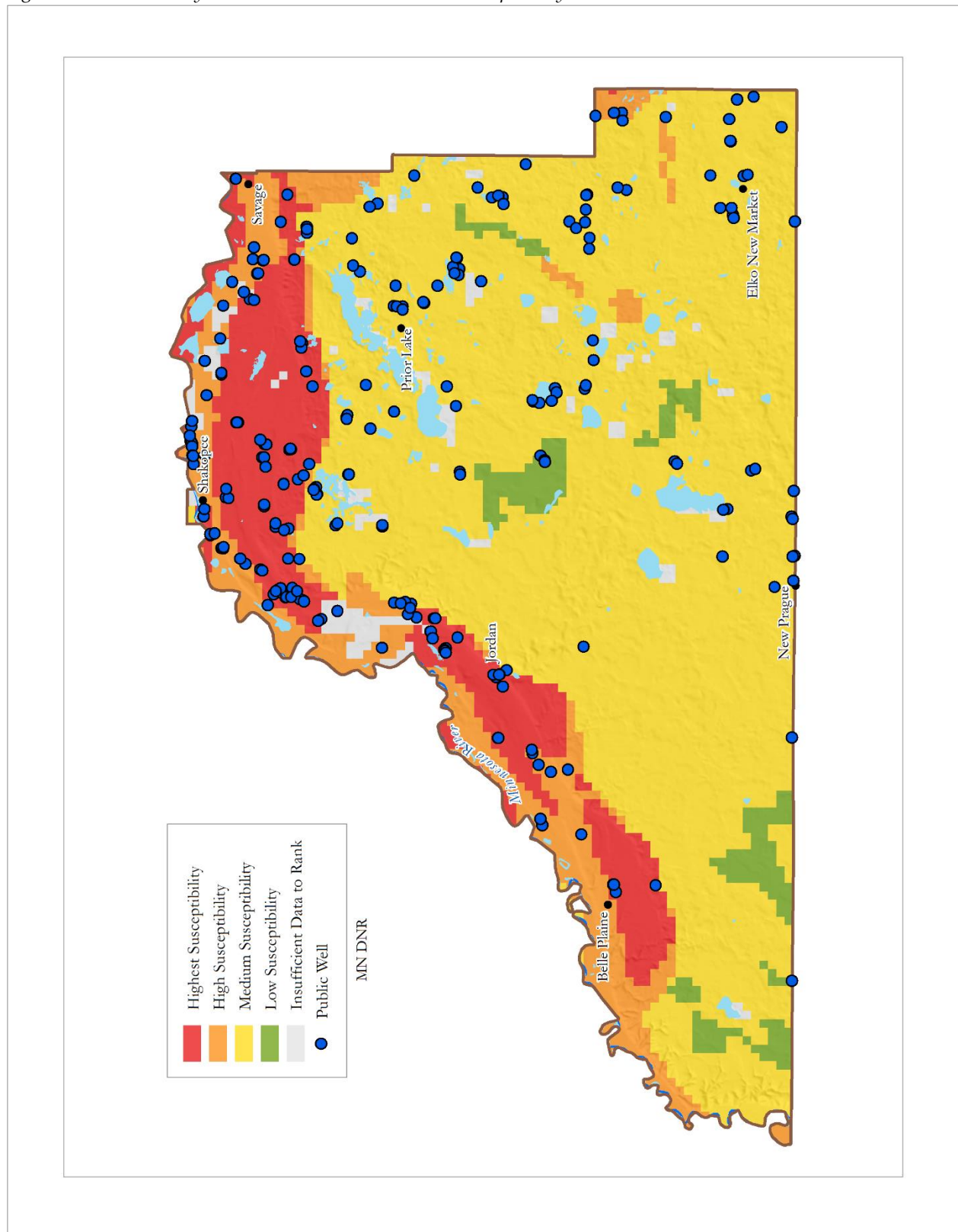
*Public Warning and Notification* – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Scott County utilizes the CodeRED Mass Notification System.

*Watershed Management Organizations* – Each Watershed Management Organization in the county has some type of technical assistance and cost share/incentive program that provides assistance to landowners for managing conservation issues (including controlling or fixing erosion, practices that moderate runoff, or practices that build resiliency) on private lands. These programs provide ways to fix things and mitigate or increase resiliency on a small, individual landowner scale.

*Local Water Management Plan* – Each city in the county has a Local Water Management Plan and the county has one for unincorporated areas. There are also 4 Water Management Organizations with jurisdiction over different parts of the County. Each has a state-approved Comprehensive Water Resources Management Plan.

*Stormwater Ordinance* – Scott County maintains a stormwater ordinance.

Figure 27. Scott County Groundwater Contamination Susceptibility and Public Wells





#### 4.4.12 Hazardous Materials

Hazardous materials are composed of substances that are flammable or combustible, explosive, toxic, noxious, corrosive, oxidizing or radioactive. Business types that commonly use hazardous materials locally include: hospitals, schools, metal plating and finishing industries, the aircraft industry, public utilities, cold storage companies, fuel industries, the communication industry, chemical distributors, research facilities, and high technology firms. Each of these facilities is required to maintain plans for warning, notification, evacuation and site security under various regulations. Hazardous materials incidents are generally associated with transportation accidents or accidents at fixed facilities.

Hazardous materials may also be released as a secondary result of natural disasters, such as tornadoes, fires and floods. In either case, buildings or vehicles can release hazardous materials when they are structurally compromised or involved in traffic accidents. Pipelines can be exposed or ruptured from collapsed embankments, road washouts, bridge collapses, and fractures in roadways.

Hazardous material spills may cause the short-term or long-term evacuation of an affected area. Depending on the nature of the spill and local weather conditions, residences, businesses, hospitals, schools, nursing homes, and roadways may be evacuated or closed to traffic until cleanup can be completed.

#### Hazardous Materials History in Scott County

Scott County has hazardous material spills on a regular basis. Table 28 below lists the spills that have occurred in the county since the fall of 2007.

Table 28. Hazardous Materials Spills in Scott County, 2007-2015

Date	Incident Type	City/ Township	Comments
10/25/2007	Gas Line Break	Prior Lake	PLFD and Md Fire- Cancelled prior to arrival.
3/4/2008	Chemical Spill	Prior Lake	Chemical leak in medical office- ammonia product.
5/2/2008	No Info	Shakopee	Hwy 169 & Marystown Rd.
6/12/2009	Motor Vehicle Accident	Shakopee	Truck goes through guardrail, spilling used vegetable oil into steep ditch.
12/21/2009	Chlorine Leak	Prior Lake	15250 Wilds Parkway N.W.
12/23/2009	Carbon Dioxide Leak	Shakopee	Hot Stuff Foods, 5301 E 12 <sup>th</sup> Ave.
6/9/2010	Explosive Removal	Savage	Explosives found at 15474 Dakota Ave, Savage.
8/5/2010	Chemical Leak	Shakopee	Chlorine leak at Valleyfair, 16 hospitalized.
11/10/2010	Pipeline Break	Savage	FABCOM employees see sheen of oil or gas on underground creek. Magellan pipeline had burst.
11/30/2010	Mercury Spill	Jordan	Mercury spill at residence. A cup to a cup and a half spilled; one of top 5 spills in MN.
11/20/2011	Fuel Leak	Elko New Market	Fuel truck crashes into cement partition; tank carrying gasoline punctures and gas spills into storm drain.
5/20/2012	Oil Spill	Savage	Used oil barrel tipped over during a storm, spilling about 100 gallons of waste oil.



Date	Incident Type	City/ Township	Comments
8/27/2012	Ethylene Glycol leak	Jordan	Container of ethylene glycol used for A/C broke a hose, releasing material on asphalt parking lot.
6/5/2013	Sewage Leak	Spring Lake Township	Sewer line breaks, 25-30 gallons of raw sewage spilled into farm.
7/12/2013	Gas Leak	Louisville Township	Road debris punctures gas tank of small car; 5+ gallons of gas leaked onto shoulder of Hwy 169.
10/18/2013	Mailbox Bomb	Belle Plaine	12oz water bottle placed in mailbox explodes, causing damage to inside of the mailbox.
2/28/2014	Building Collapse	Jordan	Large brick building collapses in downtown Jordan. Natural gas explosion or weight of snow/ice on roof are suspected cause.
7/19/2014	Sewage Leak	Cedar Lake Township	Sewer line break; up to 20,000 gallons of sewage flowed into Sand Creek.
3/18/2015	Stink	Shakopee	Several calls to 911 regarding sulfuric odor in Shakopee; media circus ensues. Odor is found to be from Gedney Pickle in Chaska.
5/19/2015	Train Crash	New Prague	A train hit a semi-truck near Hwy 2 and Hwy 21, causing a fire and a large loss of fuel from the truck.
9/25/2015	Diesel Fuel, Corn	Belle Plaine	Truck rollover @ 169NB & Main St (on the off ramp). Ground corn & 2 full diesel tanks of fuel spill.

A potential concern for Scott County are the proposed locations within the county for mining frac sand. The first silica sand mine in Scott County opened 30 years ago on the west side of Highway 169 between Shakopee and Jordan. The mine closed after 10 years due to decreasing market conditions. However, 2 proposals to mine frac sand are now being considered in the county. One proposed mine would be located at the first silica sand mine, and the other would be located south of Highway 41 and west of Highway 169. Combined, these mines would cover 1,200 acres (Scott County, 2015).

There are several potential environmental concerns concomitant with frac sand mining. The U.S. Occupational Safety and Health Administration notes that the resulting dust is a cause of *silicosis*, in addition to other respiratory diseases. It is also a potential carcinogen. Erosion, and damage to rivers, lakes, and underground aquifers is also possible, and local citizens must deal with noise, heavy traffic, and blight (Salter, 2012). Another concern in Scott County is that if these mines were active, they would increase vulnerability to hazardous materials spills.

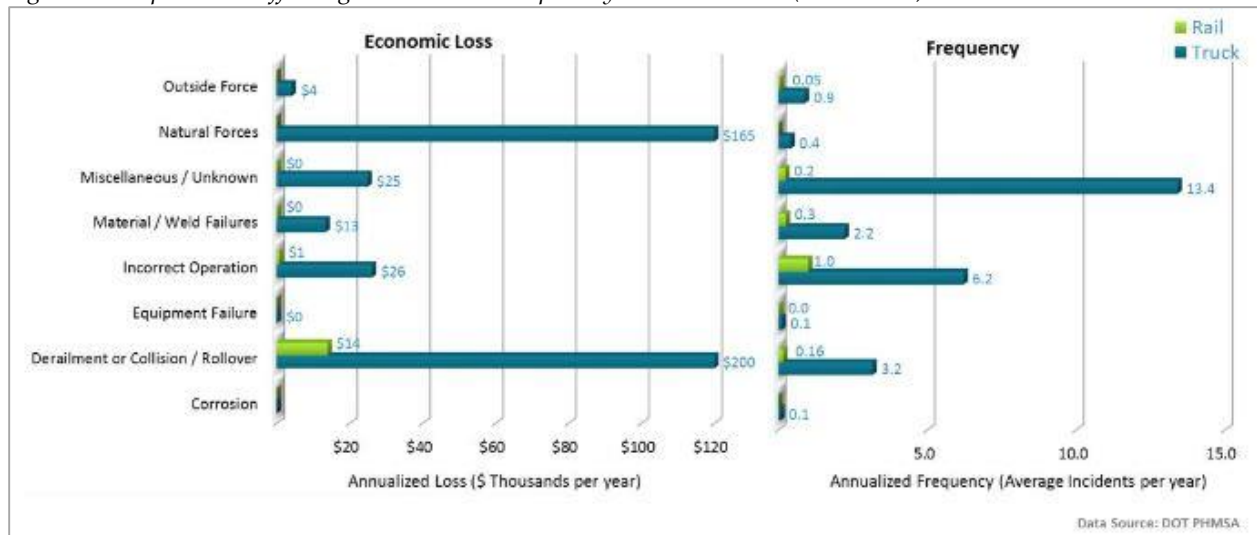
### *Transportation*

Hazardous materials are transported in Scott County by road, rail, and pipeline, each of which present differing levels of risk due to accidental release. Transported products include hazardous materials moving from producers to users, between storage and use facilities, and from generators to treatment and disposal facilities. According to the most recent findings at the Minnesota Department of Transportation, more than half of all accidents involving hazardous materials have occurred on state roadways.

The leading event type affecting the transport of petroleum product by rail and truck in Minnesota during 1986 to 2014 was “incorrect operation” for rail transport and “miscellaneous/unknown” for truck transport, with an average 1.0 and 13.4 incidents per year, respectively (U.S. Department of Energy, 2015). The economic loss and frequency of events affecting petroleum transport by truck and rail are shown in Figure 28.

Bakken Oil is not transported through Scott County.

Figure 28. Top Events Affecting Petroleum Transport by Truck and Rail (1986-2014)



### Fixed Facilities

There are a total of 131 Tier II facilities (fixed hazardous materials facilities) listed and identified in Scott County. The federal Superfund Amendments and Reauthorization Act (SARA) of 1986 created the federal Emergency Planning and Community Right-To-Know Act (EPCRA), also known as SARA Title III, which provides the community access to information about chemical hazards and helps facilitate the development of emergency response plans. A business/facility is required to provide information to the community when the presence of any “extremely hazardous substance” (listed in 40 CFR Parts 355, Appendices A and B) is in excess of the substance’s threshold planning quantity. Sites recognized by the Minnesota Pollution Control Agency as having hazardous or chemical waste are shown in Figure A - 12.

### Vulnerability

All jurisdictions in Scott County are equally vulnerable to hazardous materials. The vulnerability of each jurisdiction to hazardous materials has not changed due to any development in the last 5 years.

### Plans and Programs in Place

**Public Warning and Notification** – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Scott County utilizes the CodeRED Mass Notification System.

**Emergency Operations Plan** – Scott County maintains an Emergency Operations Plan which is designed as a guide for emergency operations. It is intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide

range of emergency conditions, including hazardous materials emergency response.

#### **4.4.13 Terrorism**

Human-caused hazards are intentional, criminal, malicious uses of force and violence to perpetrate disasters against people or property. They can be the result of terrorism – actions intended to intimidate or coerce a government or the civilian population to further political or social objectives – which can be either domestic or international, depending on the origin, base and objectives of the terrorist organization. Terrorist acts may be perpetrated by individuals for personal reasons. Hazards can result from the use of weapons of mass destruction (WMD). Examples of WMD that could be used include biological, chemical, nuclear and radiological weapons; arson, incendiary, explosive and armed attacks are also used in terrorist attacks. In addition, industrial sabotage, intentional hazardous material release, and cyber terrorism may be used.

Cascading effects and risk of an intentional human-caused disaster are highly dependent on the specific mode of attack used and asset targeted. Many of these have been detailed in the technological hazards portion of the plan covering dam failure and hazardous materials incidents. Fires and secondary explosions are possible with explosive attacks and fires from arson attacks can extend beyond the intended target. Targets could also include any building or facility that is owned, operated, or utilized by any level of government, including local, county, state, or federal. Other significant areas that could be targeted include schools or other areas where large groups of people congregate.

#### **Terrorism History in Scott County**

There are no historic incidents of terrorism in Scott County.

#### **Vulnerability**

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

#### **Plans and Programs in Place**

*Public Warning and Notification* – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Scott County utilizes the CodeRED Mass Notification System.

#### **4.4.14 Dam Failure**

Dams are structures that retain or detain water behind a large barrier. When full or partially full, the difference in elevation between the water above the dam and below creates large amounts of potential energy, allowing the chance for failure. Dams can fail due to either 1) water heights or flows above the capacity for which the structure was designed; or 2) deficiencies in the structure such that it cannot hold back the potential energy of the water. If a dam fails, issues of primary concern include loss of human life/injury, downstream property damage, lifeline disruption (transportation routes and utility lines required to maintain or protect life), and environmental damage. Dams require constant monitoring and regular maintenance to insure their integrity.

### Dam Failure History in Scott County

Table 29 below summarizes data on Scott County's 22 dams based on data from the National Inventory of Dams. They are also mapped in Figure 29. The only dam with an Emergency Action Plan is Sunset Lake.

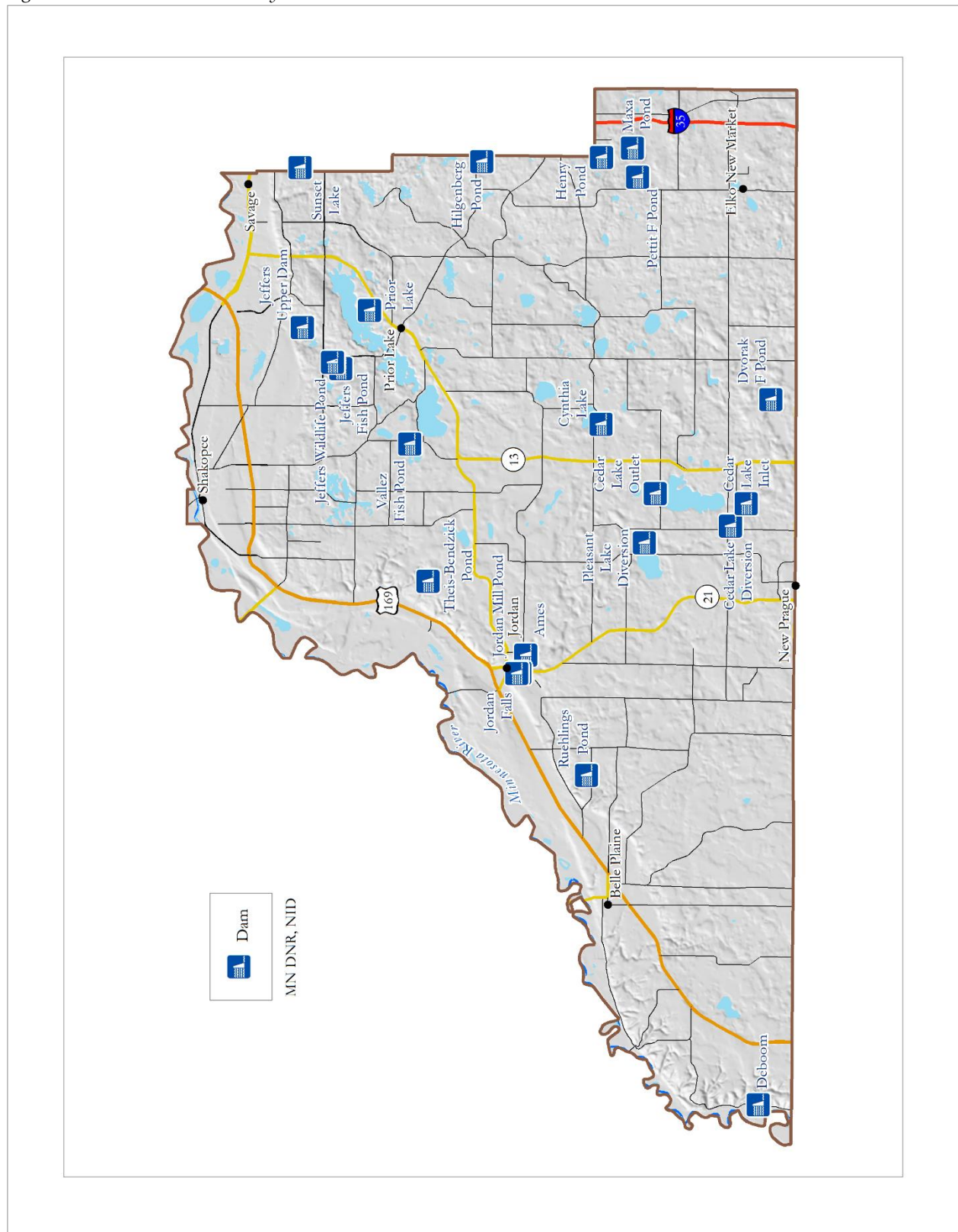
There are levees along the Minnesota River that protect the cities of Savage, Shakopee, Belle Plaine and rural areas in Scott County. A levee has been constructed along a part of Sand Creek that protects the city of Jordan from flooding. The levee system is about 8 miles long with a top elevation of 1,460 feet above mean sea level.

Table 29. Dam Data for Scott County

Name	Owner	River	Primary Purpose	Year Built	NID Height	Dam Type
Ames	Ames, Richard	Sand Creek	NA	1996	NA	NA
Cedar Lake Diversion	Hendricks	Sand Creek	Recreation	NA	1	NA
Cedar Lake Inlet	Scott County	Sand Creek	NA	NA	NA	NA
Cedar Lake Outlet	MN DNR	Sand Creek – Tributary	Other	1950	13	Gravity
Cynthia Lake	MN DNR	Porter Creek	NA	NA	2	NA
Deboom	NA	Minnesota River – Tributary	NA	NA	NA	NA
Dvorak F Pond	Dvorak, Anton	Sand Creek – Offstream Tributary	Other	1968	9	Earth
Henry Pond	Henry, Wallace	Vermillion River – Tributary	Recreation	1976	15	Earth
Hilgenberg Pond	Hilgenberg, Wally	Minnesota River – Tributary	Recreation	1976	26	Earth
Jeffers Fish Pond	Jeffers, Robert	Pikes Lake – Tributary	Fish & Wildlife Pond	1970	15	Earth
Jeffers Upper Dam	Jeffers, Robert	Pikes Lake – Tributary	Fish & Wildlife Pond	1981	10	Earth
Jeffers Wildlife Pond	Jeffers, Robert	Pikes Lake – Tributary	Fish & Wildlife Pond	1971	8	Earth
Jordan Falls	City of Jordan	Sand Creek	NA	1860	28	NA
Jordan Mill Pond	City of Jordan	Sand Creek	Recreation	NA	28	Gravity
Maxa Pond	Maza, Steve	Vermillion River – Tributary	Recreation	1978	17	Earth
Pettit F Pond	Petit, Duane	Vermillion River – Offstream Tributary	Other	1970	8	Earth
Pleasant Lake Diversion	MN DNR	Sand Creek	NA	NA	6	NA

<b>Name</b>	<b>Owner</b>	<b>River</b>	<b>Primary Purpose</b>	<b>Year Built</b>	<b>NID Height</b>	<b>Dam Type</b>
Prior Lake	MN DNR	NA	NA	NA	12	Gravity/ Concrete
Ruehlings Pond	Ruehling, Earl	Minnesota River – Tributary	Fire Protection, Stock, Small Fish Pond	1962	25	Earth
Sunset Lake	City of Burnsville	Minnesota River – Tributary	Flood Control	1983	21	Earth
Theis-Bendzick Pond	Benzick, Gerald	Sand Creek – Tributary	Fish & Wildlife Pond	1976	47	Earth
Vallez Fish Pond	Vallez, James	Sand Creek – Tributary	Fire Protection, Stock, Small Fish Pond	1968	21	Earth

Figure 29. Dams in Scott County



## Dam Failure and Climate Change

Dams are designed based on assumptions about a river's annual flow behavior that will determine the volume of water behind the dam and flowing through the dam at any one time. Changes in weather patterns due to climate change may change the expected flow pattern. It is conceivable that bigger rainfalls at earlier times in the year could threaten a dam's designed margin of safety, causing dam operators to release greater volumes of water earlier in a storm cycle in order to maintain the required margins of safety. Such early releases of increased volumes can increase flood potential downstream.

While climate change will not increase the probability of catastrophic dam failure, it may increase the probability of design failures. Minnesota had a dam failure due to a large storm event in June 2012. The Forebay canal in Carlton County had operated as designed for nearly 100 years. The intensity of the 2012 rain event caused a failure of the canal wall which caused significant damage. Climate change is adding a new level of uncertainty that needs to be considered with respect to assumptions made during dam construction.

## Vulnerability

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

## Plans and Programs in Place

*Federal Emergency Management Agency (FEMA) National Dam Safety Program* – For 30 years, the federal government has used the National Dam Safety Program (NDSP) to protect Americans from dam failure. The NDSP is a partnership of states, federal agencies, and other stakeholders that encourages individual and community responsibility for dam safety. The NDSP is intended to help states bring the necessary resources to bear on inspection, classification, and emergency planning for dam safety.

*National Inventory of Dams (NID)* – The NID is a database managed by the Army Corps of Engineers, used to track information on the nation's water control infrastructure. Information from the NID is used in the development of water resource management, land use management, floodplain management, risk management, and emergency action planning.

*Minnesota Department of Natural Resources, Division of Waters – Dam Safety Program* – The MN DNR Dam Safety Program and current dam safety regulations require the safe design, construction, operation, and maintenance of dams in Minnesota. The state program includes review of design plans and plans for proposed dams, safety inspections of existing dams, and repair of dams. The Dam Safety Program keeps a file on all dams that are subject to state dam safety regulations or have had information or reports generated on them for another purpose. A typical file contains construction plans, photos, inspection reports, and correspondence.

*Public Warning and Notification* – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Scott County utilizes the CodeRED Mass Notification System.



## Section 5 – Mitigation Strategy

The goal of mitigation is to protect lives and reduce the future impacts of hazards including property damage, disruption to local and regional economies, the amount of public and private funds spent to assist with recovery, and to build disaster-resistant communities. Mitigation actions and projects should be based on a well-constructed risk assessment, provided in Section 4 of this plan. Mitigation should be an ongoing process adapting over time to accommodate a community's needs.

### 5.1 Community Capability Assessment

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

#### 5.1.1 National Flood Insurance Program (NFIP)

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

Table 30 below shows which jurisdictions in Scott County participate in the National Flood Insurance Program (NFIP).

Table 30. NFIP Participation in Scott County

Jurisdiction Name	NFIP y/n	FEMA Mapped High-Risk Areas
Scott County	Yes	Yes
Belle Plaine	Yes	Yes
Elko New Market	Yes	No current FEMA Mapped High Risk Areas (but mapped areas on preliminary new maps)
Jordan	Yes	Yes
Prior Lake	Yes	Yes
Savage	Yes	Yes
Shakopee	Yes	Yes

Data current as of Oct. 29, 2015 (MN DNR, 2015)

Repetitive loss properties are defined as properties that have had 2 or more flood insurance claims of \$1,000 or more in any rolling 10-year period. Property owners are asked to consider mitigation

activities such as acquisition, relocation, or elevation, among other options. FEMA's Repetitive Loss (RL) properties strategy is to eliminate or reduce the damage to property and the disruption to life caused by repeated flooding of the same properties. Property owners are notified of their status by FEMA.

There are 5 repetitive loss properties in Scott County. Three are located in Shakopee, one in Belle Plain, and one in Prior Lake. The Shakopee properties are non-residential, while the others are single family residences. One of the Shakopee properties is classified as "Severe Repetitive Loss" (SRL). An SRL property is defined as a residential property that is covered under an NFIP flood insurance policy and:

- That has at least 4 NFIP claim payments (including building and contents) over \$5,000 each, and the cumulative amount of such claims payments exceeds \$20,000; or
- For which at least 2 separate claims payments (building payments only) have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building.
- For both (a) and (b) above, at least 2 of the referenced claims must have occurred within any 10-year period, and must be greater than 10 days apart.

For more on the areas that flood repeatedly in Scott County, see section 4.4.2 *Flash Flood and Riverine Flood*.

### **5.1.2 Plans and Ordinances**

Scott County and its incorporated communities have a number of plans and ordinances in place to ensure the safety of residents and the effective operation of communities, including a Zoning Ordinance, Floodplain Ordinance, Emergency Operations Plan, Capital Improvements Plan, and Local Water Plan. In Section 4.4 of this plan (*Hazard Profiles*) a review of the plans and programs in place was included as related to each of the hazards addressed in the plan.

## **5.2 Mitigation Goals**

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

The mitigation goals from the initial mitigation plan were reviewed and have been completely revised. The goals, strategies and objectives listed for natural hazards in the 2014 Minnesota State Hazard Mitigation Plan were adopted for use in the Scott County Plan (Table 31). This framework will allow for integration of the mitigation actions that are listed by Scott County and its jurisdictions into the state plan. The state will then be able to develop a statewide strategy that will benefit all of Minnesota.

Table 31. Goals, Strategies, and Objectives for Natural Hazards from the 2014 Minnesota State Hazard Mitigation Plan

<b>Flooding Goal:</b> Reduce deaths, injuries, property loss and economic disruption due to all types of flooding (riverine, flash flooding, dam/levee failure)	
<b>Mitigation Strategy</b>	<b>Objectives</b>
Prevention:	Planning, technical studies, training, adoption of ordinances and legislation, acquisition and use of equipment, establishing shelters, and encouraging participation in NFIP and CRS will be used to prevent or reduce risks to lives and property from flooding.
Property Protection:	Acquisition, repair, or retrofitting of property and acquisition and use of equipment will be used to prevent or reduce risks to property from flooding.
Public Education and Awareness:	Public education and access to information will be used to raise public awareness of risks from flooding in order to prevent or reduce those risks.
Natural Resource Protection:	Stream corridor protection projects and restoration and soil erosion control projects will be used to prevent or reduce risks and increase the protection of natural resources from flooding.
Emergency Services:	Technological improvements, warning systems, responder training, emergency response services, acquisition and use of equipment, and planning will provide emergency services to prevent or reduce the risks to lives and property from flooding.
Structural Improvements:	Construction and maintenance of drains, sewer drainage and separation projects, floodwalls, dams, culverts, levees, roads, bridges, and general flood protection projects will be used to prevent or reduce damages from flooding, loss of services to critical equipment, and the risks they pose to lives, property, and the natural environment.
<b>Wildfire Goal:</b> Reduce deaths, injuries, property loss, natural resource and economic disruption due to wildfire.	
<b>Mitigation Strategy</b>	<b>Objectives</b>
Prevention:	Enforcement of regulations, adoption of ordinances, technical studies, and planning will be used to prevent or reduce wild land fires and the risks they pose to lives, property, and the natural environment.
Property Protection:	Vegetation management, defensible space, and water treatment measures (for example, sprinklers) will be used to prevent or reduce the risk of wild land fires.
Public Education and Awareness:	Public education and access to information will be used to raise public awareness of risks from wild land fires in order to prevent or reduce those risks, specifically the Firewise program.
Emergency Services:	Planning, responder training, acquisition and use of equipment, evacuations, warning systems, technological improvements, and emergency response services will provide emergency services to prevent or reduce risks to lives and property from wild land fires.
Structural Improvements:	New or retrofit construction utilizing fire resistant building materials and installation and maintenance of sprinkler and warning systems will be used to prevent or reduce the risk of wild land fires.
<b>Windstorms Goal:</b> Reduce deaths, injuries, property loss, and economic disruption due to windstorms.	
<b>Mitigation Strategy</b>	<b>Objectives</b>

Prevention:	Planning, training, technical studies, acquisition and use of equipment, adoption of ordinances and legislation, and construction of new or retrofitting safe rooms will be used to prevent or reduce risks from windstorms to lives, property, and economic activity.
Property Protection:	Constructing safe rooms and storm shelters, retrofitting, and vegetation management will be used to prevent or reduce risks to the protection of property from windstorms.
Public Education and Awareness:	Public education, warning systems, and access to information will be used to raise public awareness of risks from windstorms in order to prevent or reduce those risks.
Emergency Services:	Warning systems, responder training, emergency response services, technological improvements, and response and recovery planning will provide emergency services to prevent or reduce risks from windstorms.
Structural Improvements:	Construction of storm shelters and safe rooms and maintenance of other structural projects will be used to prevent or reduce risks from windstorms.
<b>Severe Winter Storms Goal:</b> Reduce deaths, injuries, property loss, and economic disruption due to severe winter storms.	
<b>Mitigation Strategy</b>	<b>Objectives</b>
Prevention:	Acquisition and use of equipment, adoption and enforcement of ordinances and legislation, planning, training, and technical studies will be used to prevent or reduce risk to the protection of lives, property, and economic activity from the risks from severe winter storms.
Property Protection:	Acquisition and use of equipment and vegetation management will be used to prevent or reduce risks to property from severe winter storms.
Public Education and Awareness:	Public education, warning systems, access to information, and outreach projects will be used to raise public awareness of the risks from severe winter storms in order to reduce those risks.
Emergency Services:	Acquisition and use of equipment, emergency response services, warning systems, technological improvements, planning, and responder training will provide emergency services to prevent or reduce risks from severe winter storms.
Structural Improvements:	Structural projects for critical infrastructure will be implemented and maintained to prevent or reduce risks from severe winter storms.
<b>Lightning Goal:</b> Reduce deaths, injuries, property losses, loss of services, and economic disruption due to lightning.	
<b>Mitigation Strategy</b>	<b>Objectives</b>
Prevention:	Planning, technical studies, acquisition and use of equipment, adoption of ordinances and legislation, and establishing shelters will be utilized to prevent or reduce the risks from lightning.
Property Protection:	Retrofits and construction of safe rooms and storm shelters will be used to prevent or reduce the risks to property from lightning.
Public Education and Awareness:	Public education, outreach projects, and access to information will be used to raise public awareness of risks from lightning in order to prevent or reduce those risks.

Emergency Services:	Responder training, warning systems, emergency response services, planning, acquisition and use of equipment, and technological improvements will provide emergency services to prevent or reduce risks to lives and property from lightning.
Structural Improvements:	The construction of safe rooms, shelters, and underground utility lines as well as maintenance of structural projects will be used to prevent or reduce risks from lightning.
<b>Tornado Goal:</b> Reduce deaths, injuries, property loss, and economic disruption due to tornadoes.	
<b>Mitigation Strategy</b>	<b>Objectives</b>
Prevention:	Adoption of ordinances and legislation, acquisition and use of equipment, planning, conducting technical training, studies, and retrofit or construction of safe rooms will be used to prevent or reduce risks to lives, property, and economic activity from tornadoes.
Property Protection:	Constructing safe rooms and storm shelters, and retrofits will be used to prevent or reduce risks to property from tornadoes.
Public Education and Awareness:	Warning systems, IPAWS, public education, and access to information will be used to raise public awareness of risks from tornadoes in order to prevent or reduce those risks.
Emergency Services:	Warning systems, technological improvements, responder training, planning, emergency response services, and acquisition and use of equipment will provide emergency services to prevent or reduce risks from tornadoes.
Structural Improvements:	Construction of storm shelter and safe rooms and maintenance of other structural projects will be used to prevent or reduce risks from tornadoes.
<b>Drought Goal:</b> Reduce economic loss and environmental impacts due to drought	
<b>Mitigation Strategy</b>	<b>Objectives</b>
Prevention:	Planning, acquisition and use of equipment, and technical studies will be used to prevent or reduce risks from drought.
Property Protection:	Water treatment measures will be used to prevent or reduce risks to property from drought.
Public Education and Awareness:	Public education and access to information will be used to raise public awareness of risks from drought in order to prevent or reduce those risks.
Natural Resource Protection:	Planning and implementing watershed plans will be used to prevent or reduce risks from drought.
Structural Improvements:	Technological improvements and acquisition of equipment for structural projects will be used to prevent or reduce risks from drought.
<b>Extreme Heat Goal:</b> Reduce deaths, injuries, and economic disruption due to extreme heat.	
<b>Mitigation Strategy</b>	<b>Objectives</b>
Prevention:	Planning and the acquisition and use of equipment will be used to prevent or reduce risks from extreme heat.
Property Protection:	Acquisition and use of equipment will be used to prevent or reduce risks to property and economic disruption from extreme heat.
Public Education and Awareness:	Public education and access to information will be used to raise public awareness of the risks from extreme heat in order to prevent or reduce those risks.



Structural Improvements:	Planning, responder training, warning systems, establishing shelters, and technological improvements will provide emergency services to prevent or reduce risks from extreme heat.
<b>Extreme Cold Goal:</b> Reduce deaths, injuries, property loss, and economic disruption due to extreme cold.	
<b>Mitigation Strategy</b>	<b>Objectives</b>
Prevention:	Planning and the acquisition and use of equipment will be used to prevent or reduce risks from extreme cold.
Property Protection:	Acquisition and use of equipment will be used to prevent or reduce risks to property and economic disruption from extreme cold.
Public Education and Awareness:	Public education and access to information will be used to raise public awareness of the risks from extreme cold in order to prevent or reduce those risks.
Structural Improvements:	Planning, responder training, warning systems, establishing shelters, and technological improvements will provide emergency services to prevent or reduce risks from extreme cold.

### 5.3 Mitigation Actions and Projects

Upon completion of the risk assessment and development of the goals and objectives, the steering committee was provided a list of the 6 mitigation measure categories from the *FEMA State and Local Mitigation Planning How to Guides*. The list of Mitigation Actions by Strategy provided by HSEM was used to assist in identifying mitigation action strategies. The measures are listed as follows:

- **Prevention:** Government, administrative, or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning and zoning, building codes, capital improvement programs, open space preservation, and stormwater management regulations.
- **Property Protection:** Actions that involve the modification of existing buildings or structures to protect them from a hazard or removal from the hazard area. Examples include acquisition, elevation, structural retrofits, storm shutters, and shatter-resistant glass.
- **Public Education and Awareness:** Actions to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.
- **Natural Resource Protection:** Actions that, in addition to minimizing hazard losses, preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- **Emergency Services:** Actions that protect people and property during and immediately after a disaster or hazard event. Services include warning systems, emergency response services, and protection of critical facilities.
- **Structural Projects:** Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, levees, floodwalls, seawalls, retaining walls, and safe rooms.

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

**Social:**

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

**Technical:**

- How effective is the action in avoiding or reducing future losses?
- Will it create more problems than it solves?
- Does it solve the problem or only a symptom?
- Does the mitigation strategy address continued compliance with the NFIP?

**Administrative:**

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

**Political:**

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

**Legal:**

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

**Economic:**

- Are there currently sources of funds that can be used to implement the action?
- What benefits will the action provide?
- Does the cost seem reasonable for the size of the problem and likely benefits?
- What burden will be placed on the tax base or local economy to implement this action?

- Does the action contribute to other community economic goals such as capital improvements or economic development?
- What proposed actions should be considered but be “tabled” for implementation until outside sources of funding are available?

**Environmental:**

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

**5.3.1 Hazard Mitigation Actions**

Scott County and its included municipalities share a common Multi-Hazard Mitigation Plan and worked closely to develop it. These people work together with their city councils and the Scott County Deputy Emergency Management Director to assure that the hazards and mitigation actions included in this plan are accurate and addressed in their jurisdictions. The jurisdictions responsible for each action are: Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee, and Scott County.

Table 32 lists all mitigation actions for Scott County and its jurisdictions. Appendix G contains separate mitigation action tables for each jurisdiction. Each of these mitigation action charts detail the hazard, the mitigation action to address it, the priority ranking for implementation (1 = High Priority; 2 = Moderate Priority; 3 = Low Priority), its current stage of implementation, the timeframe for implementation going forward, the jurisdictions who have identified they will work to implement the action, the responsible parties to carry through with implementation, and comments on how the plan will be implemented through existing planning mechanisms and funding to make implementation happen.

Completed mitigation actions identified in the 2009 Scott County Hazard Mitigation Plan are listed in Appendix H.

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

- New – actions have not yet started
- Ongoing – actions require continuing application
- In Progress – actions are currently being acted upon
- Complete – the action is complete
- Deferred – no progress has been made
- Deleted – the action is no longer relevant

The mitigation types are defined as follows:

- P = Prevention
- PP = Property Protection
- PE = Public Education
- NRP = Natural Resource Protection
- ES =Emergency Services
- SI = Structural Improvement

Table 32. All Mitigation Actions for Scott County

Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
1	All Hazards	Assist citizens to develop emergency preparedness, response and recovery plans.	High	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Fire Depts Sheriff's office	Cnty/City/Twp Budget	\$2,000	Ongoing	
2	All Hazards	Train and equip 1 <sup>st</sup> responders for search and rescue missions.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Fire Depts, EMA	Cnty/City/Twp Budget, Grants	\$50,000	Ongoing	
3	All Hazards	Train and equip 1 <sup>st</sup> responders to respond to mass-casualty events.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA Public Health	Cnty/City/Twp Public Health Budget, Grants	\$50,000	Ongoing	
4	All Hazards	Train 1 <sup>st</sup> responders and community officials on the National Incident Mgmt. System.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> responder Agencies, EMA	Cnty/City/Twp Budget	\$2,000	Ongoing	
5	All Hazards	Obtain & install emergency generators or "pigtailed" for critical government facilities and fuel depots.	Medium	PP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget, Grants	\$500,000	In Progress	



Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
6	All Hazards	Assist non-governmental critical facilities to obtain emergency generators and/or pigtails.	Low	PP	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget, Grants	\$500,000	Deferred	
7	All Hazards	Obtain funding to add disaster shelters as necessary.	Medium	SI	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Red Cross County Commission	Cnty/City/Twp Budget, Grants	\$400,000	Deferred	
8	All Hazards	Assist schools to implement a disaster phone line.	Low	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA Board of Education	Cnty/Education Budget, Grants	\$2,000	Deferred	
9	All Hazards	Assist utilities in developing restoration and mitigation plans.	Low	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Utilities EMA	County Utility Budget, Grants	\$2,000	Deferred	
10	All Hazards	Assist businesses, schools, the special needs population and public facilities to post evacuation routes.	Low	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Law Enforcement EMA, Public Works	County Budget, Grants	\$2,000	Deferred	
11	All Hazards	Obtain signage to direct public evacuation during hazard events.	Medium	PE	2018	Scott County	EMA, Public Works	County Budget, Grants	\$12,000	Deferred	

Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
12	All Hazards	Develop/implement/maintain the community's Mitigation Action Plan.	Medium	ES	Annually	Scott County	1 <sup>st</sup> responder agencies, EMA	County Budget, Grants	\$20,000	Deferred	
13	All Hazards	Develop a process to ensure that all damages resulting from a disaster event is reported to the National Weather Service.	Low	ES	2016	Scott County	1 <sup>st</sup> Responder Agencies, EMA	County NWS Budget, Grants	\$2,000	Deferred	
14	All Hazards	Obtain funds for critical government departments to develop Continuity of Operations Plans.	Medium	ES	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	County Budget, Grants	\$52,000	Deferred	
15	All Hazards	Assist businesses to develop Business Continuity Plans.	Low	ES	2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	County/Business Budget, Grants	\$2,000	Deferred	
16	All Hazards	Assist communities in developing strategies to prevent loss of public records.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget	\$12,000	Deferred	
17	All Hazards	Ensure mutual aid, shelter, response, mass casualty & recovery agreements are current.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA County Commission	Cnty/City/Twp Budget	\$2,000	Ongoing	

Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
18	All Hazards	Assist critical sites to develop and provide an emergency plan to the EMA.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA	County/City Budget, Grants	\$12,000	Deferred	
19	All Hazards	Adopt & enforce comprehensive building code legislation.	Medium	P	2016-2020	Scott County	County Commission	County Budget	\$2,000	In Progress	
20	All Hazards	Install new warning sirens in new developments rural townships and replace older sirens.	High	ES	2016-2017	Prior Lake	Prior Lake Police and Fire	County/City Budget Grants	\$75,000	New	The township of Cedar Lake is asking for another warning siren.
21	All Hazards	Educate public on how to sign up for CodeRED.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$2,000	New	Scott County purchased CodeRED in 2014, but getting people to sign up for it has been a challenge. Only 285 of 6,500 residents in Jordan have signed up. Information is currently posted on every city's website.
22	All Hazards	Create and maintain a backup 911 dispatch center.	Medium	ES	2018	Scott County	Scott County	County Budget	\$20,000	New	
23	All Hazards	Improve protection against the elements for the City of Shakopee's fleet of city-owned vehicles.	Medium	SI	2019	Scott County, Shakopee	Shakopee	City Budget	\$35,000	New	The protection of squad cars is of particular concern to the Shakopee Police Dept., due to their limited shelter availability.
24	All Hazards	Modify the current mass notification system to be compatible with other languages.	Low	PE	2017	Scott County	Scott County	County Budget	\$5,000	New	

Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
25	All Hazards	Proactively determine policies/process for post-disaster FEMA response and mitigation applications.	Low	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$4,000	New	
26	All Hazards	Host debriefing meeting to assess what was learned from the June 2014 disaster.	Medium	P	2016	Scott County, Belle Plaine, Jordan, Shakopee, Prior Lake	Scott County	County/City Budget	\$1,000	New	Public safety does this for almost all large incidents, including the 2014 flooding. However, when the community as a whole is impacted during a disaster, a debriefing should be held including all departments involved.
27	Summer Storms, Winter Storms	Distribute safe room/shelter in place information to schools, the special needs population, and the community.	High	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA, BOE, Red Cross	Cnty/City/Twp Budget	\$2,000	Ongoing	
28	Summer Storms, Winter Storms	Develop a plan to trim and clear trees in county-owned parkland.	Low	ES	2017	Scott County	EMA Public Works Community Services	County Budget, Grants	\$50,000	In Progress	
29	Summer Storms, Winter Storms	Identify & reserve county land as a staging area to store and process storm debris.	Medium	ES	2017	Scott County	EMA Public Works Community Services	County Budget, Grants	\$2,000	In Progress	
30	Summer Storms, Winter Storms	Modify zoning ordinances allowing temporary debris staging areas.	Medium	ES	2018	Scott County	EMA Public Works Community Services	County Budget, Grants	\$5,000	Deferred	
31	Summer Storms, Winter Storms	Obtain NOAA weather radios for schools, government and special needs facilities.	Low	ES	2018	Scott County	EMA BOE County Commission	Cnty/City/BOE Budget Grants	\$20,000	Deferred	

Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
32	Summer Storms, Winter Storms	Distribute high wind preparedness and response information to the special needs population, schools and the community.	Low	ES	2018	Scott County	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	Deferred	
33	Summer Storms, Winter Storms	Train & equip 1 <sup>st</sup> responders to respond to high wind events.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City Budget Grants	\$12,000	Deferred	
34	Summer Storms, Winter Storms	Develop a debris clearance program that can be utilized countywide.	Medium	PP	2016	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Public Works County Commission	County/Dept Budget	\$8,000	In Progress	
35	Summer Storms, Winter Storms	Obtain funding to build mobile home community storm shelters.	High	SI	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA County Commission	County/City Budget Grants	\$500,000	Deferred	
36	Summer Storms, Winter Storms	Adopt & enforce mobile home tie down and skirting legislation.	Medium	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Commission	County Budget	\$2,000	In Progress	
37	Summer Storms, Winter Storms	Identify storm shelters in the development of master plans for county parks.	Medium	ES	2019	Scott County	EMA Community Services	County Budget, Grants	\$5,000	In Progress	



Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
38	Summer Storms, Winter Storms	Research the feasibility of requiring the burying of power lines in all new rural cluster subdivisions.	Low	SI	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Community Services	County/Utility Budget, Grants	\$20,000	Ongoing	
39	Summer Storms, Winter Storms	Assist power utilities in implementing a power outage alerting program for the public.	Low	PE	2018	Scott County	Utilities, EMA	County/Utility Budget	\$2,000	In Progress	
40	Summer Storms, Winter Storms	Identify special needs populations that rely on electricity for medical equipment.	High	P	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	Scott County Public Health has talked to Xcel Energy which has a list, and while they cannot release this information, during an emergency Scott County Public Health could work with Xcel.
41	Summer Storms, Winter Storms	Install generator at the Elko New Market Police Department Headquarters.	High	ES	2016-2018	Elko New Market	Elko New Market Police Department	FEMA HMA grant funding	\$9,000	New	The Elko New Market Police Department Headquarters serves as their backup EOC and they currently have no backup power source.
42	Summer Storms, Winter Storms	Educate public on how to stay safe during storms and promote the use of emergency kits and 72-hour shelter-in-place kits	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Cnty/City/Emergency Management/Public Health budget	\$4,000	New	
43	Summer Storms, Drought	Identify resources to combat the Emerald Ash Borer.	Medium	NRP	2016-2020	Scott County	Public Works EMA Community Services	County/State Budget, Grants	\$2,000	Ongoing	
44	Summer Storms, Drought	Obtain equipment for control and removal of infestation (i.e. chain saws, chippers, PPE, trucks).	Medium	P	2016-2020	Scott County	Public Works EMA Community Services	County/State Budget, Grants	\$500,000	In Progress	

Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
45	Summer Storms, Drought	Identify and plan for other agriculture infestation in Scott County.	Low	ES	2016-2020	Scott County	Public Works EMA Community Services	County/State Budget, Grants	\$25,000	In Progress	
46	Winter Storms	Train and equip 1 <sup>st</sup> responders to respond to an ice/snow event.	Medium	ES	2016-2020	Scott County	Public Works, EMA	County/City Budget Grants	\$12,000	Ongoing	
47	Flooding	Distribute flood preparedness and response information to schools, the special needs population, and the community.	Low	PE	2016-2020	Scott County, Belle Plaine, Jordan, Prior Lake, Shakopee, Savage	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	
48	Flooding	Train and equip a swift-water rescue team.	Low	ES	2020	Scott County	1 <sup>st</sup> Responder Agencies, EMA	County/City Budget Grants	\$200,000	Deferred	
49	Flooding	Adopt & enforce floodplain legislation requiring new structures be elevated above the BSE.	High	PP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget	\$2,000	In Progress	
50	Flooding	Obtain funding to retrofit, elevate or relocate repetitive flooding structures in floodplains.	Medium	SI	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget Grants	\$2,000,000	Deferred	
51	Flooding	Adopt & enforce floodplain, wetlands, and watershed land-use zoning.	High	NRP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget	\$2,000	In Progress	

Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
52	Flooding	Update Local Water Plans and include in Comprehensive Land Use Plans by end of 2018.	Medium	ES	2016-2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/Dept Budget	\$22,000	In Progress	All of the Cities in the County and the County have approved Local Water Management Plans. Most cover stormwater management. Approved Local Water Plans are now a required part of Comp plans which are due by the end of 2018.
53	Flooding	Obtain equipment to mitigate flooding on bridges, culverts, and roads.	High	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Public Works County Commission	County/City Budget Grants	\$200,000	In Progress	
54	Flooding	Update Land Use Plans to identify areas where development should be restrictive.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/Dept Budget	\$12,000	In Progress	Updated Comprehensive Land Use Plans are due by the end of 2018.
55	Flooding	Perform a study of the feasibility of community waterways flood control.	Low	SI	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Cnty Budget Grants	\$5,000	Deferred	
56	Flooding	Coordinate between Scott Watershed Mgmt. Organization and local governments' stormwater discharges to ensure sufficient downstream capacity.	High	NRP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County and City Planning Departments	County Budget, Grants	\$10,000	Ongoing	Assessed as part of development reviews by County and city planning departments.
57	Flooding	Complete flood damage study for downtown Jordan.	High	SI	2016-2020	Jordan	Community Services	County, City Budget, Grants	\$500,000	In Progress	

Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
58	Flooding	Complete updated floodplain maps for staff and public use.	Medium	ES	2018	Scott County	IT Department /Community Services, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget, Grants	\$25,000	In Progress	Largely complete, waiting for FEMA and the State to publish the new panels.
59	Flooding	Obtain grant funding to study for Markley Lake and O'Dowd Lake outlet improvements.	High	NRP	2018	Scott County, Prior Lake	Community Services	County Budget, Grants	\$200,000	In Progress	Markley Lake effort lead by City of Prior Lake which is using compensatory storage as the solution. Study of O'Dowd outlet recommended picking up necessary land right and improvements with as development occurs, however, development has been slow. No grants have been applied for.
60	Flooding	Acquire & prepare property to increase stormwater storage capacity for Spring Lake TWP.	Medium	NRP	2016-2020	Prior Lake, Scott County	Prior Lake Soil and Water District	County Budget, Grants	2,000,000	In Progress	
61	Flooding	Work with the City of Jordan on flood damage reduction efforts.	Medium	SI	2016-2020	Scott County, Jordan	Scott Watershed Mgmt. Organization	County Budget, Grants	\$25,000	Ongoing	Some studies completed, otherwise this is ongoing.
62	Flooding	Work with local units of government to insure completion of local flooding risk projects.	Medium	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott Watershed Mgmt. Organization EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget, Grants	\$10,000	Ongoing	Cities and County should be identifying local projects in Local Water Plans.

Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
63	Flooding	Obtain additional temporary road closure supplies (i.e. signs, cones, barrels, and concrete barriers).	Low	ES	2016-2020	Scott County	Scott County Public Works	County, City Budget, Grants	\$100,000	Ongoing	
64	Flooding	Reconstruct outlet structure on Prior Lake.	High	SI	2016-2020	Prior Lake	Prior Lake Soil and Water District	County Budget, Grants	\$500,000	In Progress	
65	Flooding	Work with Scott County Public Works to plan and discuss future public ditch operations.	Medium	SI	2016-2020	Scott County	Scott Watershed Mgmt. Organization	County Budget, Grants	\$5,000	Ongoing	
66	Flooding	Coordinate with local units of government on the maintenance of outlet structures.	Medium	SI	2016-2020	Scott County	Scott Watershed Mgmt. Organization	County Budget, Grants	\$10,000	Ongoing	
67	Flooding	Coordinate with Municipal Separate Storm Sewer Systems permit requirements.	Medium	P	2016-2020	Scott County	Scott Watershed Mgmt. Organization	County Budget, Grants	\$5,000	Ongoing	
68	Flooding	Promote and facilitate regional stormwater management.	Medium	P	2016-2020	Scott County	Scott Watershed Mgmt. Organization	County Budget, Grants	\$5,000	Ongoing	
69	Flooding	Work on a Hwy 169 area drainage feasibility assessment in Louisville Township.	Medium	SI	2018	Scott County	Scott Watershed Mgmt. Organization	County Budget, Grants	\$25,000	Deferred	Not completed, Hwy corridor study of which this was a part has not been started.
70	Flooding	Clean out drainage channel from Prior Lake to the Minnesota River.	High	SI	2018	Scott County, Prior Lake, Shakopee	Prior Lake Soil and Water District	County, City Budget, Grants	\$250,000	Ongoing	
71	Flooding	Develop a program for the hazards and boating safety of river usage (to include all types of river flow from high to low.)	Low	PE	2019	Scott County	Lower Minnesota River Watershed District	County /State Budget, Grants	\$5,000	Deferred	



Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
72	Flooding	Develop a maintenance plan and identify funding for maintenance of the 4-foot channel from river mile 14.7 (Savage) to river mile 25 (Shakopee).	Low	ES	2018	Scott County, Savage, Shakopee	Lower Minnesota River Watershed District	County/State Budget, Grants	\$500,000	Deferred	
73	Flooding	Develop a plan to provide for the safe coexistence of commercial and recreational navigation.	Low	ES	2018	Scott County, Savage	Lower Minnesota River Watershed District	County/State Budget, Grants	\$25,000	Deferred	
74	Flooding	Create a Community Service Response Team to mobilize during floods.	Low	ES	2018	Scott County	Scott County Public Health	County/City/Public Health Budget	\$12,000	New	Costs would cover recruitment, training, administration and basic equipment needs.
75	Flooding	Work to support the Prior Lake Floodplain Study/Watershed Project and implement the results.	High	P	2016-2020	Scott County, Prior Lake, Shakopee	Scott County, Prior Lake	HMA Grants, County/City Budget	\$500,000	New	A flood mitigation study is currently being done, to be completed Spring 2016. New dams will be built, and funds are needed for purchasing easements.
76	Flooding	Purchase sandbag filling machines for flood-prone jurisdictions.	Low	P	2019	Scott County, Belle Plain, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plain, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$20,000	New	
77	Flooding	Explore with the DNR the potential for a General Permit for cleaning sediment where it is impacting storm sewers and other public infrastructure, in addition to current General Permits for transportation authorities.	Medium	P	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee, townships, SCALE, Watershed Organizations	County Budget	\$10,000	New	Sediment can result in flooding, and there has been difficulty cooperating with the DNR on this issue. A joint process is needed to work with the DNR on cleaning out sediment.

Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
78	Flooding, Landslides/ Erosion	Develop solutions if hillside erosion studies have a positive cost/benefit analysis and achievable methods.	Medium	SI	2018	Scott County	Scott County Public Works	County Budget, Grants	\$500,000	In Progress	
79	Flooding, Dam Failure	Develop a dam/levee hazard identification and inspection program with the DNR.	Medium	SI	2017	Scott County	EMA, DNR	Cnty/City/State Budget Grants	\$12,000	Deferred	
80	Flooding, Dam Failure	Identify communities vulnerable to a dam/levee failure.	High	P	2017	Scott County	EMA, DNR	Cnty/Dept Budget	\$2,000	In Progress	
81	Landslides/ Erosion	Distribute information to the community on areas of potential landslides or mudslides	Medium	PE	2018	Scott County	Public Works DOT County Commission	County/City Budget	\$2,000	Deferred	
82	Landslides/ Erosion	Develop a map of potential landslide and mudslide areas.	Medium	ES	2018	Scott County, Jordan, Belle Plaine	EMA, County Commission	County/City Budget	\$2,000	In Progress	Bluff overlay map was created a number of years ago by the SWMO. Could be a starting point for this. We have also completed digital terrain modeling for much of the county.
83	Landslides/ Erosion	Review existing bluff overlay requirements.	Medium	P	2018	Scott County, Jordan, Belle Plaine	Scott County, Jordan, Belle Plaine	County/City Budget	\$10,000	New	This should be done given the June 2014 storm to determine whether they are adequate.
84	Landslides/ Erosion	Distribute land subsidence (sinkhole) awareness information to the public.	Low	PE	2018	Scott County	1 <sup>st</sup> Responder Agencies, EMA	County/City Budget, DOT	\$2,000	Deferred	
85	Landslides/ Erosion	Work to support actions identified in Jordan's landslide study.	High	P, ES, SI	2016-2020	Scott County, Jordan	Scott County, Jordan	County/City Budget	\$500,000	New	Jordan is currently doing a study on the landslide that occurred behind the brewery in 2014.
86	Extreme Heat, Extreme Cold	Identify citizens subject to suffering from extreme temperatures.	High	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	

Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
87	Extreme Heat, Extreme Cold	Create a Power Outage Policy for critical facilities.	High	ES	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$10,000	New	This is particularly important where people are on respirators.
88	Extreme Heat, Extreme Cold	Educate the public on the dangers of extreme temperatures, particularly outdoor workers and kids playing sports.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City/ Emergency Management/Public Health budget	\$4,000	New	
89	Extreme Heat, Extreme Cold	Create cooling/warming shelters for vulnerable populations.	Medium	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$200,000	New	This is particularly important for the elderly.
90	Drought	Distribute drought awareness and response materials to the public.	Low	PE	2016-2020	Scott County	Agriculture, EMA	Cnty/City/Twp Budget	\$2,000	Deferred	
91	Drought	Support the DNR's rules for water use conservation for all cities applying for new high-capacity municipal wells.	Medium	NRP	2016-2020	Scott County	Community Services	County Budget, Grants	\$5,000	In Progress	
92	Wildfires	Distribute wildfire awareness and preparedness information to schools and the public.	Low	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Lower Minnesota River Watershed District	County/State Budget, Grants	\$25,000	In Progress	

Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
93	Wildfires	Provide rural vegetation management educational information.	Low	NRP	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$6,000	New	
94	Wildfires	Obtain permits to allow preventative burns on peat land.	Low	NRP	2016-2020	Scott County	Scott County	County Budget	\$3,000	New	
95	Wildfires, Structure Fires	Complete proactive life safety inspections of high density housing.	High	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$12,000	New	
96	Wildfires, Structure Fires	Adopt Appendix H of the MN Fire Code to eliminate BBQ grills on balconies and patios of structures with 3 or more units.	Medium	P	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$4,000	New	
97	Wildfires, Structure Fires	Complete Fire Prevention Programs in schools and adult assisted living facilities.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$12,000	New	
98	Structure Fires	Assist in obtaining a fire education-training trailer for the jurisdiction.	Low	ES	2019	Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Svcs, County Commission	County/Dept Budget Grants	\$52,000	Deferred	
99	Structure Fires	Adopt & enforce sprinkler and smoke alarm legislation for all facilities.	Medium	P	2018	Scott County	County Commission	County/Dept Budget	\$2,000	Deferred	

Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
100	Structure Fires	Acquire and install six-inch water mains and hydrants communitywide.	High	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, Public Works County Commission	County/Dept Budget Grants	\$2,000,000	In Progress	
101	Structure Fires	Adopt & enforce housing code legislation to limit number of citizens in housing.	Low	P	2016-2020	Scott County	County Commission	County Budget	\$2,000	In Progress	
102	Infectious Diseases	Train & equip 1 <sup>st</sup> responders to respond to pandemics and epidemics	Medium	ES	2016-2020	Scott County	Public Health County Commission, 1 <sup>st</sup> Responders EMA	County/City Public Health Budget Grants	\$32,000	Ongoing	
103	Infectious Diseases	Assist in developing a 1 <sup>st</sup> responder infectious disease early vaccination program.	Medium	P	2018	Scott County	Public Health County Commission, 1 <sup>st</sup> Responders EMA	County/City Public Health Budget Grants	\$2,000	In Progress	Scott County Public Health has been working on their first responders piece for a while but nothing is written down. There are plans in place that would be used or normal immunization processes for those that are mission critical.
104	Infectious Diseases	Train & equip 1 <sup>st</sup> responders on agriculture and vector disease and infection response.	Medium	ES	2016-2020	Scott County	DOA, DNR, EMA	County/City Public Health Budget Grants	\$32,000	Deferred	
105	Groundwater Contamination	Develop a wellhead protection program to upgrade wells in the 100-year floodplain.	Medium	SI	2016-2020	Scott County	Utility Agencies, County Commission	County/Dept Budget	\$12,000	In Progress	
106	Groundwater Contamination	Continue well-decommissioning through cost sharing incentive programs.	Low	SI	2016-2020	Scott County	Watershed Management Organizations	County/State Budget, Grants	\$50,000	Ongoing	Watershed Organizations in the County have cost share and incentive programs that include well-decommissioning as an eligible practice.



Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
107	Drought, Groundwater Contamination	Promote conservation and wise use of groundwater through education and public information.	Low	PE	2016-2020	Scott County	Lower Mn. River Watershed District	County/State Budget, Grants	\$10,000	Ongoing	Per Watershed District Plan.
108	Groundwater Contamination	Support county area planning by using the Metro Council's model to assess groundwater impact of continued development.	Low	ES	2020	Scott County	Lower Mn River Watershed District	County/State Budget, Grants	\$100,000	Deferred	Per Watershed District Plan.
109	Groundwater Contamination	Analyze data to document trends on issues such as water usage, contamination, quality, and availability.	Medium	NRP	2019	Scott County	Lower Minnesota River Watershed District	County/State Budget, Grants	\$100,000	In Progress	Per Watershed District Plan. A lot of this data is available from various Met Council reports and the MPCA.
110	Groundwater Contamination	Determine fen and trout stream recharge areas.	Low	NRP	2019	Scott County	Lower Mn. River Watershed District	County/State Budget, Grants	\$50,000	Deferred	Per Watershed District Plan.
111	Groundwater Contamination	Develop a channel lobby for funding to assess unregulated discharges in the MN River Basin.	Low	NRP	2020	Scott County	Lower Minnesota River Watershed District	County/State Budget, Grants	\$25,000	Deferred	Per Watershed District Plan.
112	Groundwater Contamination	Improve groundwater monitoring in the Watershed Management Organization.	Medium	NRP	2016-2020	Scott County	Lower Minnesota River Watershed District	County/State Budget, Grants	\$5,000	Ongoing	Per Watershed District Plan.
113	Groundwater Contamination	Work with the Metropolitan Council to complete a model of the metro region.	Low	NRP	2019	Scott County	Lower Mn. River Watershed District	County/State Budget, Grants	\$200,000	Deferred	
114	Groundwater Contamination	Support wellhead protection efforts by providing staff time and technical assistance.	Low	NRP	2016-2020	Scott County	Lower Mn River Watershed District, Scott Watershed Management Organization	County/State Budget, Grants	\$200,000	Ongoing	Per Watershed District Plan.

Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
115	Groundwater Contamination	Adopt minimum, consistent runoff peak standards within the watershed district.	Low	NRP	2018	Scott County	Lower Mn. River Watershed District	County/State Budget, Grants	\$50,000	Deferred	Per Watershed District Plan.
116	Groundwater Contamination	Reduce/stop groundwater contamination of fens and trout streams (Eagle Creek and Savage Fen) by identifying sources and limiting/stopping contaminant release.	Medium	NRP	2019	Scott County	Lower Mn. River Watershed District	County/State Budget, Grants	\$5,000	Deferred	Per Watershed District Plan.
117	Groundwater Contamination	Identify ways to maintain supply of groundwater to fens and trout streams with the watershed district.	Medium	NRP	2020	Scott County	Lower Minnesota River Watershed District	County/State Budget, Grants	\$50,000	Deferred	Per Watershed District Plan.
118	Hazardous Materials	Distribute hazardous materials event preparedness and response information to schools, the special needs population, and the community.	Low	PE	2016-2020	Scott County	1 <sup>st</sup> Responder Agencies, EMA, BOE,	County/Dept Budget	\$2,000	Deferred	
119	Hazardous Materials	Educate schools' special needs populations and the community on chemical hazards in the area and evacuation routes.	Low	PE	2016-2020	Scott County	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	
120	Hazardous Materials	Obtain hazmat containment equipment for water, roads, and railroads.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City/Dept Budget Grants	\$20,000	In Progress	
121	Hazardous Materials	Adopt & enforce hazardous materials site building setback legislation.	Low	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Commission	County Budget	\$2,000	Deferred	

Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
122	Terrorism	Distribute terrorism preparedness and awareness information to schools and the public.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Sheriff Dept EMA BOE	Cnty/Dept/BOE Budget	\$2,000	Ongoing	
123	Terrorism	Educate government officials, the special needs population, and schools on procedures for handling suspicious mail.	Low	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	Ongoing	
124	Terrorism	Post terrorism and bomb identification information in buildings and schools.	Low	PE	2016-2020	Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA Education Officials Law Enforcement	County/Dept Budget	\$2,000	Deferred	
125	Terrorism	Identify & distribute to appropriate officials potential terrorism targets information.	High	PE	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Police Dept County Commission	County/Dept Budget	\$2,000	In Progress	
126	Terrorism	Fund/maintain a trained bomb dog and handler to serve the entire county.	Medium	P	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Law Enforcement Agencies, EMA	County/City Budget Grants	\$102,000	In Progress	

Number	Hazard	Mitigation Action	Priority	Type	Time-frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
127	Terrorism	Develop evacuation plans for identified terrorism targets.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Sheriff Dept EMA, Public Works	County/Dept Budget	\$2,000	Deferred	

### **5.3.2 Mitigation Actions by Community**

This plan is a multi-jurisdictional plan that covers Scott County, its school districts and the cities of Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, and Shakopee. The Scott County risks and mitigation activities identified in this plan also incorporate the concerns and needs of townships and other entities participating in this plan.

Mitigation actions are separated by jurisdiction in Tables G - 1 through G - 6 in Appendix G.



## Section 6 – Plan Maintenance

### 6.1 Monitoring, Evaluation, and Updating the Plan

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

Throughout the 5-year planning cycle, the Emergency Management Director from the Scott County Sheriff's Office and first responders will reconvene annually to monitor, review, evaluate, and update the Multi-Hazard Mitigation Plan. Additional stakeholders will be added based on need. If needed, the Scott County Emergency Management Director will convene the group to meet on a more regular basis to monitor plan implementation progress and reassess needs and opportunities. This could be done annually, or in response to funding cycles of programs that provide resources for hazard mitigation activities. If there is a need for a special meeting due to new developments or a declared disaster occurring in the county, the team will meet to update pertinent mitigation strategies. Depending on grant opportunities and fiscal resources, mitigation projects may be implemented independently by individual communities or through local partnerships.

The committee will review the MHMP goals and objectives to determine their relevance to changing situations in Scott County. In addition, state and federal policies will be reviewed to ensure they are addressing current and expected conditions. The committee will also review the risk assessment portion of the plan to determine if this information should be updated or modified. The parties responsible for the various implementation actions will report on the status of their projects, and will include which implementation processes worked well, any difficulties encountered, how coordination efforts are proceeding, and which strategies should be revised.

Updates or modifications to the MHMP during the 5-year planning process will require a public notice and a meeting prior to submitting revisions to the individual jurisdictions for approval. The plan will be updated via written changes, submissions as the committee deems appropriate and necessary, and as approved by county commissioners.

### 6.2 Implementation

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

A number of implementation tools are available to address hazards. Many of these tools are below, however, in some cases additional discussion is needed in order to identify what strategies are most

appropriate to use. This will be part of an ongoing discussion as Scott County looks for opportunities for plan implementation. The following tools will be considered:

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

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

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

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

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

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

### 6.3 Continued Public Involvement

Continued public involvement is critical to the successful implementation of the Multi-Hazard Mitigation Plan (MHMP). The Scott County Emergency Management Director and the steering committee members from the participating jurisdictions of the cities of Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, and Shakopee will continue to engage new public stakeholders in planning discussions and project implementation during the 5-year cycle of this plan.

The plan will be posted on the Scott County website for the public to read and provide feedback. Collected feedback will be reviewed and the plan will be amended as necessary.

During the 5-year period before the plan is updated, steering committee members will be responsible to keep their city councils, city departments, schools, and community members updated and engaged in the implementation of their respective mitigation action charts (see *Appendix G: Mitigation Actions by Jurisdiction*). Each respective jurisdiction will report their progress in this area to the Scott County

Emergency Management Director. Jurisdictions will use numerous means of public outreach to engage new public stakeholders in providing input on mitigation efforts or concerns on hazards by sharing information at city council meetings, sharing information at special events, working with local schools and partner organizations, and posting information on relevant local or social media that their communities use to inform and engage the public. As mitigation projects are implemented, jurisdictions will work to keep the public updated and engaged in those local efforts.

*This page is intentionally left blank*

# APPENDICES

- Appendix A – Scott County Maps
- Appendix B – Scott County Critical Facilities
- Appendix C – Scott County Hazard Events
- Appendix D – Adopting Resolutions
- Appendix E – Steering Committee Meetings
- Appendix F – Public Meeting Notices & Meeting Notes
- Appendix G – Mitigation Actions by Jurisdiction
- Appendix H – Completed Mitigation Actions from 2009 Plan
- Appendix I – Works Cited
- Appendix J – Scott County Plans & Programs In Place



*This page is intentionally left blank*

# Appendix A

## Scott County Maps

Figure A - 1. Hydrography of Scott County.....	2
Figure A - 2. Scott County Population by Census Block, 2010.....	3
Figure A - 3. Fire Departments and Fire Response Times in Scott County.....	4
Figure A - 4. Scott County Public Safety and Government Services.....	5
Figure A - 5. Scott County Utilities and Communication Infrastructure .....	6
Figure A - 6. Scott County Transportation Infrastructure .....	7
Figure A - 7. Scott County Land Cover, National Land Cover Database, 2006.....	8
Figure A - 8. Scott County Land Ownership by Agency.....	9
Figure A - 9. Severe Wind and Hail Storms in Scott County .....	10
Figure A - 10. Tornado Touchdowns and Paths in Scott County.....	11
Figure A - 11. Dams in Scott County.....	12
Figure A - 12. Sites with Hazardous or Chemical Waste in Scott County .....	13
Figure A - 13. Health Care Providers in Scott County .....	14
Figure A - 14. Scott County Groundwater Contamination Susceptibility and Wells .....	15
Figure A - 15. Critical Facilities in Scott County.....	16
Figure A - 16. Critical Facilities in Shakopee.....	17
Figure A - 17. Critical Facilities in Savage .....	18
Figure A - 18. Critical Facilities in Prior Lake .....	19
Figure A - 19. Wildfires by Acres Burned (1985-April 2015) and Peat Soil Areas in Scott County.....	20
Figure A - 20. Distribution of Estimated Economic Loss for Scott County in 100-Year Flood .....	21
Figure A - 21. Census Block #271390802011003 and 100-Year Floodplain in Savage.....	22
Figure A - 22. Census Block #271390809052004 and 100-Year Floodplain by Prior Lake.....	23
Figure A - 23. Census Block #271390809061005 and 100-Year Floodplain by Prior Lake.....	24
Figure A - 24. Census Block #271390809032014 and 100-Year Floodplain by Prior Lake.....	25
Figure A - 25. Census Block #271390803012005 and 100-Year Floodplain in Shakopee .....	26
Figure A - 26. Savage Essential Facility in 100-Year Floodplain .....	27
Figure A - 27. Feedlots in Scott County .....	28
Figure A - 28. Soil Erodibility (K Factor, Rock Free) in Scott County.....	29
Figure A - 29. Soil Erodibility (K Factor, Rock Free) in Jordan, with slopes 12-18% and >18%.....	30

Figure A - 1. Hydrography of Scott County

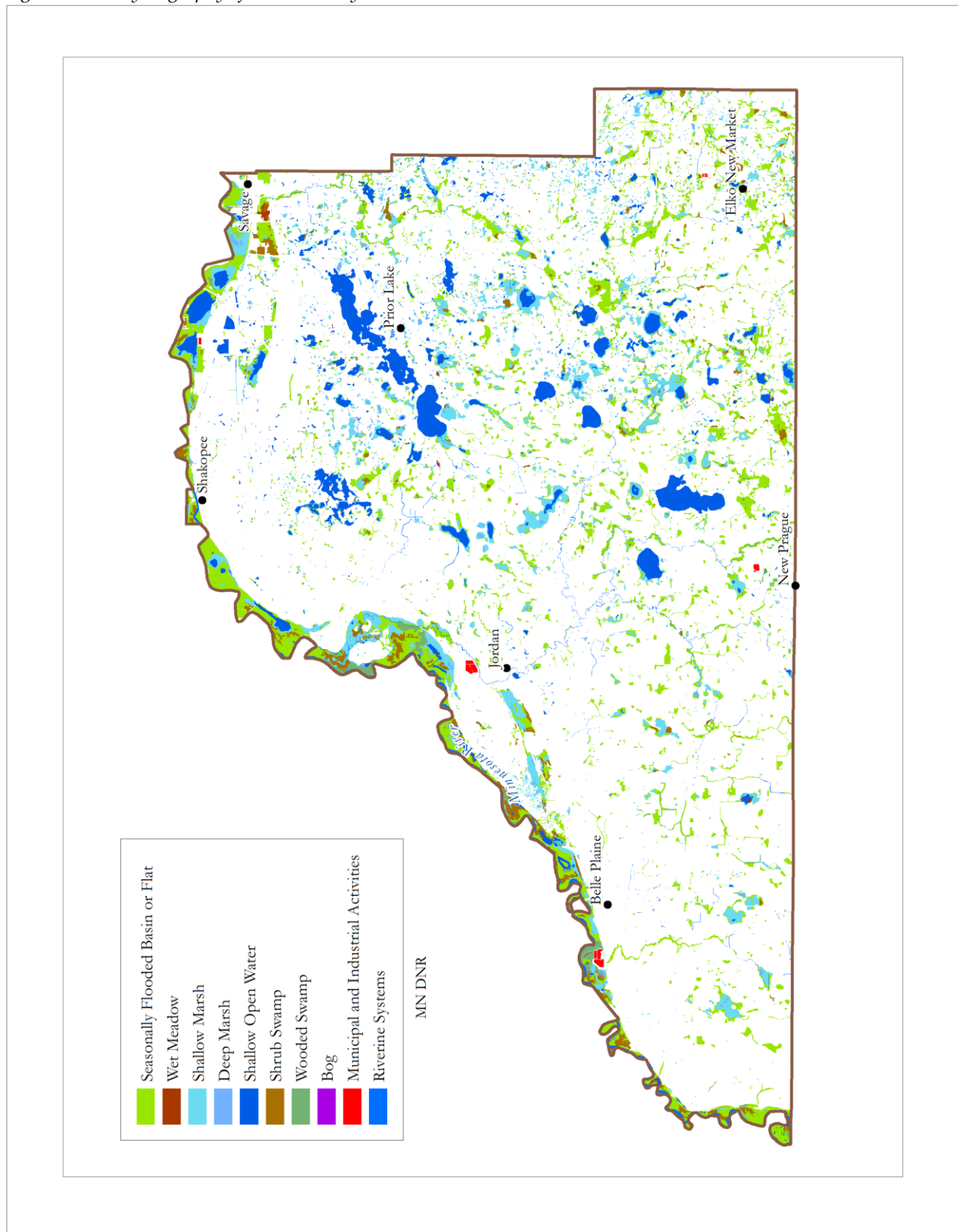


Figure A - 2. Scott County Population by Census Block, 2010

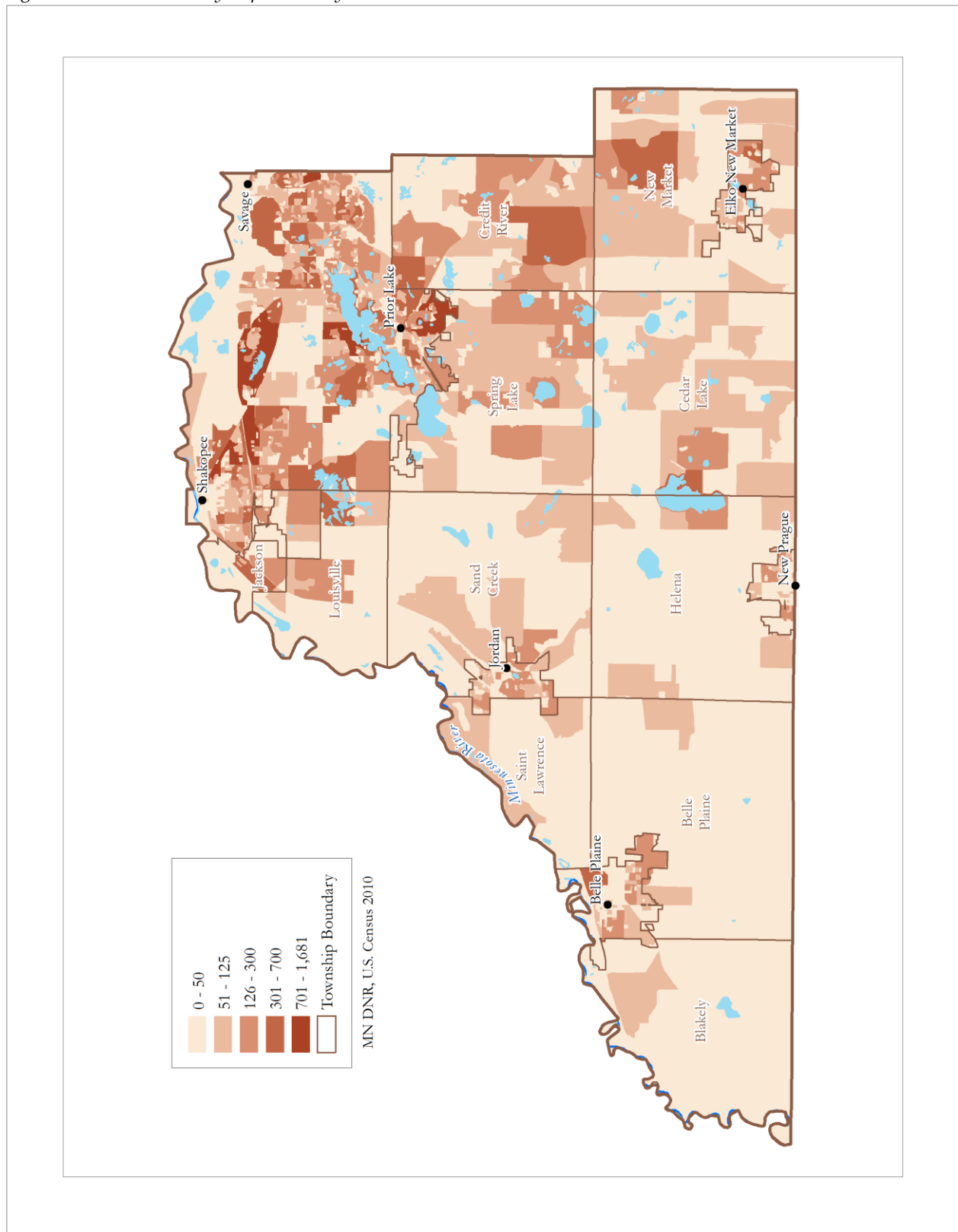


Figure A - 3. Fire Departments and Fire Response Times in Scott County

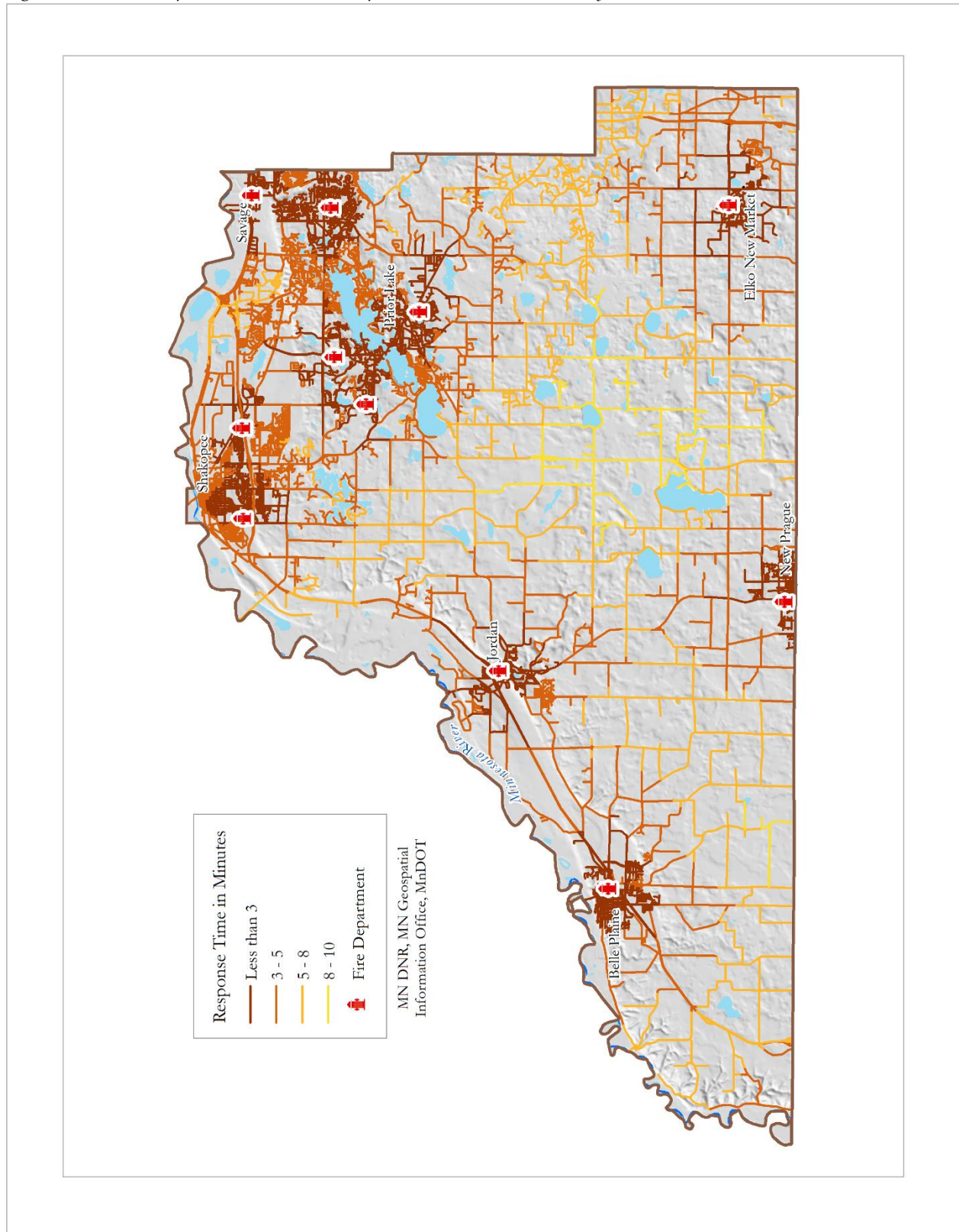




Figure A - 4. Scott County Public Safety and Government Services

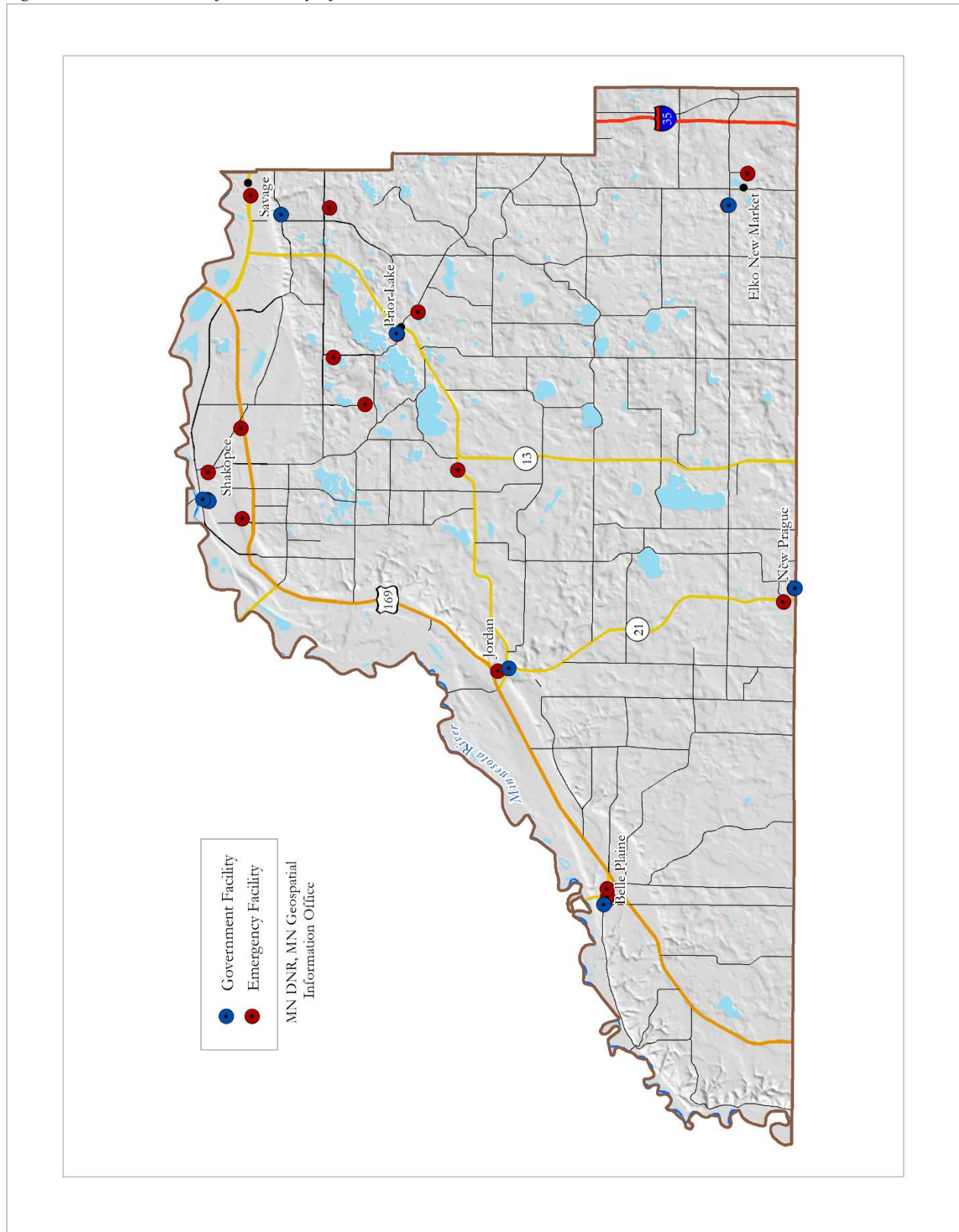




Figure A - 5. Scott County Utilities and Communication Infrastructure

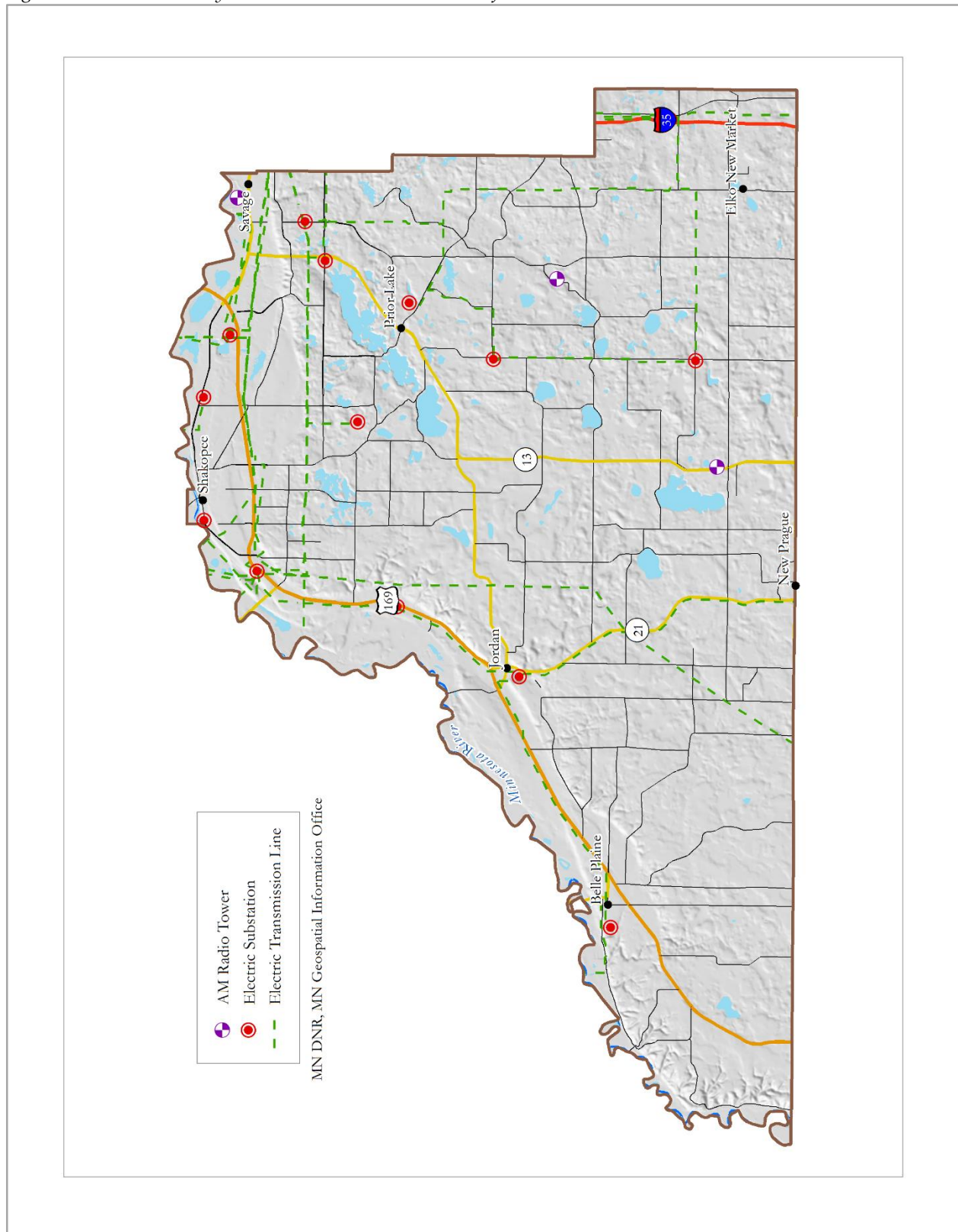


Figure A - 6. Scott County Transportation Infrastructure

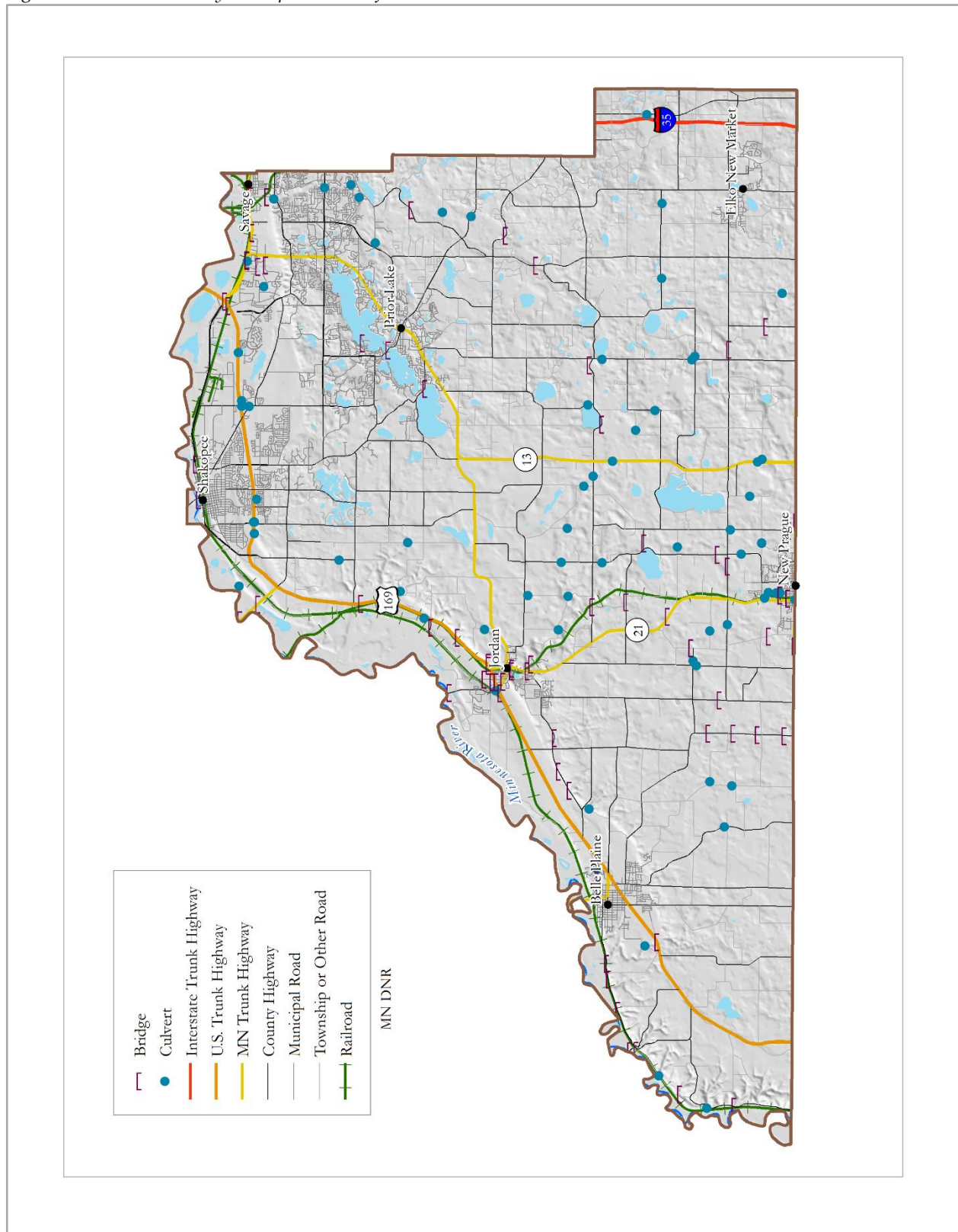


Figure A - 7. Scott County Land Cover, National Land Cover Database, 2006

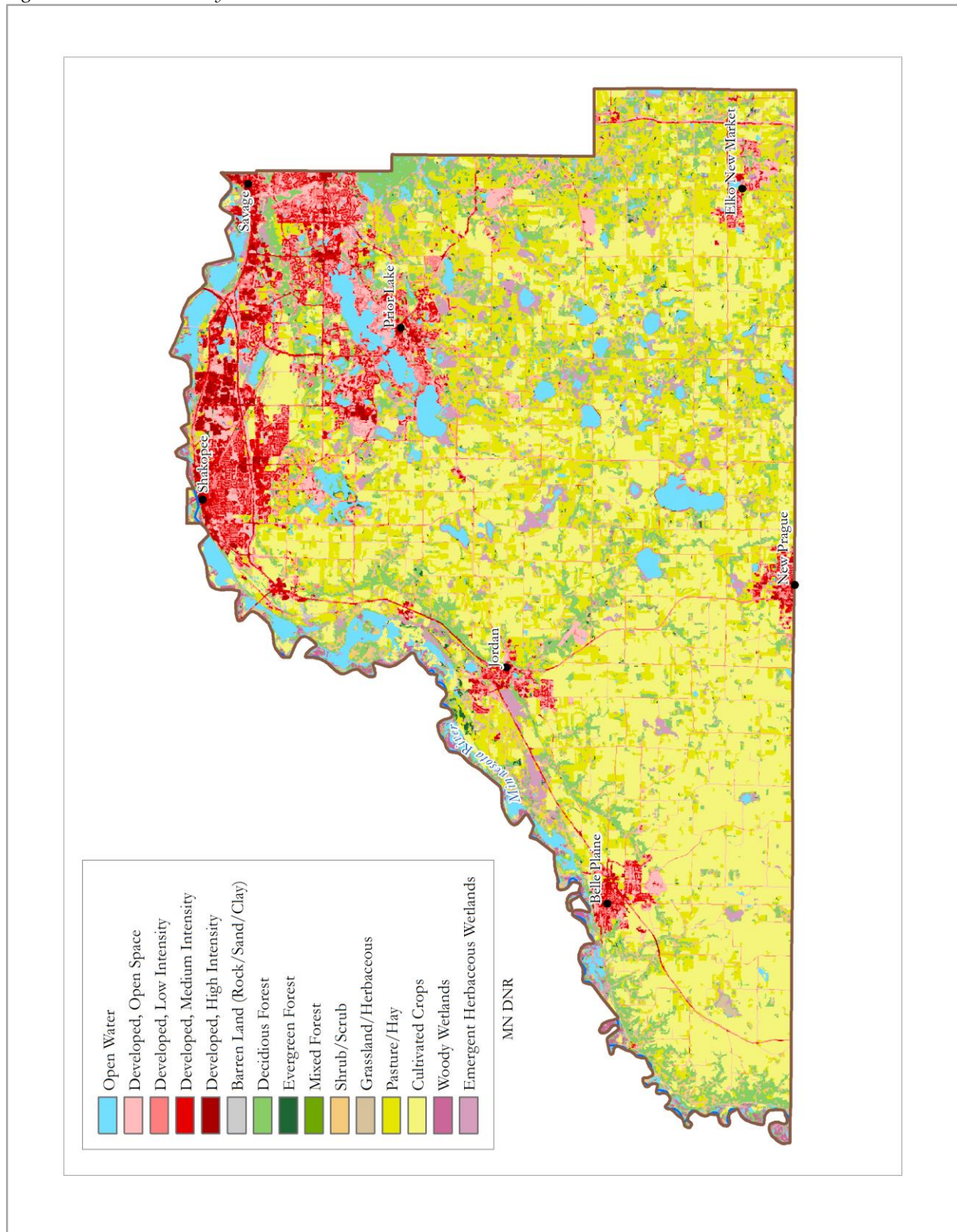




Figure A - 8. Scott County Land Ownership by Agency

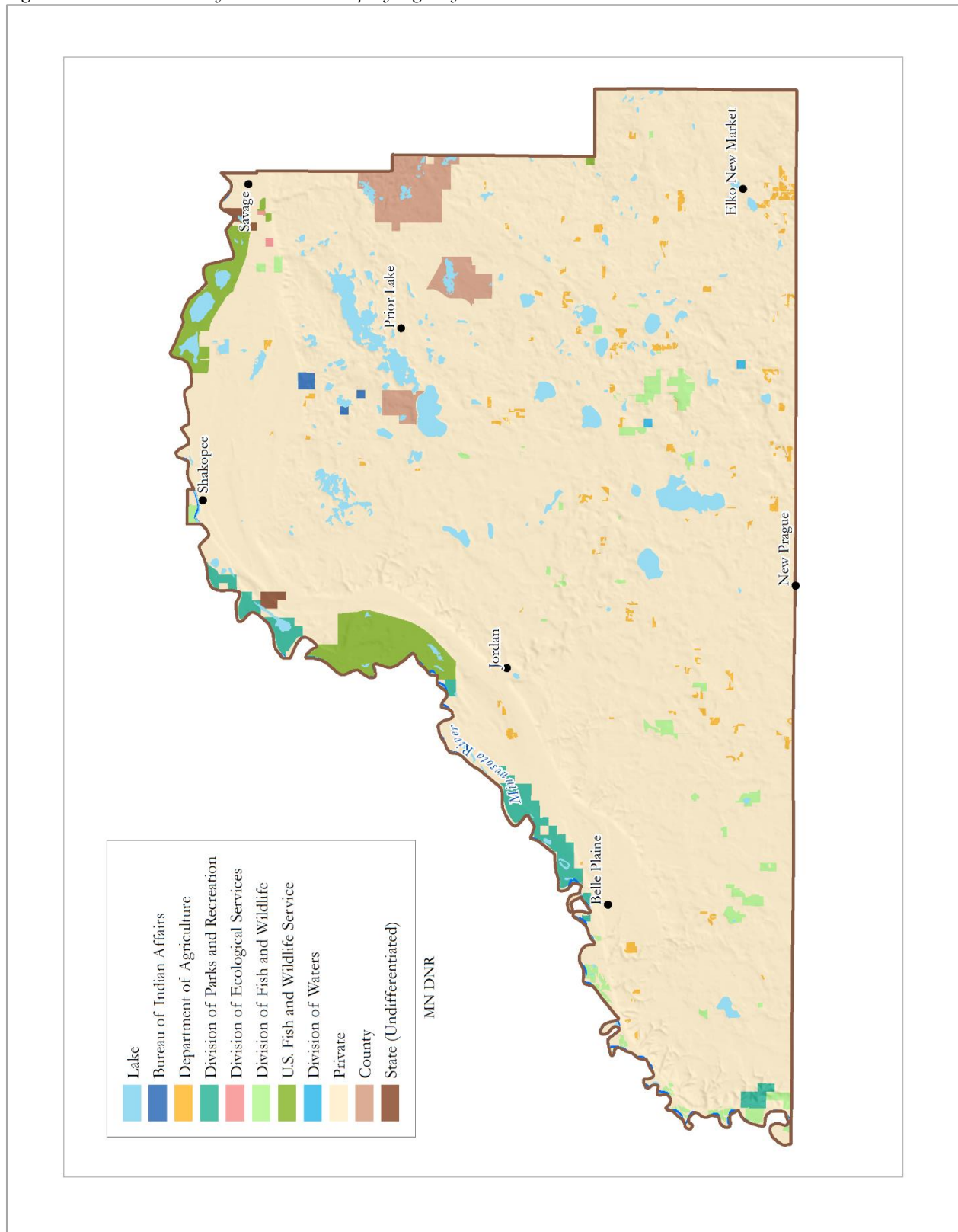
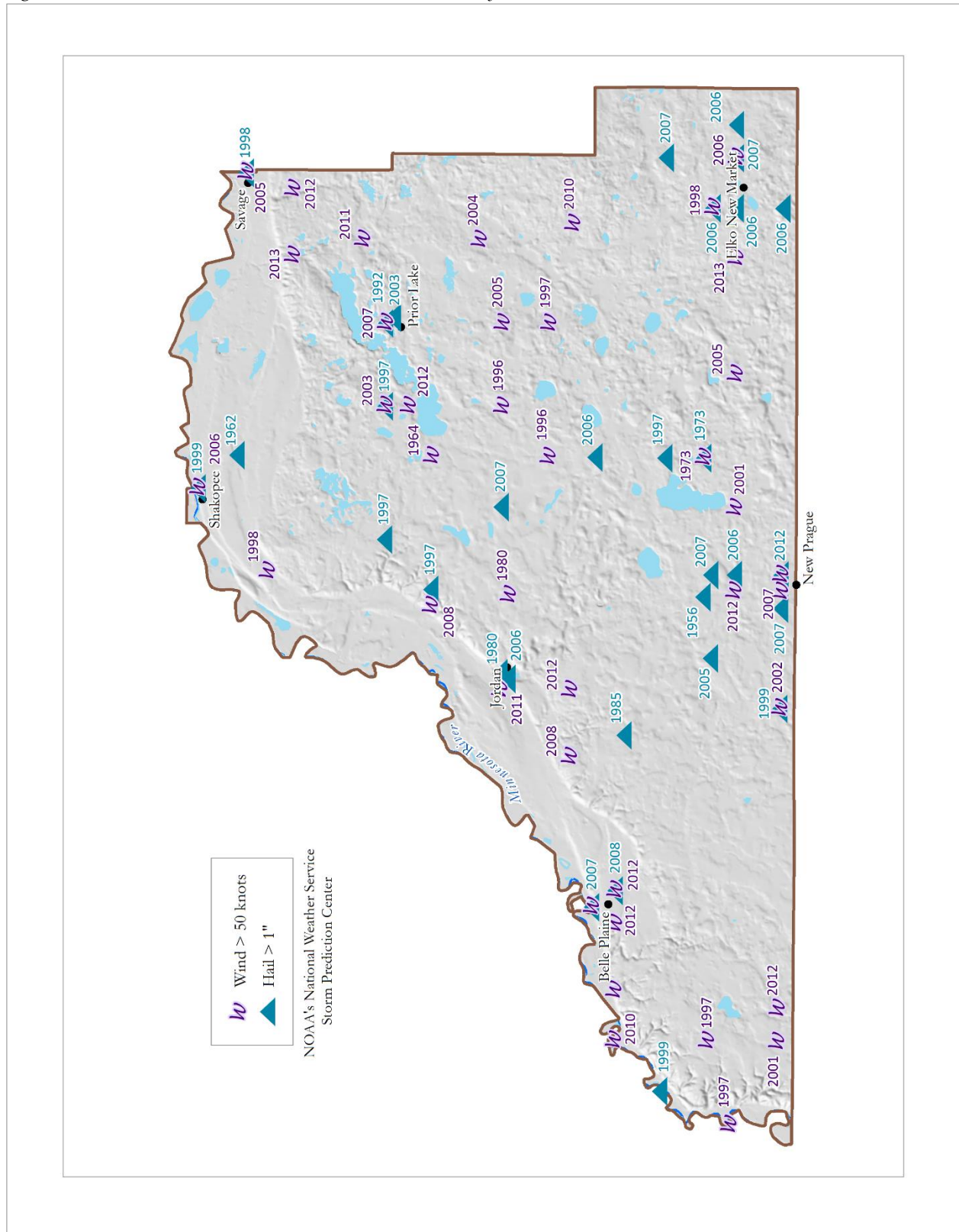


Figure A - 9. Severe Wind and Hail Storms in Scott County







*Figure A - 11. Dams in Scott County*

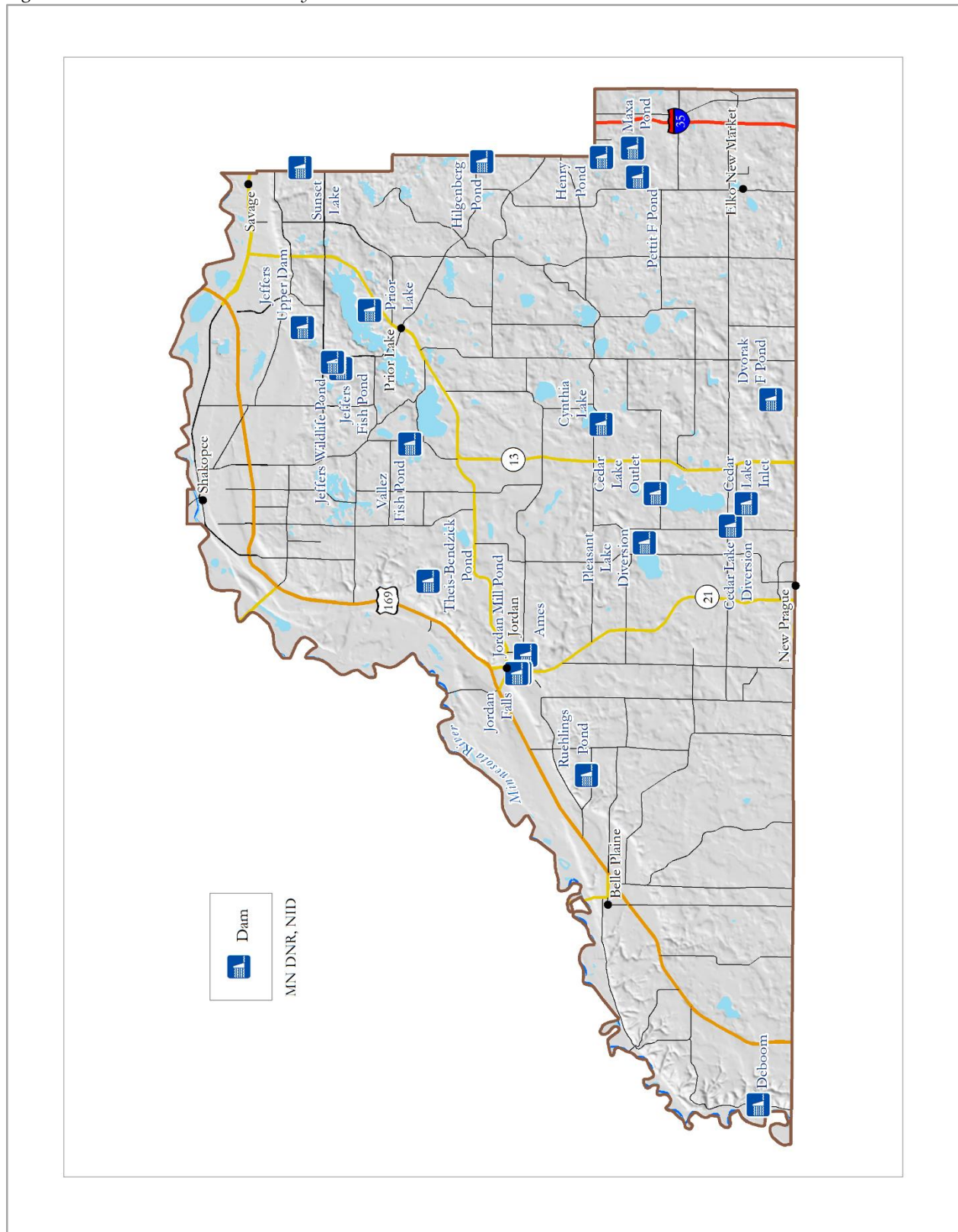


Figure A - 12. Sites with Hazardous or Chemical Waste in Scott County

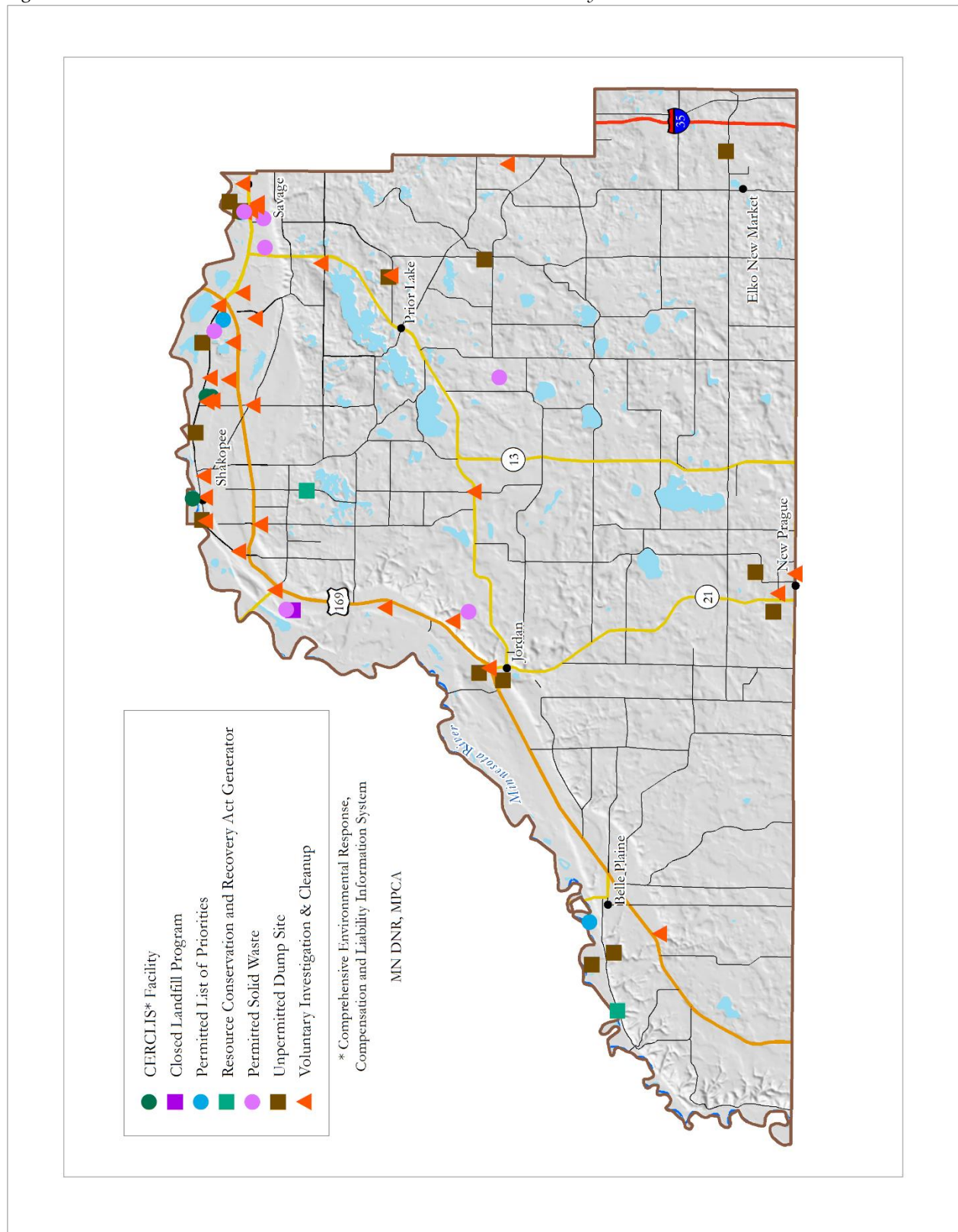


Figure A - 13. Health Care Providers in Scott County

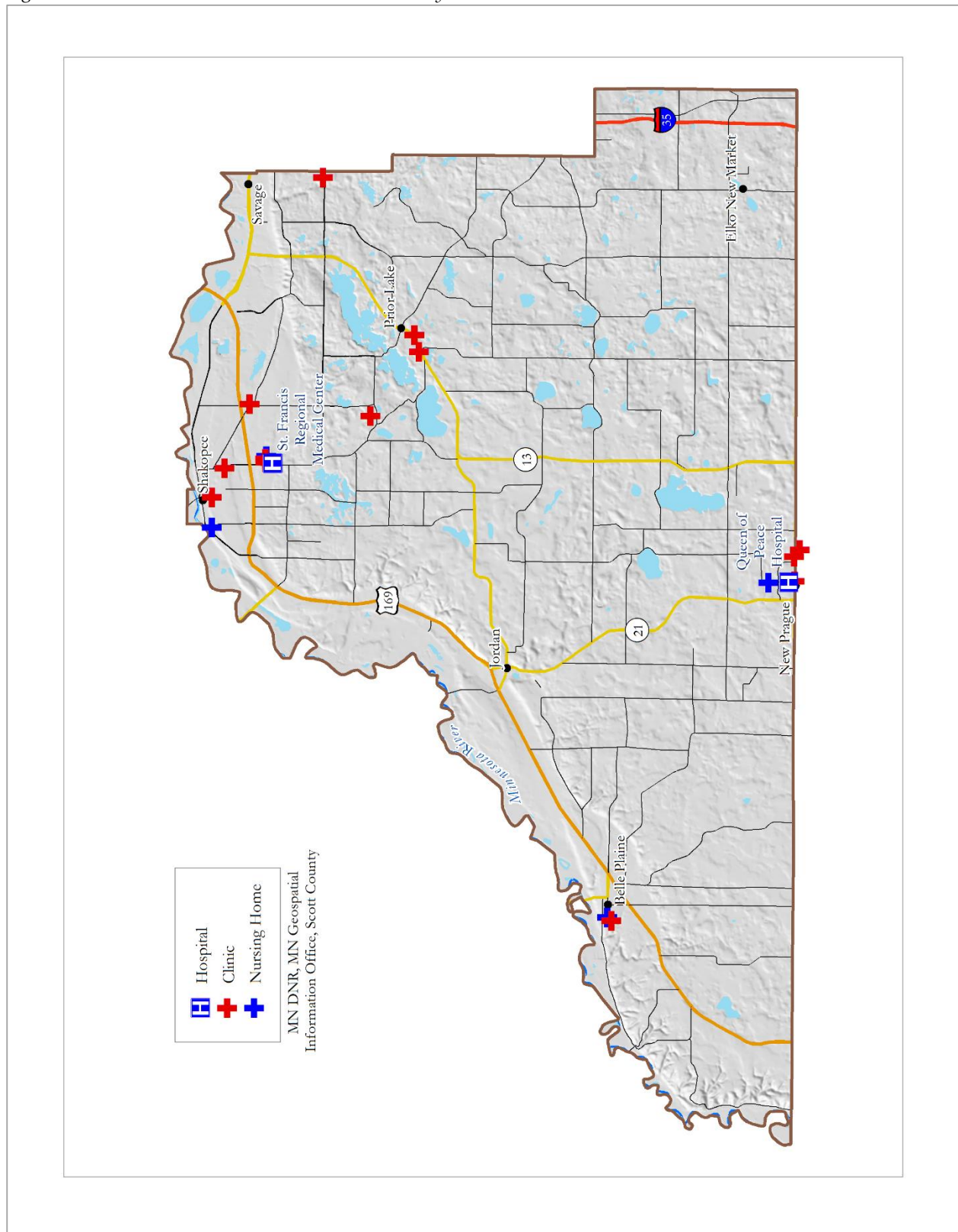




Figure A - 14. Scott County Groundwater Contamination Susceptibility and Wells

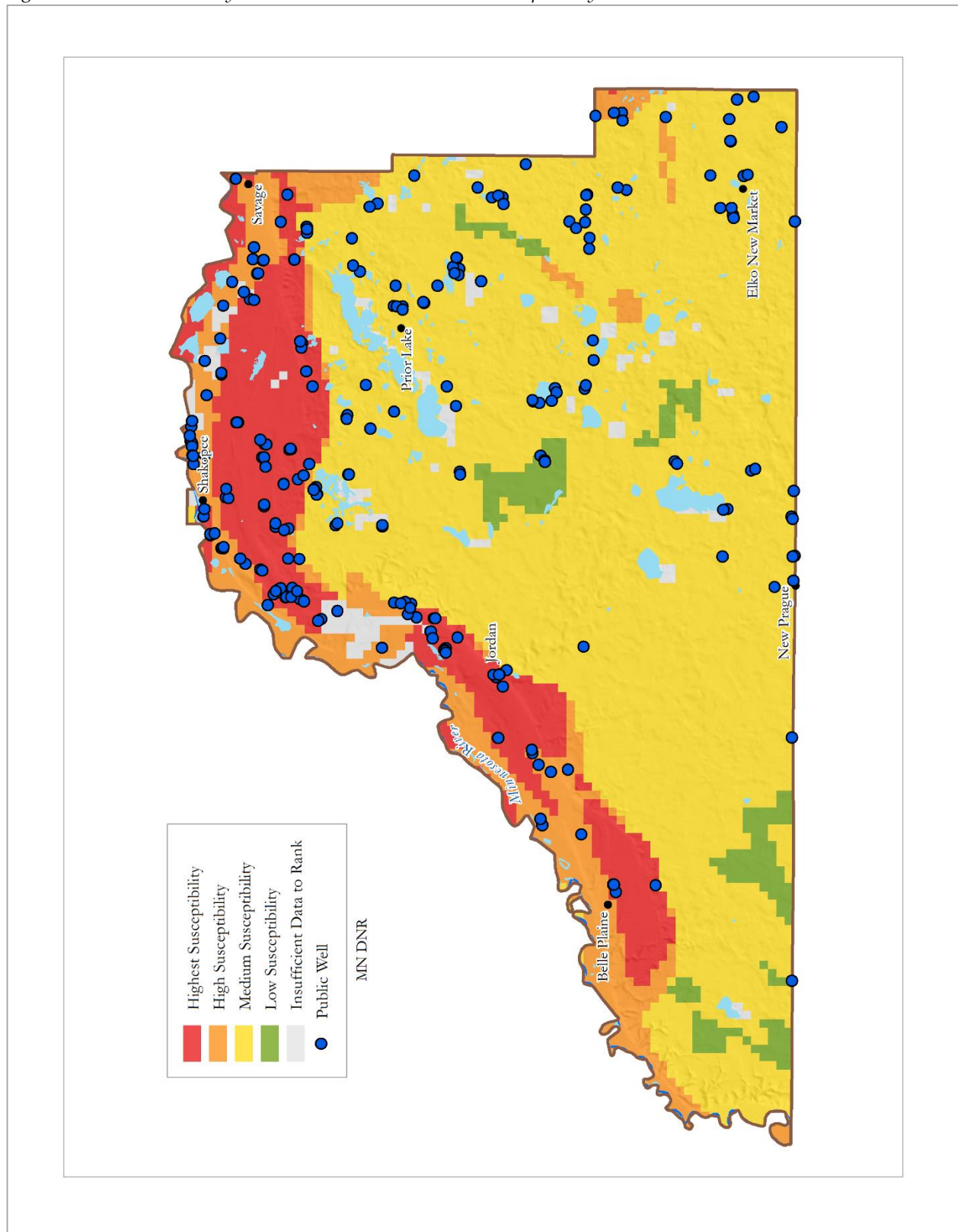


Figure A - 15. Critical Facilities in Scott County

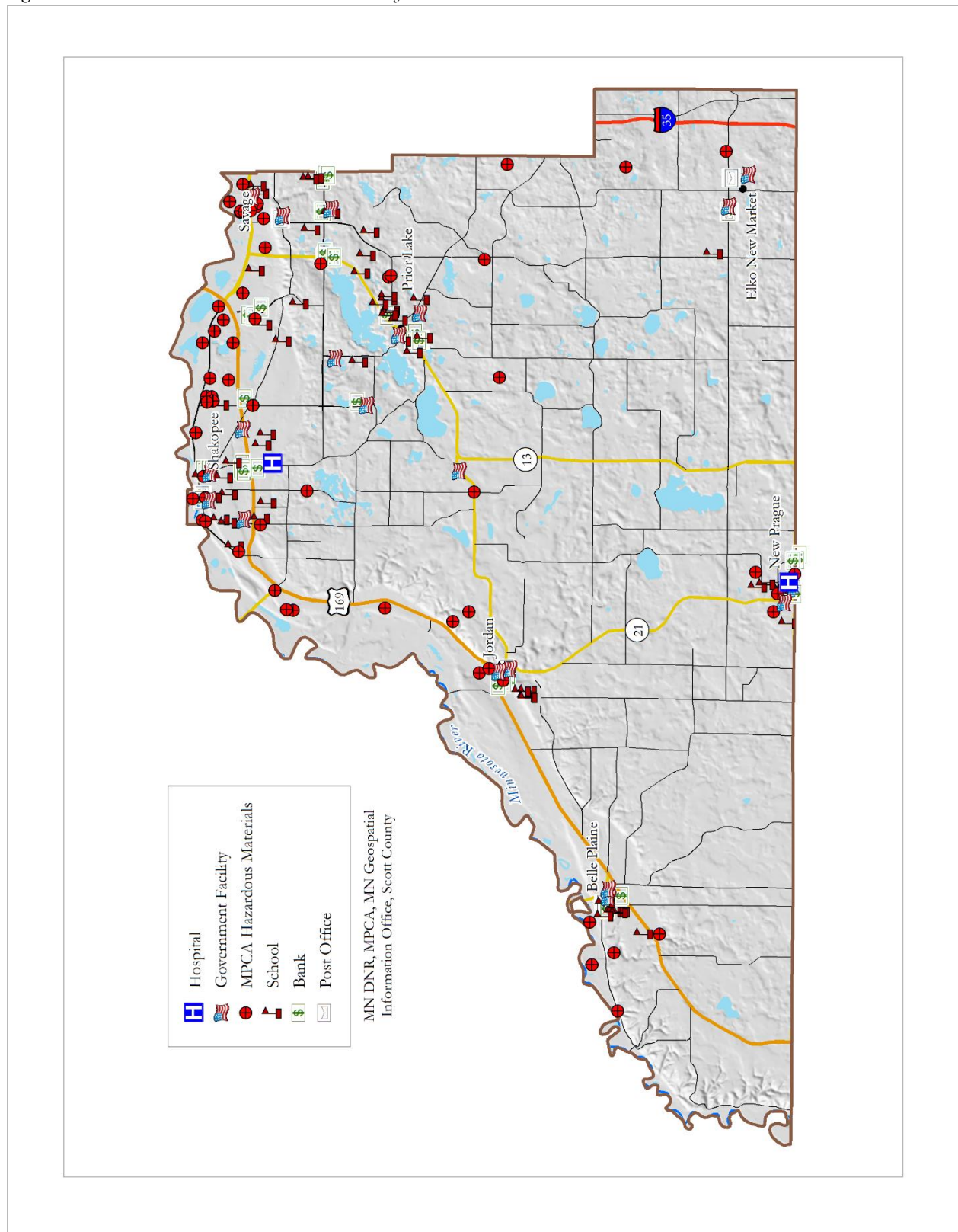




Figure A - 16. Critical Facilities in Shakopee

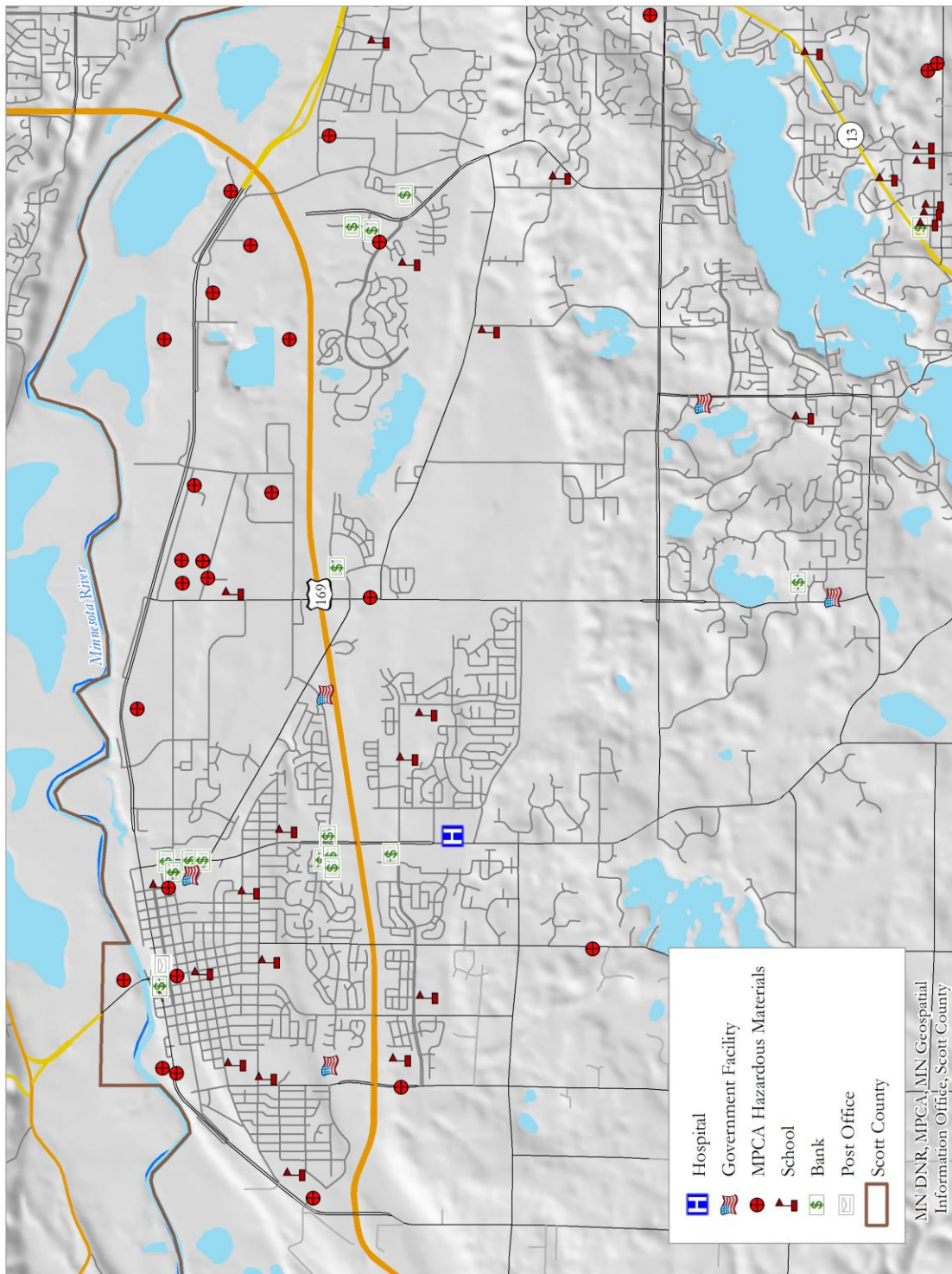


Figure A - 17. Critical Facilities in Savage

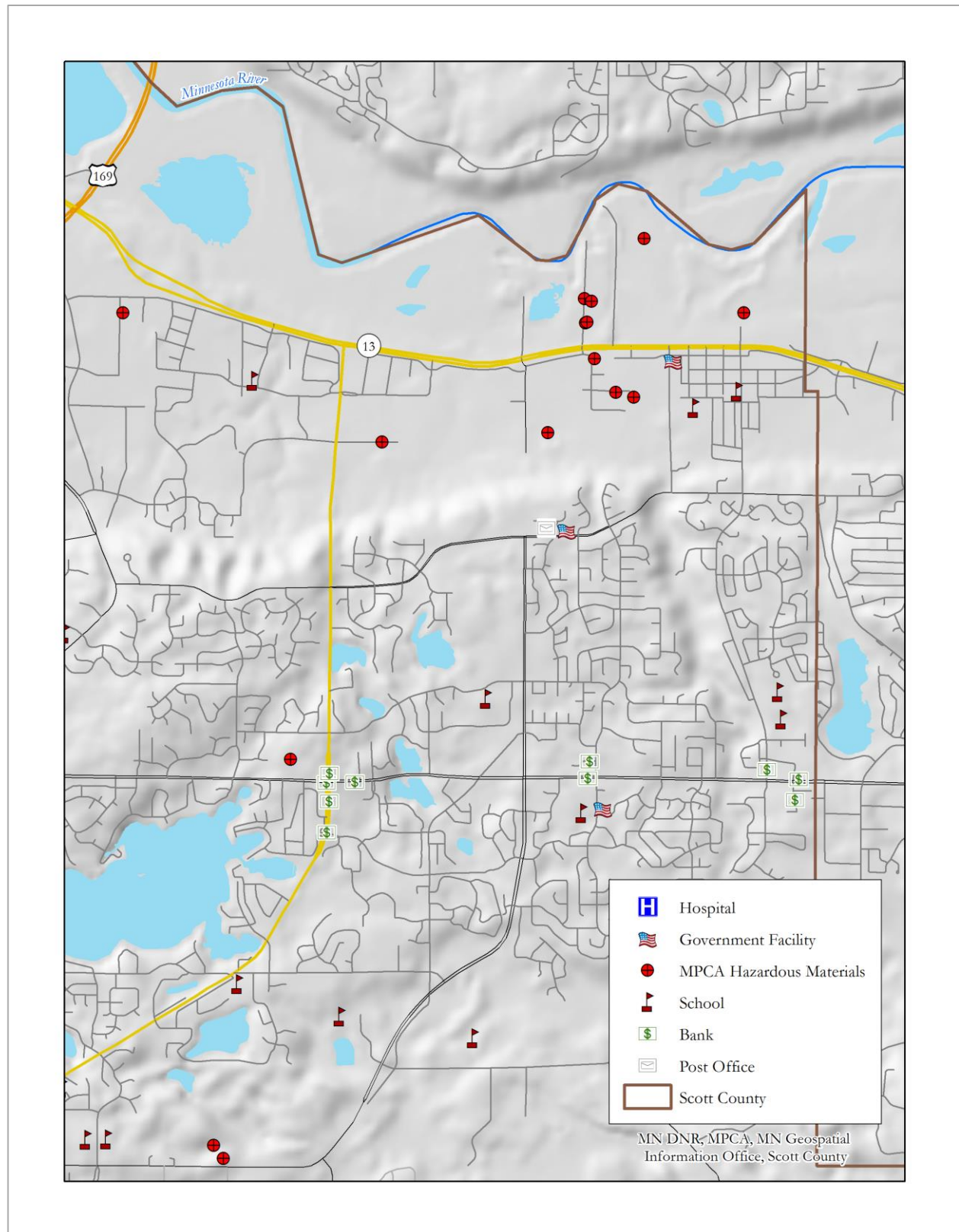




Figure A - 18. Critical Facilities in Prior Lake

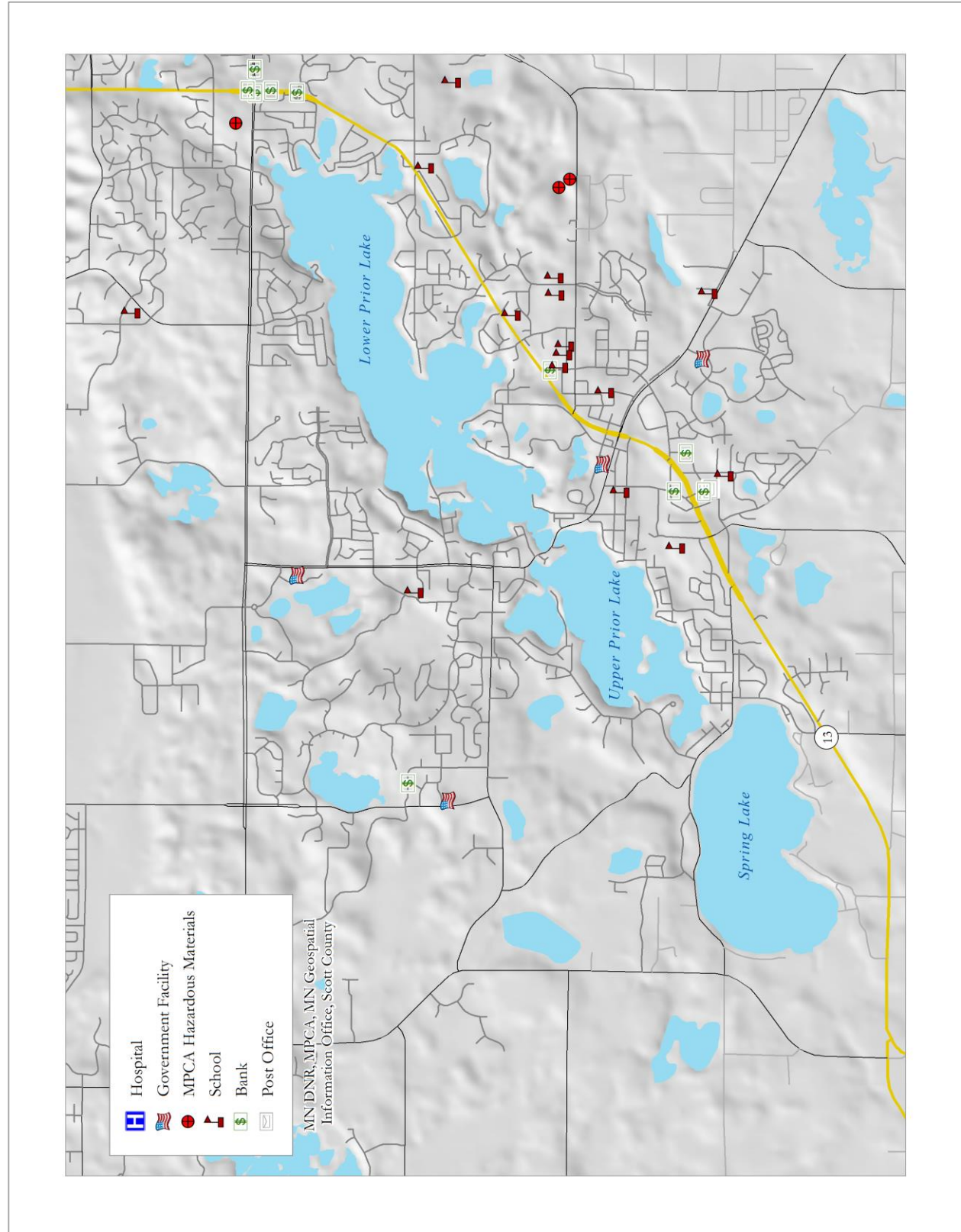


Figure A - 19. Wildfires by Acres Burned (1985-April 2015) and Peat Soil Areas in Scott County

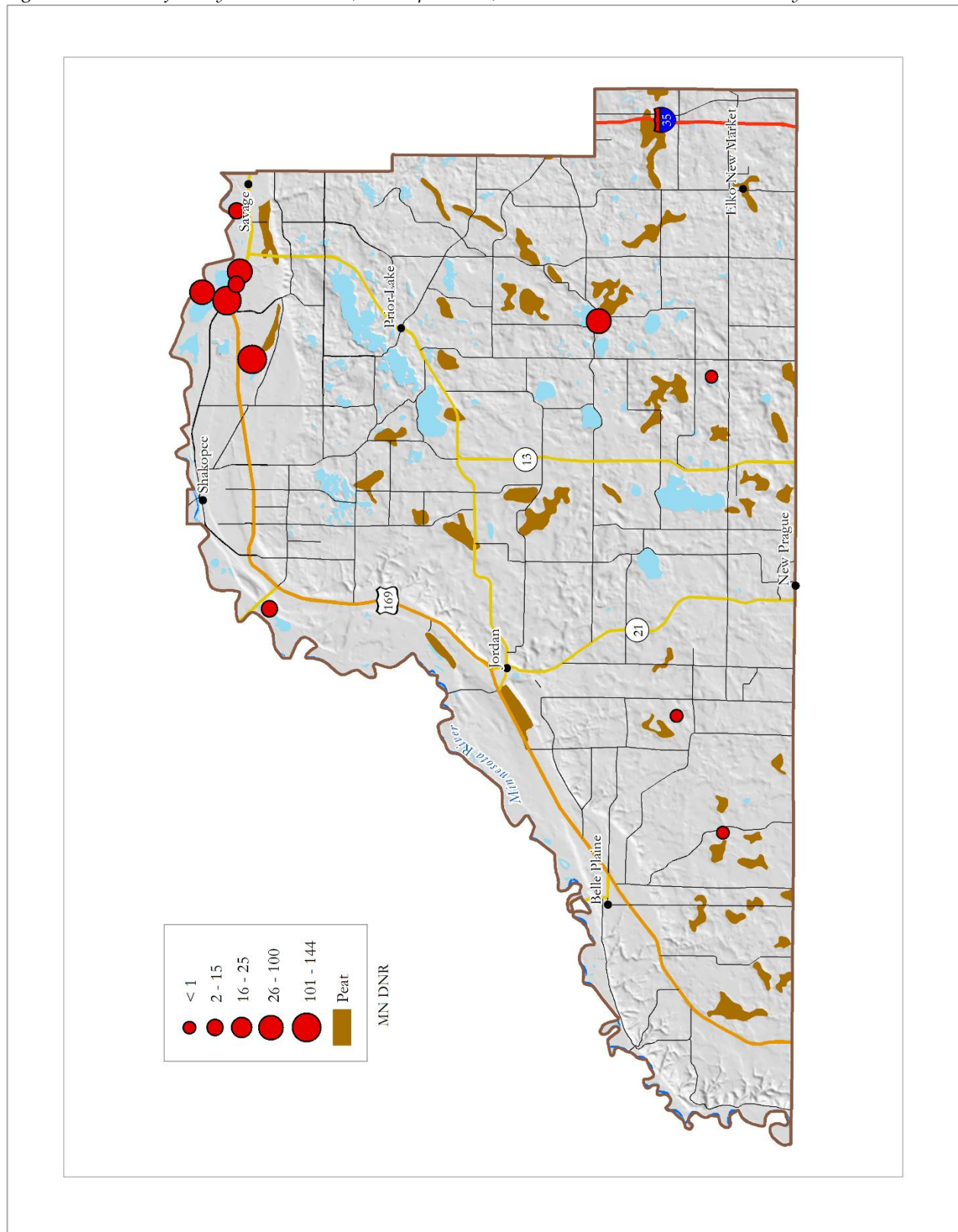


Figure A - 20. Distribution of Estimated Economic Loss for Scott County in 100-Year Flood

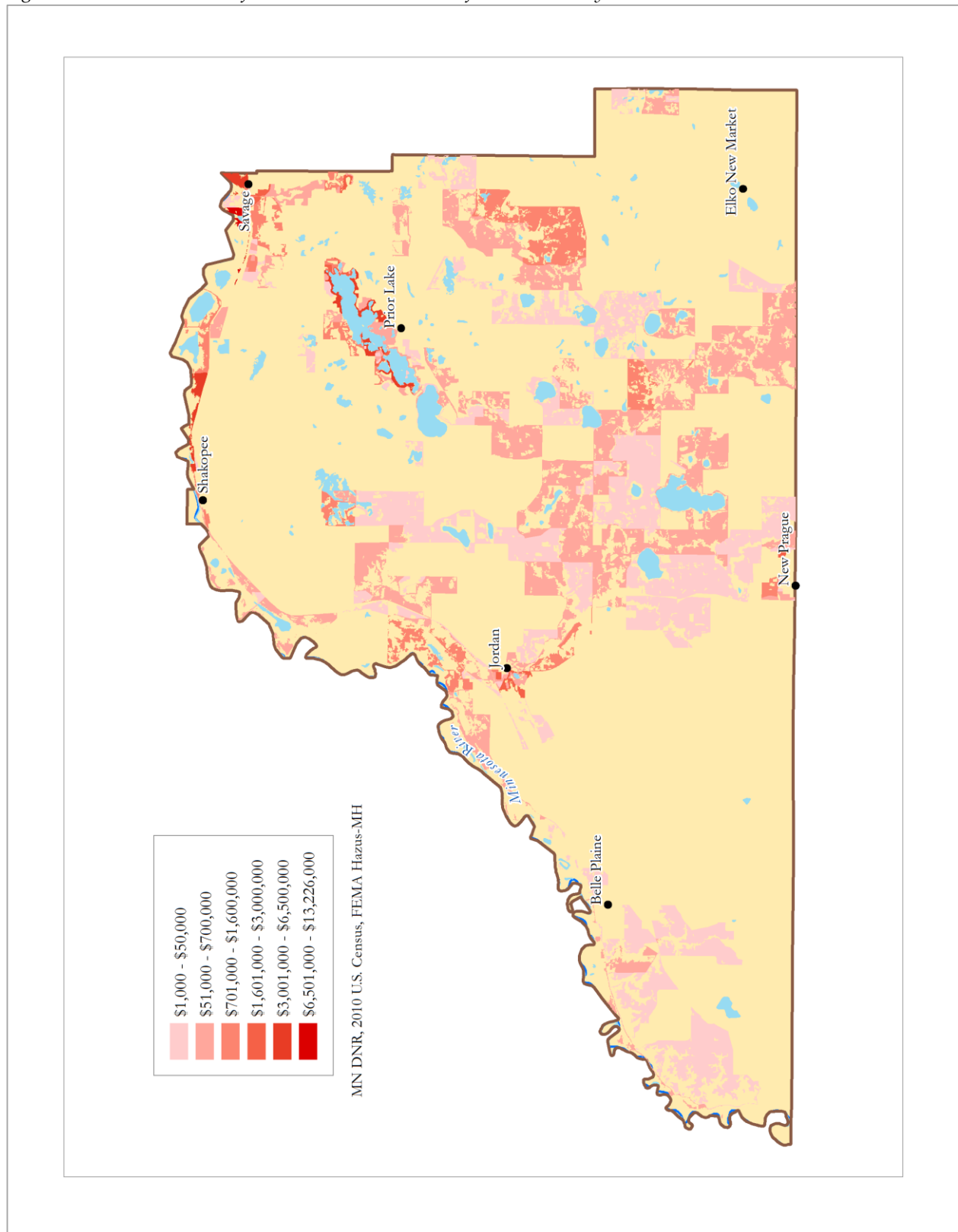




Figure A - 21. Census Block #271390802011003 and 100-Year Floodplain in Savage

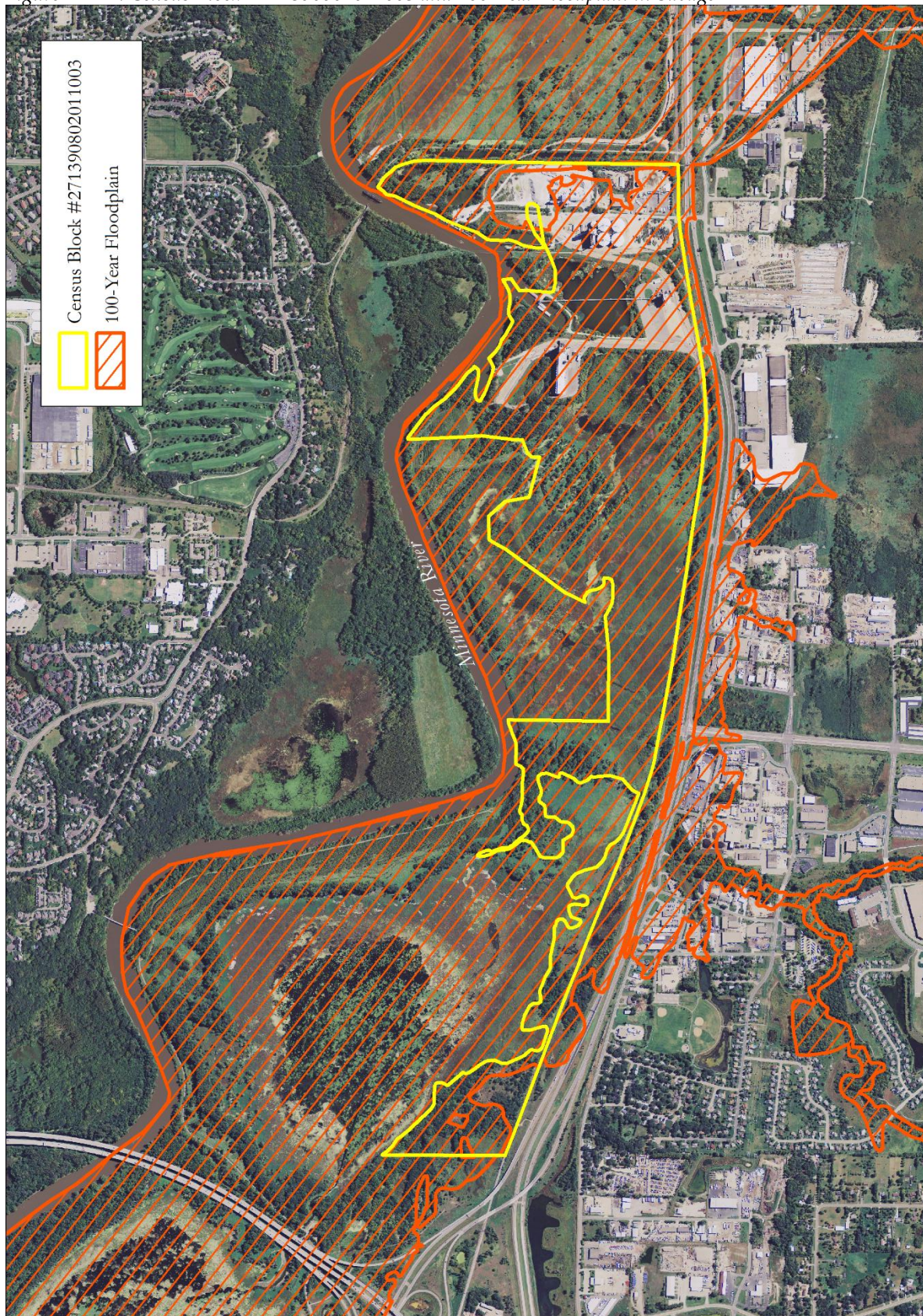




Figure A - 22. Census Block #271390809052004 and 100-Year Floodplain by Prior Lake

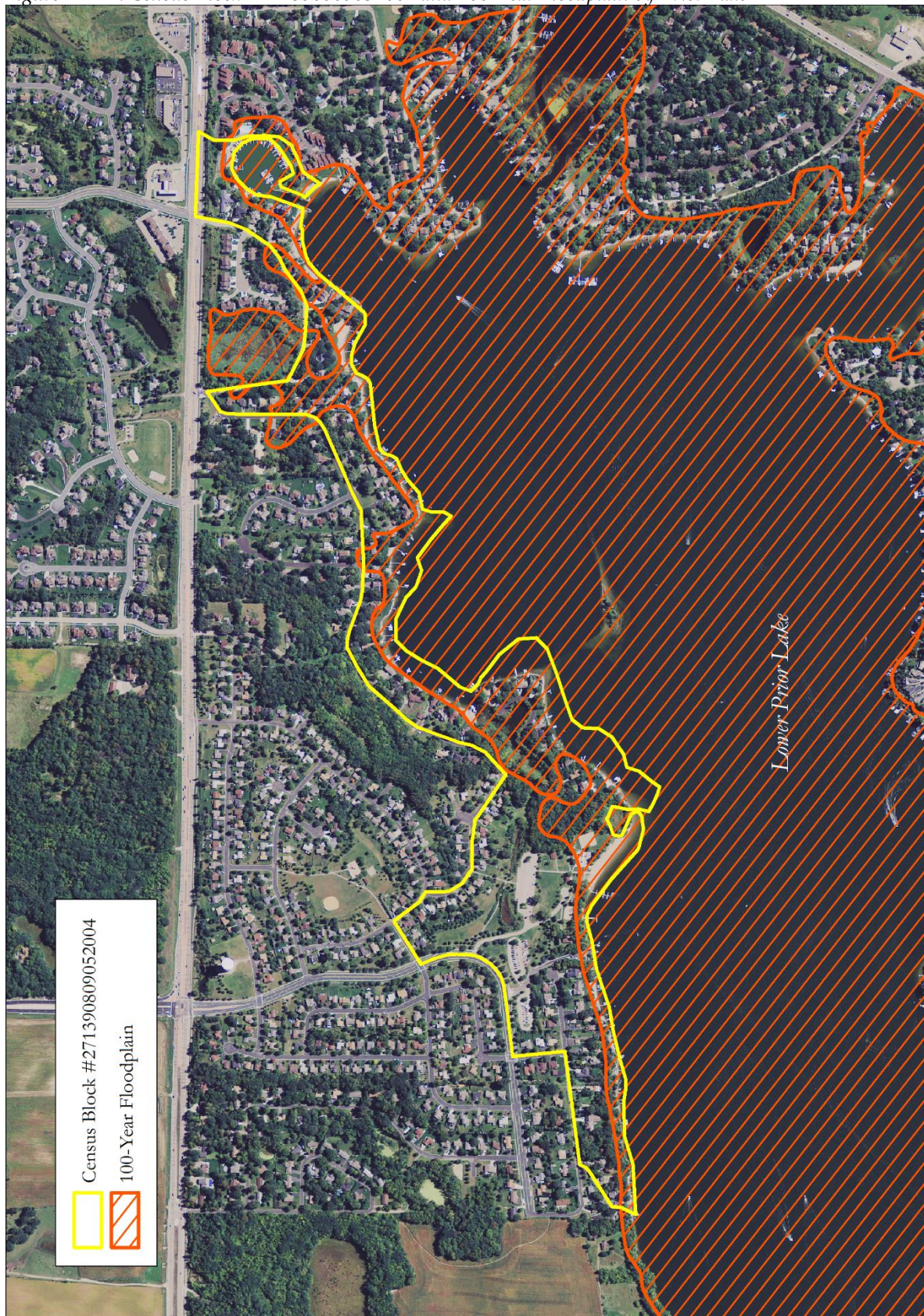




Figure A - 23. Census Block #271390809061005 and 100-Year Floodplain by Prior Lake

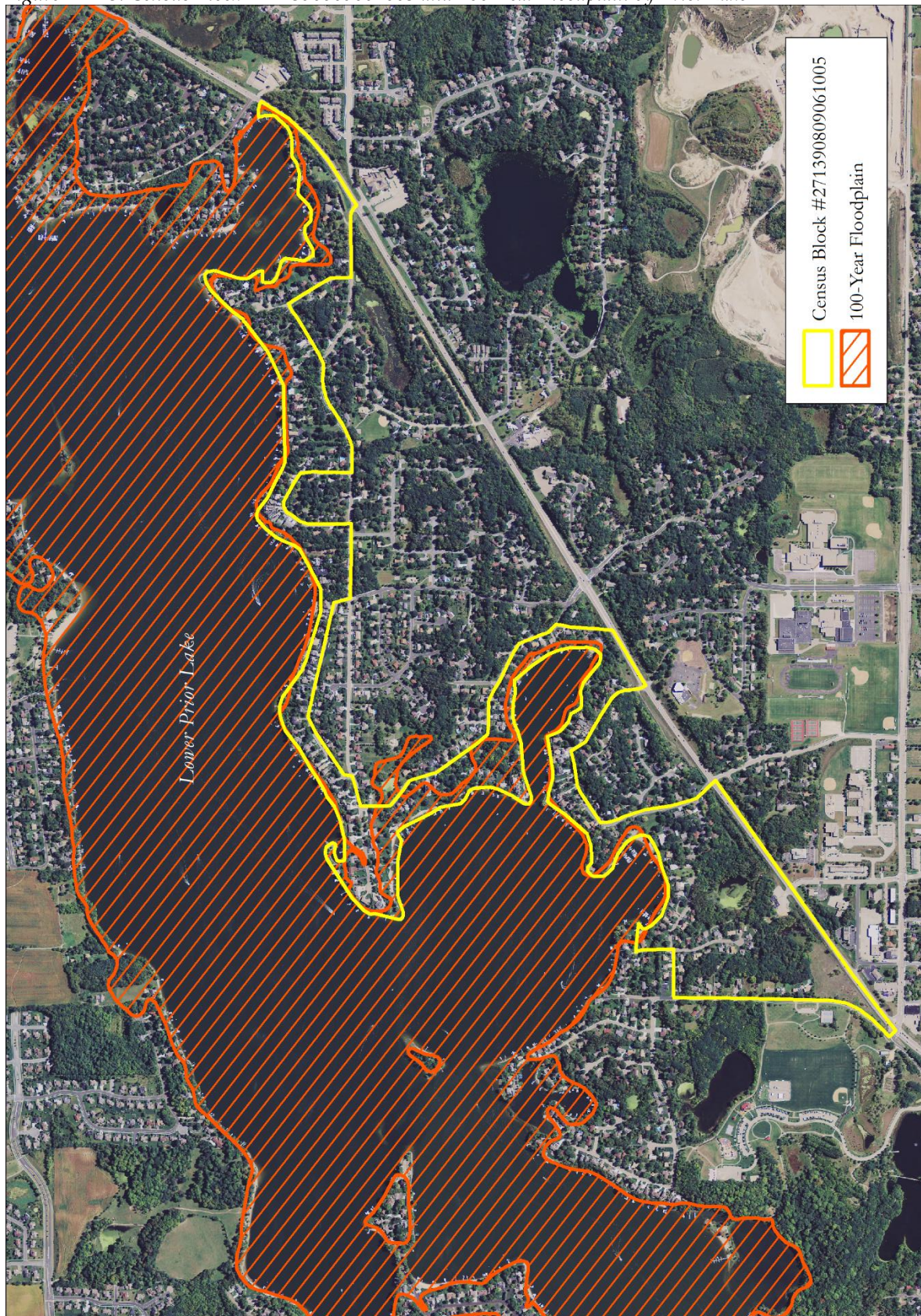




Figure A - 24. Census Block #271390809032014 and 100-Year Floodplain by Prior Lake





Figure A - 25. Census Block #271390803012005 and 100-Year Floodplain in Shakopee

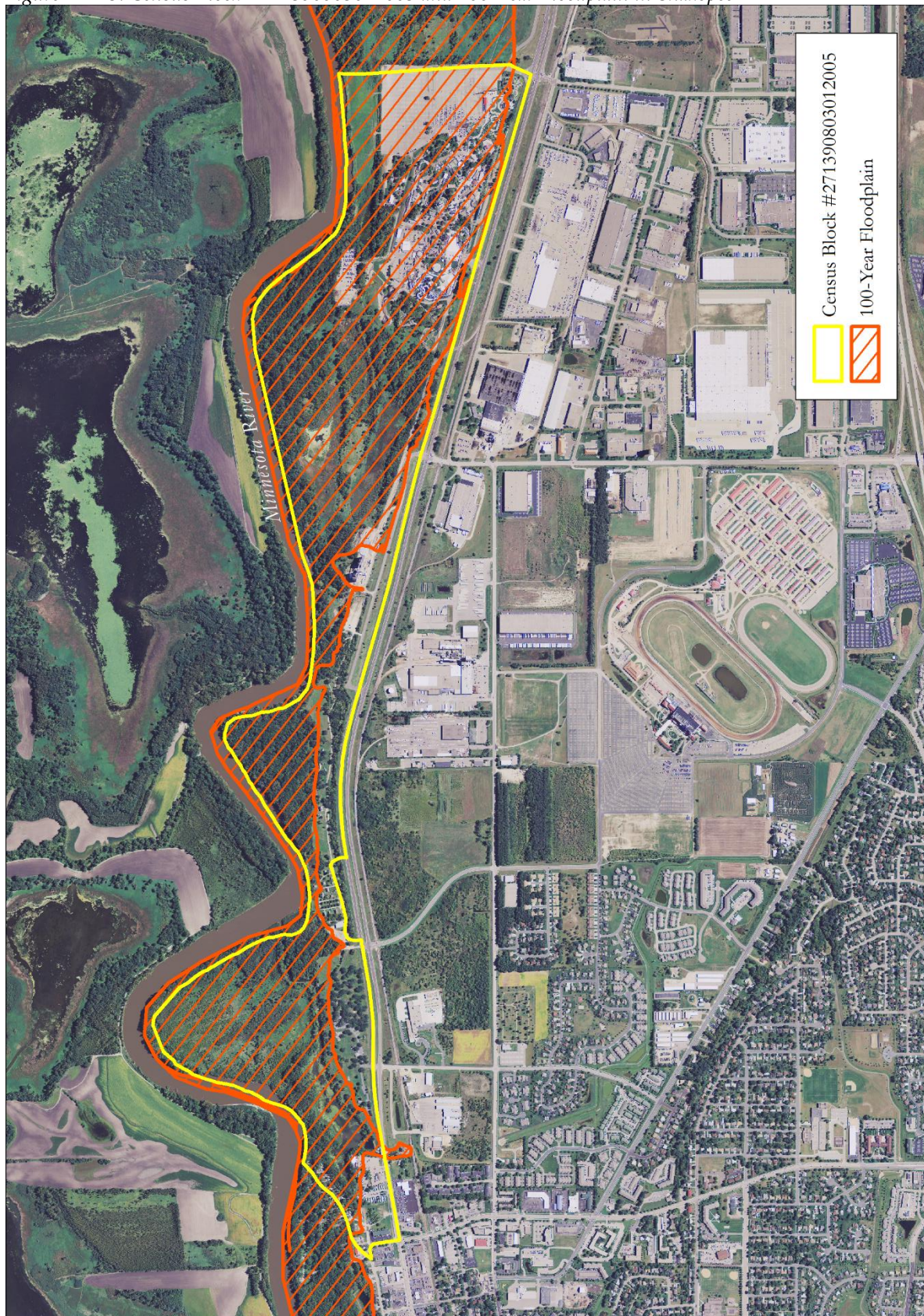




Figure A - 26. Savage Essential Facility in 100-Year Floodplain





Figure A - 27. Feedlots in Scott County

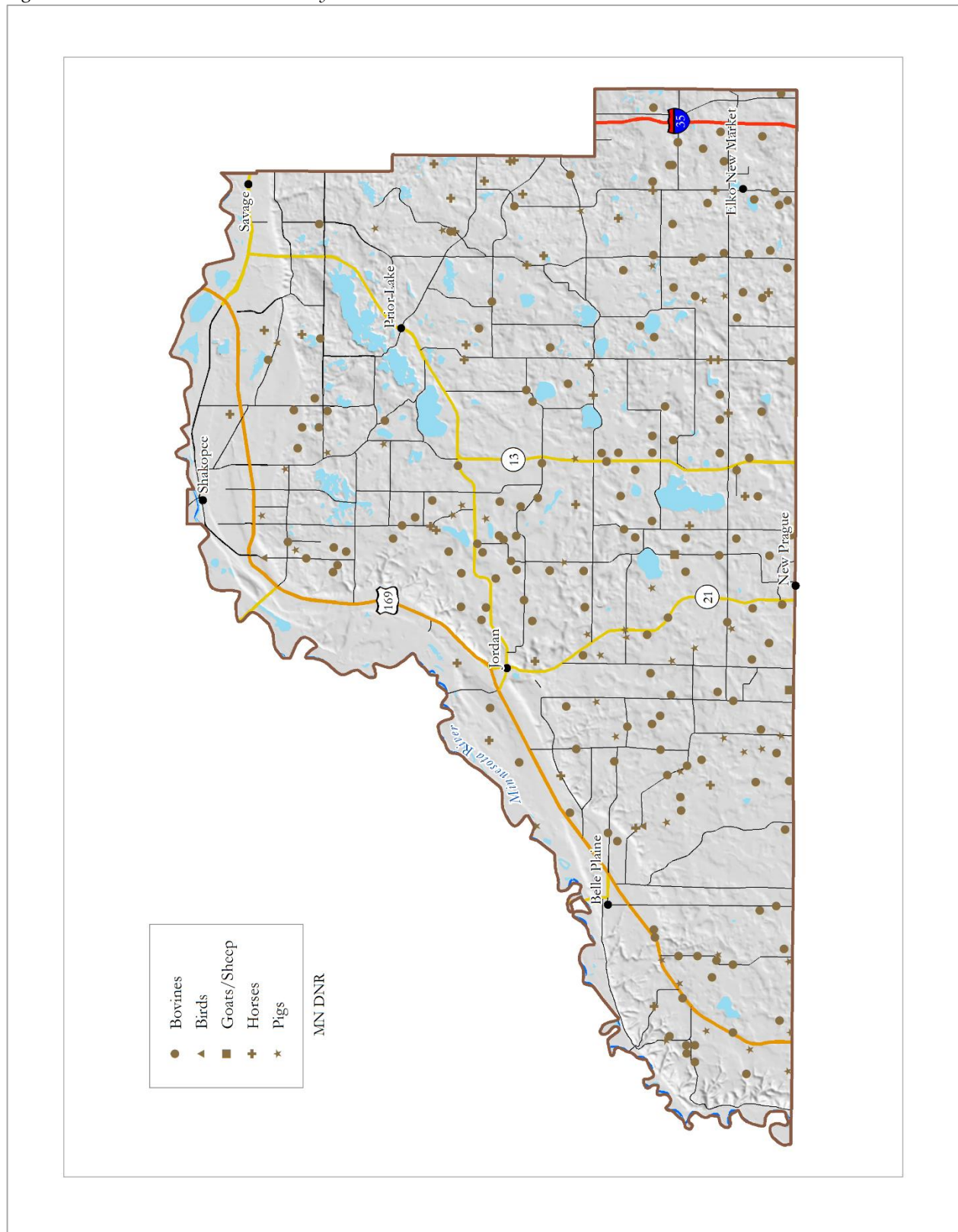


Figure A - 28. Soil Erodibility (K Factor, Rock Free) in Scott County

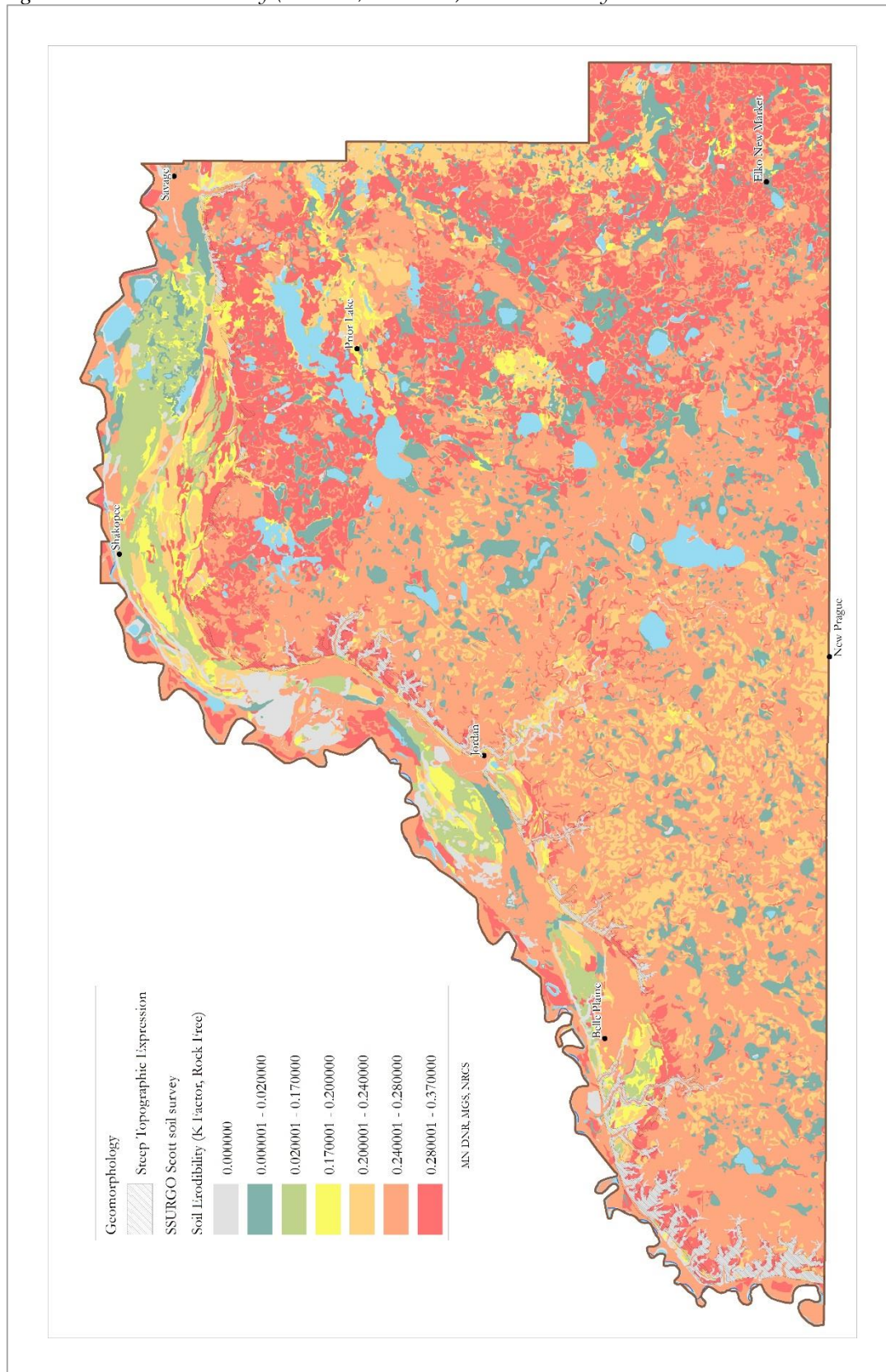
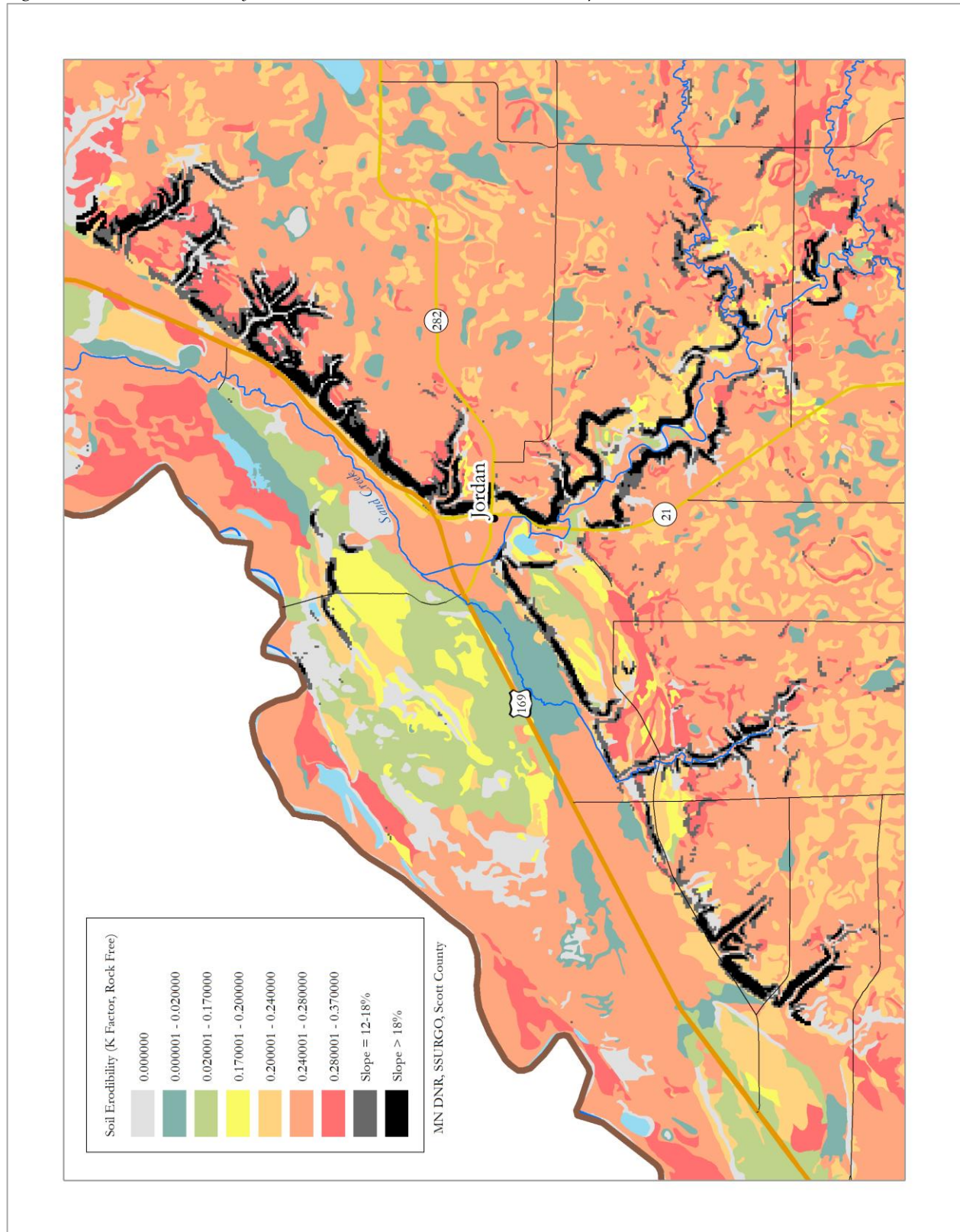




Figure A - 29. Soil Erodibility (K Factor, Rock Free) in Jordan, with slopes 12-18% and >18%





# **Appendix B**

## **Scott County Critical Facilities**

AGRICULTURE & FOOD				
Kajer, Wencil, Farmstead	6406 260 <sup>th</sup> St. E	Elko	MN	55020
Rahr Malting	800 W 1 <sup>st</sup> Av	Shakopee	MN	55379
Scott Equipment	605 NW 4 <sup>th</sup> Ave.	New Prague	MN	56071

BANKING & FINANCE				
Associated Bank	7533 Egan Dr.	Savage	MN	55378
Bankcard Depot Credit Card Services	1226 4th Ave E #150	Shakopee	MN	55379
BMO Harris Bank	1341 Greenwood Ct	Shakopee	MN	55379
Cornerstone State Bank	406 Commerce Dr. E	Belle Plaine	MN	56011
First Resource Bank	4022 Co Rd 42 W	Savage	MN	55378
Frandsen Bank & Trust	200 Creek Ln N	Jordan	MN	55352
Guaranty Bank	8101 Old Carriage Ct	Shakopee	MN	55379
Guaranty Bank	14100 MN-13	Savage	MN	55378
Heartland Credit Union	225 Chalupsky Ave SE	New Prague	MN	56071
Home Town Bank	101 Creek Ln S	Jordan	MN	55352
KleinBank	1407 Vierling Dr. E	Shakopee	MN	55379
KleinBank	14141 Glendale Rd	Savage	MN	55378
KleinBank	16677 Duluth Ave SE	Prior Lake	MN	55372
New Market Bank	4719 Park Nicollet Ave SE #100	Prior Lake	MN	55372
New Market Bank	461 Main St	Elko New Market	MN	55054
Paragon Bank	115 1st Ave E	Shakopee	MN	55379
Prime Security Bank	1305 Vierling Dr. E	Shakopee	MN	55379
Prior Lake State Bank	16677 Duluth Ave SE # 101	Prior Lake	MN	55372
Riverland Bank	700 Seville Dr. # 100	Jordan	MN	55352
Roundbank	1100 1st St NE	New Prague	MN	56071
Soo Line Credit Union	14327 Huntington Ave	Savage	MN	55378
South Metro Federal Credit Union	574 Marschall Rd	Shakopee	MN	55379
South Metro Federal Credit Union	8040 Old Carriage Ct	Shakopee	MN	55379
South Metro Federal Credit Union	5767 Egan Dr.	Savage	MN	55378
South Metro Federal Credit Union	2573 Credit Union Drive	Prior Lake	MN	55372
State Bank of Belle Plaine	201 W Main St	Belle Plaine	MN	56011
State Bank of New Prague	1101 1st St SE	New Prague	MN	56071
Sterling State Bank	14185 Hwy 13 South Front Rd	Savage	MN	55378
TCF Bank	1198 Vierling Dr E	Shakopee	MN	55379
TCF Bank	14075 Hwy 13 South Front Rd	Savage	MN	55378

## BANKING & FINANCE

U.S. Bank	8325 Crossings Blvd	Shakopee	MN	55379
U.S. Bank	15830 Franklin Trail SE	Prior Lake	MN	55372
U.S. Bank	255 Triangle Ln N	Jordan	MN	55352
U.S. Bank	111 Central Ave N	New Prague	MN	56071
US Federal Credit Union	4290 Dean Lakes Blvd	Shakopee	MN	55379
Voyager Bank: Shakopee	500 Marschall Rd #100	Shakopee	MN	55379
Wells Fargo Bank	380 Marschall RD	Shakopee	MN	55379
Wells Fargo Bank	1156 Vierling Dr E	Shakopee	MN	55379
Wells Fargo Bank	5705 Loftus Ln	Savage	MN	55378
Wells Fargo Bank	16817 Duluth AVE SE STE 1	Prior Lake	MN	55372
Wells Fargo Bank	217 Main St W	New Prague	MN	56071
Wings Financial Credit Union	14411 Highway 13	Savage	MN	55378

## CHEMICAL AND HAZARDOUS MATERIALS

<i>Complete list restricted</i>				
---------------------------------	--	--	--	--

## COMMERCIAL FACILITIES

AmericInn Lodge & Suites	510 S Elm St	Belle Plaine	MN	56011
AmericInn Lodge & Suites	1200 1st St Ne	New Prague	MN	56071
Belle Plaine Motel & Antiques	315 S Walnut	Belle Plaine	MN	56011
Budget Host Motel	1181 1st Av E	Shakopee	MN	55379
Canterbury Inn	1244 Canterbury Rd S	Shakopee	MN	55379
Canterbury Park	1100 Canterbury Rd	Shakopee	MN	55379
Chart Industries	407 NW 7 <sup>th</sup> St.	New Prague	MN	56071
Comfort Inn	4601 West Hwy 13	Savage	MN	55378
Convenience Store 1	15035 Mystic Lake Dr. NW	Prior Lake	MN	55372
Convenience Store 2	14160 Wilds Path Dr. NW	Prior Lake	MN	55372
Country Inns & Suites	1204 S Ramsey St	Shakopee	MN	55379
Cub Foods	14075 Highway 13	Savage	MN	55378
Dakotah Meadows Mini Storage	2341 Park Place	Prior Lake	MN	55372
Dakotah Meadows RV Park	2341 Park Place	Prior Lake	MN	55372
Dakotah! Sport & Fitness	2100 Trail of Dreams	Prior Lake	MN	55372
Elko Speedway	26350 France Ave	Elko	MN	55020
Emma Krumbees' Apple Orchard	501 South St E	Belle Plaine	MN	56011
Fabcon	6111 West Hwy 13	Savage	MN	55378
Mystic Lake Golf Course Building	2400 Mystic Lake Dr.	Prior Lake	MN	55372
Hill View Motel	12826 Johnson Memorial	Jackson		

COMMERCIAL FACILITIES				
Holiday Inn Express	511 S Marschall Rd	Shakopee	MN	55379
KOA Kampgrounds	3315 W 166th St	Jordan	MN	55352
Little Six Casino	2450 Sioux Trail NW	Prior Lake	MN	55372
Marcus Town Square Cinema	1116 Shakopee Town Sq	Shakopee	MN	55379
McColl Pond ELC	13550 Dakota Ave	Savage	MN	55378
Minnesota Renaissance Festival	12364 Chestnut Blvd	Shakopee	MN	55379
Mystic Lake Casino Hotel	2400 Mystic Lake Blvd NW	Prior Lake	MN	55372
Mystic Mall	2330 Sioux Trail N.W.	Prior Lake	MN	55372
Playworks LINK Event Center	2200 Trail of Dreams	Prior Lake	MN	55372
Raceway Park		Shakopee	MN	55379
Rainbow Foods	14100 Highway 13	Savage	MN	55378
Renaissance Festival	12364 Chestnut Ave	Shakopee	MN	55379
River Valley YMCA	3575 N Berens Rd NW	Prior Lake	MN	55372
Savage Motor Inn	7361 West Hwy 13	Savage	MN	55378
Scott County Fairgrounds		St. Lawrence Township	MN	
Scott County Historical Society	235 Fuller St S	Shakopee	MN	55379
Scott Equipment	605 NW 4 <sup>th</sup> Ave.	New Prague	MN	56071
Shakopee Community Center	1255 Fuller St S	Shakopee	MN	55379
Shutterfly	5005 Dean Lakes Blvd	Shakopee	MN	55379
SM Hentges & Sons Inc.	650 Quaker Avenue	Jordan	MN	55352
Super Target	14333 Highway 13	Savage	MN	55378
Super 8 Motel	581 S Marschall Rd	Shakopee	MN	55379
The Landing – Minnesota River Heritage Park	2187 Highway 101 East	Shakopee	MN	55379
Travelodge Valleyfair	1251 1st Av E	Shakopee	MN	55379
Valley Plumbing	860 Quaker Avenue	Jordan	MN	55352
Valleyfair Amusement Park	1 Valley Fair Drive	Shakopee	MN	55379

COMMUNICATIONS				
Integra Phone Co.	4690 Colorado St SE	Prior Lake	MN	55372
Twin City Radio Control		Jordan	MN	55352

DAMS			
Ames	Sand Creek	MN	
Cedar Lake Diversion	Sand Creek	MN	
Cedar Lake Inlet	Sand Creek	MN	
Cedar Lake Outlet	Sand Creek - Tributary	MN	



DAMS			
Cynthia Lake	Porter Creek	MN	
Deboom	Minnesota River - Tributary	MN	
Dvorak F Pond	Sand Creek - Offstream Tributary	MN	
Henry Pond	Vermillion River - Tributary	MN	
Hilgenberg Pond	Minnesota River - Tributary	MN	
Jeffers Fish Pond	Pikes Lake - Tributary	MN	
Jeffers Upper Dam	Pikes Lake - Tributary	MN	
Jeffers Wildlife Pond	Pikes Lake - Tributary	MN	
Jordan Falls	Sand Creek	MN	
Jordan Mill Pond	Sand Creek	MN	
Maxa Pond	Vermillion River - Tributary	MN	
Pettit F Pond	Vermillion River - Offstream Tributary	MN	
Pleasant Lake Diversion	Sand Creek	MN	
Prior Lake	NA	MN	
Ruehlings Pond	Minnesota River - Tributary	MN	
Sunset Lake	Minnesota River - Tributary	MN	
Theis-Bendzick Pond	Sand Creek - Tributary	MN	
Vallez Fish Pond	Sand Creek - Tributary	MN	

EDUCATION FACILITIES				
Belle Plaine High School	220 S Market St.	Belle Plaine	MN	56011
Chatfield Elementary	330 S Market St.	Belle Plaine	MN	56011
Eagle Creek Elementary School	6855 Woodward Ave	Shakopee	MN	55379
Eagle Ridge Junior High	13955 Glendale Rd	Savage	MN	55378
Eagle View Elem. School	25600 Nevada Ave	Elko New Market	MN	55054
Edgewood Elementary	5304 Westwood DR SE	Prior Lake	MN	55372
Falcon Ridge Elementary School	1200 N Columbus Ave.	New Prague	MN	56071
Five Hawks Elementary.	16620 Five Hawks Ave SE	Prior Lake	MN	55372
Grainwood Elementary	5061 Minnesota ST SE	Prior Lake	MN	55372
Harriet Bishop Elementary	14400 O'Connell Rd	Savage	MN	55378
Hidden Oaks Middle School	15855 Fish Point RD SE	Prior Lake	MN	55372
Hidden Valley Elementary	13875 Glendale Ave.	Savage	MN	55378
Jeffers Pond Elementary	14800 Jeffers Pass	Prior Lake	MN	55372
Jordan ECFE	815 Sunset Drive	Jordan	MN	55352
Jordan Elementary	815 Sunset Drive	Jordan	MN	55352
Jordan High School	600 Sunset Drive	Jordan	MN	55352
Jordan Middle School	500 Sunset Drive	Jordan	MN	55352
Living Hope Lutheran School	150 W 130 <sup>th</sup> St	Shakopee	MN	55379

EDUCATION FACILITIES				
LNMV Area Catholic School	41 Church St	Elko New Market	MN	55054
M.W. Savage Elementary	4819 W 126 <sup>th</sup> St	Savage	MN	55378
New Prague Middle School	721 N Central Ave.	New Prague	MN	56071
New Prague School District Office	410 N Central Ave.	New Prague	MN	56071
New Prague Sr. High School	221 NE 12 <sup>th</sup> St.	New Prague	MN	56071
Oak Crest Elementary	1101 W Commerce Dr.	Belle Plaine	MN	56011
Our Lady of the Prairie School/Church	215 N Chestnut	Belle Plaine	MN	56011
Pearson Elementary	917 Dakota St S	Shakopee	MN	55379
Prior Lake Baptist School	5690 Credit River Rd.	Prior Lake	MN	55372
Raven Stream Elementary	300 11 <sup>th</sup> Ave NW	New Prague	MN	56071
Red Oak Elementary	7700 Old Carriage Ct	Shakopee	MN	55379
Shakopee Area Catholic School	305 S Scott St	Shakopee	MN	55379
Shakopee High School	100 17 <sup>th</sup> Ave W	Shakopee	MN	55379
Shakopee Jr. High School	200 10 <sup>th</sup> Ave E S	Shakopee	MN	55379
Shakopee Middle School	1137 Marschall Rd	Shakopee	MN	55379
Special Ed Extended School Year	4540 Tower St SE	Prior Lake	MN	55372
St Benedict School	24981 St Benedict Rd	New Prague	MN	56071
St. John the Baptist School	215 N. Broadway St.	Jordan	MN	55352
St John the Baptist School	12508 Lynn Ave S	Savage	MN	55378
St Michael Elementary School	16280 Duluth Ave SE	Prior Lake	MN	55372
St Paul's Lutheran School	5634 Luther Dr. SE	Prior Lake	MN	55372
Sun Path Elementary	2250 17 <sup>th</sup> Ave E	Shakopee	MN	55379
Sweeney Elementary	1001 Adams St S	Shakopee	MN	55379
Trinity Lutheran School and Church	500 W Church St.	Belle Plaine	MN	56011
Twin Oaks Middle School	15860 Fish Point Rd SE Prior Lake	Prior Lake	MN	55372
Westwood Elementary	5970 Westwood DR SE	Prior Lake	MN	55372

EMERGENCY SERVICES				
Belle Plaine Fire Department	700 East Main Street	Belle Plaine	MN	56011
Belle Plaine Police Department	420 East Main Street	Belle Plaine	MN	56011
Elko New Market Fire Department	601 Main Street	Elko New Market	MN	55054
Elko New Market Police Department	26518 France Avenue	Elko New Market	MN	55020
Jordan Fire Department	501 North Varner St	Jordan	MN	55352
Jordan Police Department	210 East 1st Street	Jordan	MN	55352

EMERGENCY SERVICES				
Mdewakanton Public Safety	2525 Flandreau Trail NW	Prior Lake	MN	55372
New Prague Fire Department	505 5 <sup>th</sup> Ave NW	New Prague	MN	56071
New Prague Police Department	118 Central Ave N #1	New Prague	MN	56071
Prior Lake Fire Department	16776 Fish Point Road	Prior Lake	MN	55372
Prior Lake Fire Department Station 2	3906 Station Place NW	Prior Lake	MN	55372
Prior Lake Police Department	4649 Dakota Street	Prior Lake	MN	55372
Savage Fire Department Station 1	12305 Quentin Ave	Savage	MN	55378
Savage Fire Department Station 2	14321 Oconnell Road	Savage	MN	55378
Savage Police Department	6000 Mccoll Drive	Savage	MN	55378
Scott County Sheriff's Office	301 Fuller Street South	Shakopee	MN	55379
Shakopee Fire Department 1	2700 Vierling Drive E	Shakopee	MN	55379
Shakopee Fire Department 2	1001 Vierling Drive W	Shakopee	MN	55379
Shakopee Mdewakanton Sioux Community Fire Department and EMS	2525 Flandreau Trail NW	Prior Lake	MN	55372
Shakopee Police Department	475 Gorman Street	Shakopee	MN	55379

ENERGY				
Master Electric Co. Inc.	8555 123 <sup>rd</sup> St	Savage	MN	55378
Minnesota Valley Electric Cooperative	125 Minnesota Valley Electric Dr.	Jordan	MN	55352
New Prague Electric Line Building	200 7 <sup>th</sup> Street NW	New Prague	MN	56071

GOVERNMENT FACILITIES				
Administration Bldg St Patrick Social Hall	24425 Old Hwy 13 Blvd	Jordan	MN	55352
Belle Plaine District Offices	130 S Willow St.	Belle Plaine	MN	56011
Belle Plaine Public Works	420 E Main	Belle Plaine	MN	56011
Belle Plaine Library		Belle Plaine	MN	56011
Belle Plain Twp Admin Bldg	25130 Hickory Blvd.	Belle Plaine	MN	56011
Blakeley Twp Township Hall	15016 250 ST W	Belle Plaine	MN	56011
CAP Agency	712 S Canterbury Rd	Shakopee	MN	55379
Central Family Center (District Office)	505 S Holmes St	Shakopee	MN	55379
City Clerk Facility	18551 Redwing Tr	Shakopee	MN	55379
City of Belle Plaine	218 North Meridian St.	Belle Plaine	MN	56011
City of Prior Lake	4646 Dakota Street SE	Prior Lake	MN	55372
Credit River Twp Admin Bldg	18985 Meadow View Blvd.	Prior Lake	MN	55372

GOVERNMENT FACILITIES				
Elko New Market City Hall	601 Main Street	Elko New Market	MN	55054
Elko New Market Public Works	100 Webster St	Elko New Market	MN	55054
Helena Township Administration	27466 Delmar Ave	New Prague	MN	56071
Highway Dept. Garage	22331 Union Trail	Belle Plaine	MN	56011
Jackson Twp Admin Bldg	1090 130 <sup>th</sup> St.	Shakopee	MN	55379
Jordan City Hall	210 1 <sup>st</sup> Street East #1	Jordan	MN	55352
Jordan Public Works	903 Syndicate Street	Jordan	MN	55352
Juvenile Facility Law Enforcement	17681 Valley View	Jordan	MN	55352
Law Enforcement Center	301 South Fuller Street	Shakopee	MN	55379
Library Admin. Offices	13090 Alabama Ave South	Savage	MN	55378
Louisville Twp Admin Bldg	92 Mallard Dr.	Louisville Township	MN	55379
Mdewakanton Sioux Community Administration Facility	2330 Sioux Trail N.W.	Prior Lake	MN	55372
Mn Dept Of Natural Resources		Jordan	MN	55352
New Market Twp Admin Bldg	8950 230 <sup>th</sup> St.	Lakeville	MN	55044
New Prague City Hall	118 Central Ave. N	New Prague	MN	56071
New Prague Generation Plant	300 E. Main St.	New Prague	MN	56071
New Prague Public Works	507 12 <sup>th</sup> Street NE	New Prague	MN	56071
Prior Lake Library	16200 Erie Av	Prior Lake	MN	55372
Prior Lake Maintenance Center	17073 Adelmann St	Prior Lake	MN	55372
Public Safety Training Facility	17681 Valley View	Jordan	MN	55352
Public Works Central Shop	600 Country Trail East	Jordan	MN	55352
Savage City Hall	6000 McColl Drive	Savage	MN	55378
Savage Public Works	13800 Dakota Ave	Savage	MN	55378
Scott County Justice Center/Courthouse	200 4 <sup>th</sup> Avenue West	Shakopee	MN	55379
Shakopee City Hall	129 Holmes Street S.	Shakopee	MN	55379
Shakopee Community Center	1255 S Fuller St	Shakopee	MN	55379
Shakopee Public Utilities	255 S Sarazin St	Shakopee	MN	55379
Shakopee Public Works	500 S Gorman St	Shakopee	MN	55379
Spring Lake Township Town Hall	20381 Fairlawn Avenue	Prior Lake	MN	55372
St Lawrence Township Hall	7500 Old Hwy 169 Blvd	Jordan	MN	55352
SWCD & Extension Center- Agriculture	7151 190th St. W.	Jordan	MN	55352
Warehouse & Transit	828 1st Ave East	Shakopee	MN	55379
Work Force Development Ctr	719 Canterbury Rd	Shakopee	MN	55379



HEALTHCARE AND PUBLIC HEALTH				
Allina Health Dean Lakes Clinic	4201 Dean Lakes Blvd	Shakopee	MN	55379
Allina Health Savage Clinic	6350 143 <sup>rd</sup> Street	Savage	MN	55378
Allina Health Shakopee Clinic	1601 St. Francis Ave	Shakopee	MN	55379
Allina SC Ambulance Service	8085 124 <sup>th</sup> St.	Savage	MN	55378
Crossroads Medical Ctr	1335 E 10 <sup>th</sup> Ave	Shakopee	MN	55379
CVS Minute Clinic	4050 Deans Lakes Blvd	Shakopee	MN	55379
Fairview Clinic – Prior Lake	4151 Willowwood St. NE	Prior Lake	MN	55372
Fairview Clinic – Savage	5725 Loftus Lane	Savage	MN	55378
Friendship Manor Nursing Home	1340 W 3 <sup>rd</sup> Av	Shakopee	MN	55379
Lutheran Home	611 West Main St	Belle Plaine	MN	56011
Mala Strana Health Care Center	1001 Columbus Ave N	New Prague	MN	56071
Mayo Clinic Health System Clinic – Belle Plaine	700 W. Prairie Street	Belle Plaine	MN	56011
Belle Plaine Clinic	700 Prairie St W	Belle Plaine	MN	56011
Mayo Clinic Health System Clinic – New Prague	212 County Road 37	New Prague	MN	56071
Mayo Clinic Health System Express Clinic – New Prague	200 Alton Ave SE	New Prague	MN	56071
Mayo Clinic Health System Hospital	301 2 <sup>nd</sup> St NE	New Prague	MN	56071
New Prague Medical Clinic	301 E Main St.	New Prague	MN	56071
Park Nicollet Clinic – Prior Lake	4670 Park Nicollet Ave SE	Prior Lake	MN	55372
Park Nicollet Clinic – Shakopee	1415 St. Francis Ave	Shakopee	MN	55379
Parkview Medical Clinic	1400 NE 1 <sup>st</sup> St	New Prague	MN	56071
Shakopee Dakota Mystic Clinic/Urgent Care	2400 Mystic Lake Drive	Prior Lake	MN	55372
Shakopee Friendship Manor	1340 Third Avenue W	Shakopee	MN	55379
St. Francis Regional Medical Center	1455 St Francis Avenue	Shakopee	MN	55379
St. Francis Health Services Clinic	265 Creek Lane S.	Jordan	MN	55352
St. Gertrude's Health Center	1850 Sarazin Street	Shakopee	MN	55379
St. Mary's Clinic	505 Holmes Street	Shakopee	MN	55379
The Lutheran Home-Nursing	611 Main St W	Belle Plaine	MN	56011
Valley View Assisted Living	4061 W 173rd St	Jordan	MN	55352

MANUFACTURING				
BF Nelson Corp.	12900 Eagle Creek Parkway	Savage	MN	55378
Continental Machines Inc.	5505 123 <sup>rd</sup> St.	Savage	MN	55378
Fabcon Inc.	6111 Highway 13	Savage	MN	55378
Silgan Container Corp.	12130 Lynn Ave.	Savage	MN	55378

## NATIONAL MONUMENTS & ICONS

Brewery Ruins	415 S. Broadway Street	Jordan	MN	55352
Carriage House	410 Cedar St N.	Belle Plaine	MN	56011
Early Shakopee Residences	419 E. 2 <sup>nd</sup> Ave.	Shakopee	MN	55379
Gopher State Railway Museum		New Prague	MN	56071
Hooper-Bowler-Hillstrom House	410 Cedar St N.	Belle Plaine	MN	56011
Inyan Ceyaka Otonwe (Native American Historical Site – address restricted)				
Julius A. Coller House	434 S. Lewis St.	Shakopee	MN	55379
Maka Yusota (Boiling Springs)	12790 Independence Ave	Savage	MN	55378
Shakopee Historic District	1st Ave.	Shakopee	MN	55379
Strunk-Nyssen House	1120 Chaparral Ave	Shakopee	MN	55379

## POSTAL AND SHIPPING

Belle Plaine Post Office	233 N. Meridian St.	Belle Plaine	MN	56011
Elko Post Office	26516 France Ave			
Jordan Post Office	214 2 <sup>nd</sup> Street E	Jordan	MN	55352
New Market Post Office	14 Church Street			
New Prague Post Office	124 Main Street E.	New Prague	MN	56071
Prior Lake Post Office	4455 Village Lake Dr. S.	Prior Lake	MN	55372
Savage Post Office	6100 McColl Drive	Savage	MN	55378
Shakopee Post Office	135 Sommerville St. S.	Shakopee	MN	55379

## WATER

Belle Plaine Wastewater Plant	22360 Union Trail	Belle Plaine	MN	56011
Belle Plaine Water Plant	801 Prairie St	Belle Plaine	MN	56011
Blue Lake Wastewater Treatment Facility	6957 Hwy 101	Shakopee	MN	55379
Elko New Market Water Plant	25630 Co Rd 91	Elko New Market	MN	55054
Jordan Wastewater Plant	903 Syndicate Street	Jordan	MN	55352
Jordan Water Plant	105 ½ 4 <sup>th</sup> Street W	Jordan	MN	55352
New Prague Wastewater Plant	601 NE 12 <sup>th</sup> St	New Prague	MN	56071
New Prague Water Booster Station	1001 10 <sup>th</sup> Ave. SE	New Prague	MN	56071
New Prague Water Booster Station	210 10 <sup>th</sup> Street SE	New Prague	MN	56071
New Prague Water Plant	305 Lexington Ave. S.	New Prague	MN	56071
New Prague Water Tower #1	1204 NE Highview	New Prague	MN	56071
New Prague Water Tower #2	1000 NW 4 <sup>th</sup> St.	New Prague	MN	56071
Prior Lake Water Plant	16335 Itasca Av SE	Prior Lake	MN	55372

WATER				
Prior Lake Well Houses #3	16341 Itasca St SE	Prior Lake	MN	55372
Prior Lake Well Houses #4	16343 Itasca St SE	Prior Lake	MN	55372
Prior Lake Well Houses #5	5500 Bounty St SE	Prior Lake	MN	55372
Prior Lake Well Houses #6	15250 Wilds Parkway	Prior Lake	MN	55372
Prior Lake Well Houses #7	16343 Itasca AV	Prior Lake	MN	55372
Prior Lake Well Houses #8 & #9	17081 Adelmann St SE	Prior Lake	MN	55372
Savage Water Plant I	13800 Dakota Ave	Savage	MN	55378
Savage Water Plant III	8100 Foxberry Bay Rd.	Savage	MN	55378
Water outlet structure on Prior Lake	15287 Edinborough Ave	Prior Lake	MN	55372

*This page is intentionally left blank*



# **Appendix C**

## **Scott County Hazard Events**

The National Climatic Data Center Database was queried for all notable events since 1950. However, some categories of events do not have records prior to 1996. Data was available through September of 2015.

Table C - 1. All tornadoes recorded by NCDC, 1950-September 2015

Location or County	Date	Magnitude	Deaths	Injuries	Property Damage
1. Blakeley	6/10/2012	EF0	0	0	\$250,000
2. St Patrick	6/26/2010	EF0	0	0	0
3. Belle Plaine	8/3/2002	F0	0	0	0
4. New Market	6/11/2001	F1	0	0	\$50,000
5. Belle Plaine	5/9/2001	F0	0	0	0
6. New Prague	5/9/2001	F0	0	0	0
7. New Prague	5/9/2001	F0	0	0	0
8. New Market	5/9/2001	F0	0	0	0
9. Blakeley	7/30/1999	F0	0	0	0
10. Belle Plaine	7/30/1999	F1	0	0	0
11. Lydia	7/30/1999	F0	0	0	0
12. Savage	6/5/1999	F0	0	0	0
13. Savage	8/22/1998	F0	0	0	0
14. Lydia	7/21/1995	F1	0	0	0
15. Scott County	5/21/1977	F2	0	0	\$250,000
<b>Highest Value Property Damage:</b>					<b>\$250,000</b>

Table C - 2. All severe hail storm events recorded by NCDC, 1950-September 2015

Location Or County	Date	Type	Size in Inches	Deaths	Injuries	Property Damage
16. Shakopee	6/29/2015	Hail	1	0	0	0
17. Prior Lake	6/29/2015	Hail	1.5	0	0	0
18. Elko New Market	6/22/2015	Hail	1.75	0	0	0
19. Elko New Market	6/22/2015	Hail	1	0	0	0
20. Savage	5/3/2015	Hail	0.88	0	0	0
21. Shakopee	7/7/2014	Hail	1.75	0	0	0
22. Prior Lake	5/7/2014	Hail	0.75	0	0	0
23. Elko New Market	5/7/2014	Hail	0.75	0	0	0
24. Jordan	5/7/2014	Hail	1	0	0	0
25. New Prague	8/21/2013	Hail	0.75	0	0	0
26. Jordan	8/21/2013	Hail	0.75	0	0	0
27. Prior Lake	8/6/2013	Hail	1	0	0	0
28. St Benedict	6/21/2013	Hail	1	0	0	0
29. Belle Plaine	6/19/2012	Hail	1	0	0	0
30. New Prague	6/17/2012	Hail	1.75	0	0	0
31. Belle Plaine	6/14/2012	Hail	0.75	0	0	0

Location Or County	Date	Type	Size in Inches	Deaths	Injuries	Property Damage
32. Blakeley	6/14/2012	Hail	0.75	0	0	0
33. Shakopee	6/14/2012	Hail	0.75	0	0	0
34. Belle Plaine	6/14/2012	Hail	0.75	0	0	0
35. Merriam	5/27/2012	Hail	1	0	0	0
36. Jordan	5/27/2012	Hail	1	0	0	0
37. Belle Plaine	5/27/2012	Hail	0.75	0	0	0
38. Prior Lake	5/19/2012	Hail	0.75	0	0	0
39. Savage	5/19/2012	Hail	0.75	0	0	0
40. Shakopee	5/19/2012	Hail	1	0	0	0
41. Prior Lake	5/6/2012	Hail	0.75	0	0	0
42. Prior Lake	5/6/2012	Hail	0.88	0	0	0
43. Spring Lake	5/6/2012	Hail	0.75	0	0	0
44. Spring Lake	4/2/2012	Hail	0.88	0	0	0
45. Prior Lake	4/2/2012	Hail	0.75	0	0	0
46. New Market	8/6/2011	Hail	0.88	0	0	0
47. New Prague	7/23/2011	Hail	1	0	0	0
48. Prior Lake	5/28/2011	Hail	0.88	0	0	0
49. Spring Lake	5/28/2011	Hail	0.88	0	0	0
50. St Benedict	5/28/2011	Hail	1	0	0	0
51. Credit River	5/28/2011	Hail	0.88	0	0	0
52. Blakeley	5/28/2011	Hail	1	0	0	0
53. Merriam	5/10/2011	Hail	0.88	0	0	0
54. Shakopee	5/9/2011	Hail	0.88	0	0	0
55. Shakopee	5/9/2011	Hail	0.75	0	0	0
56. New Market	7/14/2010	Hail	1	0	0	0
57. Blakeley	7/22/2009	Hail	0.88	0	0	0
58. New Prague	7/11/2008	Hail	0.88	0	0	0
59. Belle Plaine	7/11/2008	Hail	0.75	0	0	0
60. Belle Plaine	7/11/2008	Hail	0.75	0	0	0
61. Prior Lake	7/10/2008	Hail	0.75	0	0	0
62. Prior Lake	7/10/2008	Hail	1	0	0	0
63. Shakopee	7/10/2008	Hail	1	0	0	0
64. Belle Plaine	5/30/2008	Hail	1	0	0	0
65. Prior Lake	5/29/2008	Hail	0.8	0	0	0
66. Prior Lake	5/29/2008	Hail	0.75	0	0	0
67. Belle Plaine	5/29/2008	Hail	1.75	0	0	0
68. Blakeley	5/29/2008	Hail	1	0	0	0
69. Lydia	8/13/2007	Hail	1.5	0	0	0
70. Prior Lake	8/11/2007	Hail	0.88	0	0	0
71. Shakopee	8/11/2007	Hail	0.88	0	0	0
72. Lydia	8/11/2007	Hail	0.75	0	0	0
73. Jordan	8/11/2007	Hail	1	0	0	0
74. Shakopee	8/11/2007	Hail	0.75	0	0	0
75. Elko	7/3/2007	Hail	1.75	0	0	0
76. Belle Plaine	6/21/2007	Hail	0.75	0	0	0
77. New Prague	6/20/2007	Hail	1	0	0	0
78. New Prague	6/20/2007	Hail	1.75	0	0	0
79. Belle Plaine	6/20/2007	Hail	1.25	0	0	0
80. New Prague	6/20/2007	Hail	1.75	0	0	0
81. New Prague	6/20/2007	Hail	2.75	0	0	0
82. New Prague	6/20/2007	Hail	1	0	0	0

Location Or County	Date	Type	Size in Inches	Deaths	Injuries	Property Damage
83. Elko	6/20/2007	Hail	0.75	0	0	0
84. Elko	6/20/2007	Hail	1.5	0	0	0
85. New Prague	6/20/2007	Hail	1.75	0	0	0
86. Jordan	6/20/2007	Hail	0.88	0	0	0
87. Elko	6/20/2007	Hail	1.75	0	0	0
88. Jordan	6/20/2007	Hail	1.75	0	0	0
89. Prior Lake	6/20/2007	Hail	1	0	0	0
90. Shakopee	6/20/2007	Hail	0.88	0	0	0
91. New Prague	10/3/2006	Hail	0.88	0	0	0
92. New Prague	10/3/2006	Hail	0.75	0	0	0
93. New Prague	10/3/2006	Hail	0.88	0	0	0
94. New Prague	10/3/2006	Hail	1	0	0	0
95. New Prague	10/3/2006	Hail	0.88	0	0	0
96. New Market	8/24/2006	Hail	3	0	0	0
97. New Market	8/24/2006	Hail	3	0	0	0
98. Elko	8/24/2006	Hail	1.75	0	0	0
99. Prior Lake	8/24/2006	Hail	0.75	0	0	0
100. Jordan	8/24/2006	Hail	1.75	0	0	0
101. New Prague	8/24/2006	Hail	2.75	0	0	0
102. New Prague	8/24/2006	Hail	1.75	0	0	0
103. New Prague	8/24/2006	Hail	4.25	0	0	\$10,000,000
104. Belle Plaine	8/24/2006	Hail	3	0	0	0
105. New Prague	8/24/2006	Hail	1.75	0	0	0
106. Belle Plaine	8/24/2006	Hail	1.75	0	0	0
107. Elko	6/24/2006	Hail	1	0	0	0
108. New Market	6/24/2006	Hail	0.75	0	0	0
109. Lydia	6/24/2006	Hail	1.5	0	0	0
110. Jordan	6/24/2006	Hail	0.88	0	0	0
111. Marystown	4/18/2006	Hail	0.75	0	0	0
112. Belle Plaine	4/18/2006	Hail	0.75	0	0	0
113. Prior Lake	9/21/2005	Hail	0.75	0	0	0
114. New Prague	9/3/2005	Hail	0.75	0	0	0
115. St Benedict	8/9/2005	Hail	1.75	0	0	0
116. Belle Plaine	8/9/2005	Hail	1	0	0	0
117. Prior Lake	6/13/2005	Hail	1	0	0	0
118. New Prague	6/13/2005	Hail	0.75	0	0	0
119. Prior Lake	6/8/2005	Hail	0.88	0	0	0
120. Belle Plaine	6/8/2005	Hail	1	0	0	0
121. New Prague	8/24/2006	Hail	2.75	0	0	0
122. Shakopee	6/7/2005	Hail	0.75	0	0	0
123. Prior Lake	6/7/2005	Hail	1	0	0	0
124. Shakopee	10/29/2004	Hail	0.75	0	0	0
125. Shakopee	8/1/2004	Hail	1	0	0	0
126. Belle Plaine	5/9/2004	Hail	1	0	0	0
127. Jordan	5/9/2004	Hail	0.88	0	0	0
128. Belle Plaine	5/9/2004	Hail	0.75	0	0	0
129. Prior Lake	5/9/2004	Hail	0.75	0	0	0
130. Prior Lake	5/9/2004	Hail	1	0	0	0
131. Shakopee	4/18/2004	Hail	0.75	0	0	0
132. Prior Lake	7/14/2003	Hail	1.25	0	0	0
133. New Market	4/15/2003	Hail	1	0	0	0



Location Or County	Date	Type	Size in Inches	Deaths	Injuries	Property Damage
134. Jordan	9/1/2002	Hail	1	0	0	0
135. Shakopee	8/16/2002	Hail	0.88	0	0	0
136. Prior Lake	8/3/2002	Hail	0.75	0	0	0
137. New Market	7/28/2002	Hail	1	0	0	0
138. Belle Plaine	7/28/2002	Hail	0.88	0	0	0
139. New Prague	7/28/2002	Hail	0.75	0	0	0
140. Blakeley	6/10/2002	Hail	0.75	0	0	0
141. New Market	5/8/2002	Hail	0.75	0	0	0
142. New Market	5/5/2002	Hail	0.75	0	0	0
143. Belle Plaine	5/5/2002	Hail	0.75	0	0	0
144. Savage	4/18/2002	Hail	1	0	0	0
145. Shakopee	4/18/2002	Hail	0.88	0	0	0
146. Jordan	4/18/2002	Hail	0.75	0	0	0
147. Savage	6/18/2001	Hail	0.75	0	0	0
148. Prior Lake	6/11/2001	Hail	1.75	0	0	\$500,000
149. Savage	6/11/2001	Hail	0.75	0	0	0
150. Savage	6/1/2001	Hail	0.88	0	0	0
151. Jordan	5/1/2001	Hail	0.75	0	0	0
152. Prior Lake	9/2/2000	Hail	0.75	0	0	0
153. Savage	9/2/2000	Hail	0.75	0	0	0
154. Savage	9/7/1999	Hail	0.75	0	0	0
155. Belle Plaine	6/6/1999	Hail	1.75	0	0	0
156. Shakopee	6/5/1999	Hail	0.88	0	0	0
157. Shakopee	6/5/1999	Hail	3	0	0	0
158. Shakopee	6/5/1999	Hail	2.75	0	0	0
159. Blakeley	8/23/1998	Hail	0.75	0	0	0
160. Shakopee	8/22/1998	Hail	1	0	0	0
161. Prior Lake	8/9/1998	Hail	0.75	0	0	0
162. Belle Plaine	6/26/1998	Hail	0.88	0	0	0
163. New Prague	6/26/1998	Hail	1.75	0	0	0
164. Jordan	5/18/1998	Hail	0.75	0	0	0
165. Shakopee	5/15/1998	Hail	0.75	0	0	0
166. Savage	5/15/1998	Hail	1.75	0	0	0
167. Savage	5/15/1998	Hail	0.75	0	0	0
168. Prior Lake	5/15/1998	Hail	2	0	0	0
169. New Prague	5/15/1998	Hail	0.88	0	0	0
170. Prior Lake	10/6/1997	Hail	0.75	0	0	0
171. Savage	9/8/1997	Hail	1	0	0	0
172. Spring Lake	8/15/1997	Hail	1.75	0	0	0
173. Jordan	8/15/1997	Hail	1.75	0	0	0
174. Lydia	8/15/1997	Hail	1.75	0	0	0
175. Savage	7/13/1997	Hail	1.75	0	0	0
176. Shakopee	7/13/1997	Hail	1.75	0	0	0
177. Prior Lake	7/1/1997	Hail	1	0	0	0
178. Jordan	7/1/1997	Hail	2	0	0	0
179. Lydia	7/1/1997	Hail	0.75	0	0	0
180. Marystown	7/1/1997	Hail	1	0	0	0
181. Shakopee	7/1/1997	Hail	1.25	0	0	0
182. Jordan	7/1/1997	Hail	0.88	0	0	0
183. Jordan	7/1/1997	Hail	0.88	0	0	0
184. Marystown	6/28/1997	Hail	2	0	0	0

Location Or County	Date	Type	Size in Inches	Deaths	Injuries	Property Damage
185. St Patrick	10/16/1996	Hail	0.75	0	0	0
186. Prior Lake	6/6/1996	Hail	0.75	0	0	0
187. New Prague	7/21/1995	Hail	1	0	0	0
188. Prior Lake	7/7/1994	Hail	1	0	0	0
189. Shakopee	7/7/1994	Hail	1	0	0	0
190. Prior Lake	6/30/1994	Hail	1.75	0	0	0
191. Shakopee	6/30/1994	Hail	1.75	0	0	0
192. Savage	9/13/1993	Hail	1	0	0	0
193. Scott County	8/1/1992	Hail	1.75	0	0	0
194. Scott County	6/12/1990	Hail	0.75	0	0	0
195. Scott County	3/31/1986	Hail	0.75	0	0	0
196. Scott County	5/30/1985	Hail	1.75	0	0	0
197. Scott County	4/20/1985	Hail	1	0	0	0
198. Scott County	4/20/1985	Hail	1.75	0	0	0
199. Scott County	7/9/1984	Hail	0.75	0	0	0
200. Scott County	4/29/1981	Hail	1.75	0	0	0
201. Scott County	8/19/1980	Hail	1.75	0	0	0
202. Scott County	6/7/1980	Hail	1	0	0	0
203. Scott County	3/16/1980	Hail	1	0	0	0
204. Scott County	5/23/1977	Hail	1.75	0	0	0
205. Scott County	5/20/1975	Hail	0.75	0	0	0
206. Scott County	7/29/1973	Hail	2.5	0	0	0
207. Scott County	7/17/1956	Hail	1.75	0	0	0
208. Scott County	6/19/1956	Hail	3	0	0	0
<b>Highest Value Property Damage:</b>						<b>\$10,000,000</b>

Table C - 3. All severe thunderstorm wind events recorded by NCDC, 1950-September 2015

Location or County	Date	Type	Magnitude (knots)	Deaths	Injuries	Property Damage
209. Marystown	7/17/2015	Thunderstorm Wind	61	0	0	\$100,000
210. New Prague	7/17/2015	Thunderstorm Wind	52	0	0	0
211. Marystown	7/12/2015	Thunderstorm Wind	52	0	0	0
212. Shakopee	7/12/2015	Thunderstorm Wind	52	0	0	0
213. Savage	7/7/2014	Thunderstorm Wind	52	0	0	0
214. Elko New Market	5/8/2014	Thunderstorm Wind	52	0	0	0
215. Prior Lake	7/9/2013	Thunderstorm Wind	52	0	0	0
216. Savage	6/21/2013	Thunderstorm Wind	52	0	0	0
217. Elko New Market	5/19/2013	Thunderstorm Wind	52	0	0	0
218. Savage	8/3/2012	Thunderstorm Wind	52	0	0	0
219. Savage	6/19/2012	Thunderstorm Wind	55	0	0	0
220. Spring Lake	6/19/2012	Thunderstorm Wind	56	0	0	0
221. Spring Lake	6/19/2012	Thunderstorm Wind	52	0	0	0
222. New Prague	6/19/2012	Thunderstorm Wind	70	0	0	0
223. Belle Plaine	6/19/2012	Thunderstorm Wind	72	0	0	0
224. Belle Plaine	6/19/2012	Thunderstorm Wind	65	0	0	0

Location or County	Date	Type	Magnitude (knots)	Deaths	Injuries	Property Damage
225. Blakeley	6/19/2012	Thunderstorm Wind	57	0	0	0
226. St Patrick	6/17/2012	Thunderstorm Wind	50	0	0	0
227. New Prague	6/10/2012	Thunderstorm Wind	50	0	0	0
228. Jordan	6/10/2012	Thunderstorm Wind	56	0	0	\$5,000
229. Spring Lake	5/23/2012	Thunderstorm Wind	51	0	0	0
230. St Benedict	5/23/2012	Thunderstorm Wind	62	0	0	\$2,000
231. Belle Plaine	7/10/2011	Thunderstorm Wind	63	0	0	0
232. Prior Lake	7/10/2011	Thunderstorm Wind	52	0	0	\$5,000
233. Jordan	7/10/2011	Thunderstorm Wind	52	0	0	\$35,000
234. Jordan	7/1/2011	Thunderstorm Wind	52	0	0	0
235. Credit River	7/14/2010	Thunderstorm Wind	61	0	0	\$25,000
236. Belle Plaine	6/26/2010	Thunderstorm Wind	63	0	0	0
237. Blakeley	6/26/2010	Thunderstorm Wind	52	0	0	0
238. Shakopee	7/11/2008	Thunderstorm Wind	50	0	0	0
239. Merriam	7/10/2008	Thunderstorm Wind	55	0	0	0
240. Savage	7/10/2008	Thunderstorm Wind	60	0	0	0
241. Lawrence	7/10/2008	Thunderstorm Wind	61	0	0	0
242. Merriam	7/9/2008	Thunderstorm Wind	55	0	0	0
243. Prior Lake	9/24/2007	Thunderstorm Wind	50	0	0	0
244. Savage	8/28/2007	Thunderstorm Wind	50	0	0	0
245. Prior Lake	8/28/2007	Thunderstorm Wind	55	0	0	0
246. New Prague	6/20/2007	Thunderstorm Wind	54	0	0	0
247. Elko	8/24/2006	Thunderstorm Wind	55	0	0	0
248. Shakopee	7/13/2006	Thunderstorm Wind	55	0	0	0
249. Shakopee	6/16/2006	Thunderstorm Wind	55	0	0	0
250. Shakopee	9/12/2005	Thunderstorm Wind	52	0	0	0
251. New Prague	9/3/2005	Thunderstorm Wind	52	0	0	0
252. Prior Lake	6/24/2005	Thunderstorm Wind	52	0	0	0
253. St Patrick	6/24/2005	Thunderstorm Wind	55	0	0	0
254. New Prague	6/24/2005	Thunderstorm Wind	56	0	0	0
255. Belle Plaine	6/24/2005	Thunderstorm Wind	58	0	0	0
256. Prior Lake	6/20/2005	Thunderstorm Wind	52	0	0	0
257. Shakopee	6/20/2005	Thunderstorm Wind	52	0	0	0
258. Savage	6/8/2005	Thunderstorm Wind	52	0	0	0
259. Belle Plaine	6/8/2005	Thunderstorm Wind	52	0	0	0
260. Prior Lake	5/8/2005	Thunderstorm Wind	50	0	0	0
261. New Prague	5/8/2005	Thunderstorm Wind	55	0	0	0
262. New Prague	6/23/2004	Thunderstorm Wind	63	0	0	0
263. Belle Plaine	6/23/2004	Thunderstorm Wind	53	0	0	0
264. Belle Plaine	5/9/2004	Thunderstorm Wind	55	0	0	0
265. Shakopee	5/9/2004	Thunderstorm Wind	50	0	0	0
266. Prior Lake	4/18/2004	Thunderstorm Wind	61	0	0	0
267. Prior Lake	7/4/2003	Thunderstorm Wind	52	0	0	0
268. Shakopee	7/4/2003	Thunderstorm Wind	52	0	0	0
269. Spring Lake	6/24/2003	Thunderstorm Wind	55	0	0	0
270. Belle Plaine	8/16/2002	Thunderstorm Wind	52	0	0	0
271. New Prague	8/16/2002	Thunderstorm Wind	70	0	0	\$50,000
272. Belle Plaine	8/16/2002	Thunderstorm Wind	50	0	0	0
273. New Prague	8/3/2002	Thunderstorm Wind	62	0	0	\$40,000
274. Lydia	8/3/2002	Thunderstorm Wind	50	0	0	0
275. Blakeley	8/29/2001	Thunderstorm Wind	60	0	0	0

Location or County	Date	Type	Magnitude (knots)	Deaths	Injuries	Property Damage
276. New Prague	6/13/2001	Thunderstorm Wind	61	0	0	0
277. New Market	6/13/2001	Thunderstorm Wind	50	0	0	0
278. New Prague	6/11/2001	Thunderstorm Wind	52	0	0	\$5,000
279. Belle Plaine	6/11/2001	Thunderstorm Wind	55	0	0	0
280. Elko	7/30/1999	Thunderstorm Wind	55	0	0	0
281. Prior Lake	6/22/1999	Thunderstorm Wind	55	0	0	0
282. Shakopee	6/6/1999	Thunderstorm Wind	50	0	0	0
283. Shakopee	8/22/1998	Thunderstorm Wind	52	0	0	0
284. Savage	8/22/1998	Thunderstorm Wind	52	0	0	0
285. Shakopee	7/14/1998	Thunderstorm Wind	50	0	0	0
286. New Prague	6/26/1998	Thunderstorm Wind	61	0	0	0
287. Jordan	6/24/1998	Thunderstorm Wind	61	0	0	0
288. Belle Plaine	6/24/1998	Thunderstorm Wind	61	0	0	0
289. New Market	5/30/1998	Thunderstorm Wind	65	0	0	0
290. Savage	5/30/1998	Thunderstorm Wind	85	0	0	0
291. Prior Lake	5/30/1998	Thunderstorm Wind	85	0	0	\$17,600,000
292. Shakopee	5/30/1998	Thunderstorm Wind	60	0	0	0
293. Belle Plaine	5/30/1998	Thunderstorm Wind	65	0	0	0
294. Savage	5/15/1998	Thunderstorm Wind	61	0	0	\$170,000,000
295. Spring Lake	8/15/1997	Thunderstorm Wind	52	0	0	0
296. Prior Lake	8/15/1997	Thunderstorm Wind	55	0	0	0
297. Jordan	8/15/1997	Thunderstorm Wind	55	0	0	0
298. Savage	7/13/1997	Thunderstorm Wind	61	0	0	0
299. Shakopee	7/13/1997	Thunderstorm Wind	65	0	0	0
300. Belle Plaine	7/13/1997	Thunderstorm Wind	60	0	0	0
301. Jordan	7/13/1997	Thunderstorm Wind	61	0	0	0
302. Belle Plaine	7/13/1997	Thunderstorm Wind	61	0	0	0
303. Belle Plaine	7/13/1997	Thunderstorm Wind	61	0	0	0
304. Elko	6/28/1997	Thunderstorm Wind	50	0	0	0
305. Shakopee	8/6/1996	Thunderstorm Wind	50	0	0	0
306. Lydia	8/6/1996	Thunderstorm Wind	55	0	0	0
307. Lydia	6/29/1996	Thunderstorm Wind	60	0	0	0
308. New Prague	5/19/1996	Thunderstorm Wind	55	0	0	0
309. Prior Lake	5/19/1996	Thunderstorm Wind	70	0	0	0
310. Belle Plaine	5/19/1996	Thunderstorm Wind	70	0	0	0
311. Jordan	7/7/1994	Thunderstorm Wind	0	0	0	0
312. Belle Plaine	7/5/1994	Thunderstorm Wind	0	0	0	0
313. Scott County	8/1/1992	Thunderstorm Wind	0	0	0	0
314. Scott County	6/16/1992	Thunderstorm Wind	0	0	0	0
315. Scott County	6/30/1991	Thunderstorm Wind	0	0	0	0
316. Scott County	5/28/1991	Thunderstorm Wind	0	0	0	0
317. Scott County	4/29/1991	Thunderstorm Wind	0	0	0	0
318. Scott County	6/12/1990	Thunderstorm Wind	0	0	0	0
319. Scott County	5/24/1989	Thunderstorm Wind	61	0	0	0
320. Scott County	7/27/1987	Thunderstorm Wind	0	0	0	0
321. Scott County	7/27/1987	Thunderstorm Wind	0	0	0	0
322. Scott County	6/28/1987	Thunderstorm Wind	0	0	0	0
323. Scott County	5/13/1987	Thunderstorm Wind	0	0	0	0
324. Scott County	4/26/1986	Thunderstorm Wind	0	0	0	0
325. Scott County	7/3/1983	Thunderstorm Wind	0	0	0	0
326. Scott County	8/31/1982	Thunderstorm Wind	0	0	0	0



Location or County	Date	Type	Magnitude (knots)	Deaths	Injuries	Property Damage
327. Scott County	8/31/1982	Thunderstorm Wind	0	0	0	0
328. Scott County	6/14/1981	Thunderstorm Wind	0	0	0	0
329. Scott County	6/13/1981	Thunderstorm Wind	65	0	0	0
330. Scott County	9/3/1980	Thunderstorm Wind	61	0	0	0
331. Scott County	9/3/1980	Thunderstorm Wind	70	0	0	0
332. Scott County	8/19/1980	Thunderstorm Wind	70	0	0	0
333. Scott County	8/19/1980	Thunderstorm Wind	65	0	0	0
334. Scott County	7/15/1980	Thunderstorm Wind	90	0	0	0
335. Scott County	6/7/1980	Thunderstorm Wind	0	0	0	0
336. Scott County	5/17/1979	Thunderstorm Wind	0	0	0	0
337. Scott County	5/17/1979	Thunderstorm Wind	52	0	0	0
338. Scott County	5/20/1975	Thunderstorm Wind	50	0	0	0
339. Scott County	7/29/1973	Thunderstorm Wind	68	0	0	0
340. Scott County	7/16/1965	Thunderstorm Wind	0	0	0	0
341. Scott County	5/23/1964	Thunderstorm Wind	60	0	0	0
<b>Highest Value Property Damage:</b>						<b>\$170,000,000</b>

Table C - 4. All extreme flood events recorded by NCDC, 1997-September 2015

Location or County	Date	Type	Deaths	Injuries	Property Damage
342. Belle Plaine	6/19/2014	Flash Flood	0	0	0
343. Blakeley	6/18/2014	Flood	0	0	\$9,000,000
344. Shakopee	7/13/2013	Flash Flood	0	0	\$500,000
345. St Patrick	3/21/2011	Flood	0	0	0
346. Belle Plaine	8/13/2010	Flash Flood	0	0	0
347. Shakopee	6/26/2010	Flash Flood	0	0	0
348. Blakeley	6/26/2010	Flash Flood	0	0	\$50,000
349. Prior Lake	6/26/2010	Flash Flood	0	0	0
350. Shakopee	3/20/2010	Flood	0	0	\$400,000
351. Shakopee	3/19/2010	Flood	0	0	0
352. St Patrick	3/17/2010	Flood	0	0	0
353. Deer Park	3/13/2010	Flood	0	0	0
354. Jordan	3/12/2010	Flood	0	0	0
355. Shakopee	8/8/2009	Flash Flood	0	0	0
356. Jordan	3/19/2007	Flood	0	0	\$900,000
357. Jordan	6/16/2006	Flash Flood	0	0	0
358. Scott County	10/4/2005	Flood	0	0	0
359. Scott County	10/4/2005	Flash Flood	0	0	0
360. Scott County	9/4/2005	Flash Flood	0	0	0
361. Scott County	8/3/2002	Flash Flood	0	0	\$200,000
362. Scott County	5/1/2001	Flood	0	0	0
363. Scott County	4/1/2001	Flood	0	0	0
364. Savage	8/22/1998	Flash Flood	0	0	0
365. Scott County	6/28/1998	Flood	0	0	0
366. Belle Plaine	7/25/1997	Flash Flood	0	0	0

Location or County	Date	Type	Deaths	Injuries	Property Damage
367. Prior Lake	7/22/1997	Flash Flood	0	0	0
368. Scott County	5/1/1997	Flood	0	0	0
369. Scott County	4/1/1997	Flood	0	0	0
370. Scott County	3/15/1997	Flood	0	0	0
<b>Highest Value Property Damage:</b>					<b>\$9,000,000</b>

Table C - 5. All severe winter weather events recorded by NCDC, 1996-September 2015

Location or County	Date	Type	Deaths	Injuries	Property Damage
371. Scott County	3/22/2015	Winter Storm	0	0	0
372. Scott County	11/10/2014	Winter Storm	0	0	0
373. Scott County	4/3/2014	Winter Storm	0	0	0
374. Scott County	2/20/2014	Winter Storm	0	0	0
375. Scott County	2/17/2014	Winter Storm	0	0	0
376. Scott County	4/22/2013	Winter Storm	0	0	0
377. Scott County	4/18/2013	Winter Storm	0	0	0
378. Scott County	4/10/2013	Winter Storm	0	0	0
379. Scott County	3/4/2013	Winter Storm	0	0	0
380. Scott County	12/8/2012	Winter Storm	0	0	0
381. Scott County	12/31/2011	Winter Weather	0	0	0
382. Scott County	2/20/2011	Winter Storm	0	0	0
383. Scott County	12/20/2010	Winter Storm	0	0	0
384. Scott County	12/15/2010	Winter Storm	0	0	0
385. Scott County	12/10/2010	Blizzard	0	0	0
386. Scott County	12/3/2010	Winter Storm	0	0	0
387. Scott County	11/13/2010	Winter Storm	0	0	0
388. Scott County	2/7/2010	Winter Storm	0	0	0
389. Scott County	12/23/2009	Winter Storm	0	0	0
390. Scott County	12/8/2009	Blizzard	0	0	0
391. Scott County	10/12/2009	Winter Weather	0	0	0
392. Scott County	2/26/2009	Winter Storm	0	0	0
393. Scott County	1/12/2009	Winter Storm	0	0	0
394. Scott County	12/20/2008	Winter Storm	0	0	0
395. Scott County	4/1/2008	Heavy Snow	0	0	0
396. Scott County	3/31/2008	Heavy Snow	0	0	0
397. Scott County	3/20/2008	Winter Storm	0	0	0
398. Scott County	12/1/2007	Winter Storm	0	0	0
399. Scott County	3/1/2007	Winter Storm	0	0	0
400. Scott County	2/23/2007	Winter Storm	0	0	0
401. Scott County	1/14/2007	Heavy Snow	0	0	0
402. Scott County	12/31/2006	Winter Storm	0	0	0
403. Scott County	3/15/2006	Winter Storm	0	0	0
404. Scott County	3/12/2006	Winter Storm	0	0	0
405. Scott County	12/13/2005	Heavy Snow	0	0	0
406. Scott County	3/18/2005	Winter Storm	0	0	0
407. Scott County	1/21/2005	Winter Storm	0	0	0
408. Scott County	1/1/2005	Winter Storm	0	0	0

Location or County	Date	Type	Deaths	Injuries	Property Damage
409. Scott County	3/5/2004	Winter Storm	0	0	0
410. Scott County	2/1/2004	Winter Storm	0	0	0
411. Scott County	1/24/2004	Winter Storm	0	0	0
412. Scott County	12/9/2003	Winter Storm	0	0	0
413. Scott County	11/22/2003	Winter Storm	0	0	0
414. Scott County	3/14/2002	Winter Storm	0	0	0
415. Scott County	3/8/2002	Winter Storm	0	0	0
416. Scott County	11/26/2001	Winter Storm	0	0	0
417. Scott County	3/11/2001	Heavy Snow	0	0	0
418. Scott County	2/24/2001	Winter Storm	0	0	0
419. Scott County	2/07/2001	Heavy Snow	0	0	0
420. Scott County	1/29/2001	Winter Storm	0	0	0
421. Scott County	12/28/2000	Winter Storm	0	0	0
422. Scott County	1/19/2000	Heavy Snow	0	0	0
423. Scott County	1/12/2000	Heavy Snow	0	0	0
424. Scott County	3/8/1999	Winter Storm	0	0	0
425. Scott County	1/1/1999	Heavy Snow	0	0	0
426. Scott County	1/4/1998	Ice Storm	0	0	0
427. Scott County	3/13/1997	Winter Storm	0	0	0
428. Scott County	12/23/1996	Winter Storm	0	0	0
429. Scott County	12/14/1996	Heavy Snow	0	0	0
430. Scott County	11/22/1996	Heavy Snow	0	0	0
431. Scott County	11/20/1996	Heavy Snow	0	0	0
432. Scott County	11/14/1996	Ice Storm	0	0	0
433. Scott County	3/23/1996	Heavy Snow	0	0	0
434. Scott County	1/17/1996	Ice Storm	0	0	0
435. Scott County	1/10/1996	Heavy Snow	0	0	0
<b>Highest Value Property Damage:</b>					<b>0</b>

Table C - 6. All severe cold/wind chill events recorded by NCDC, 1996-September 2015

Location or County	Date	Type	Deaths	Injuries	Property Damage
436. Scott County	1/27/2014	Extreme Cold/Wind Chill	0	0	0
437. Scott County	1/23/2014	Extreme Cold/Wind Chill	0	0	0
438. Scott County	1/5/2014	Extreme Cold/Wind Chill	0	0	0
439. Scott County	1/14/2009	Cold/Wind Chill	0	0	0
440. Scott County	2/19/2008	Cold/Wind Chill	0	0	0
441. Scott County	2/10/2008	Cold/Wind Chill	0	0	0
442. Scott County	1/15/1997	Cold/Wind Chill	0	0	0
443. Scott County	12/24/1996	Cold/Wind Chill	0	0	0
444. Scott County	2/1/1996	Cold/Wind Chill	0	0	0
445. Scott County	1/31/1996	Cold/Wind Chill	0	0	0
446. Scott County	1/18/1996	Cold/Wind Chill	0	0	0

Location or County	Date	Type	Deaths	Injuries	Property Damage
<b>Highest Value Property Damage:</b>					<b>0</b>

Table C - 7. All extreme heat/heat events recorded by the NCDC, 1996-September 2015

Location or County	Date	Type	Deaths	Injuries	Property Damage
447. Scott County	8/25/2013	Excessive Heat	0	0	0
448. Scott County	7/18/2011	Excessive Heat	0	0	0
449. Scott County	7/30/2006	Heat	0	0	0
450. Scott County	8/4/2001	Heat	0	0	0
451. Scott County	8/1/2001	Heat	0	0	0
452. Scott County	7/30/2001	Heat	0	0	0
453. Scott County	7/29/1999	Heat	0	0	0
454. Scott County	7/23/1999	Heat	0	0	0
<b>Highest Value Property Damage:</b>					<b>0</b>

Table C - 8. All lightning events recorded by the NCDC, 1996-September 2015

Location or County	Date	Type	Deaths	Injuries	Property Damage
455. Savage	10/4/2005	Lightning	0	0	0
456. Prior Lake	9/4/2005	Lightning	0	0	\$604,000
457. Shakopee	6/5/1999	Lightning	0	0	0
458. Prior Lake	3/24/1996	Lightning	0	1	0
<b>Highest Value Property Damage:</b>					<b>\$604,000</b>



# **Appendix D**

## **Adopting Resolutions**



# **Appendix E**

## **Steering Committee Meetings**

August 13, 2015

Good afternoon,

Scott County has received a grant from Minnesota Homeland Security and Emergency Management (HSEM) to hire a consultant to facilitate the preparation of an update to its multi-jurisdictional, 2010 Multi-Hazard Mitigation Plan (MHMP). In order to remain eligible for federal Hazard Mitigation Grant Program funding, FEMA requires that MHMPs are updated every five years.

As a critical part of the planning process, FEMA requires that a Planning Team has been developed that includes representation from local government departments as well as other key stakeholder agencies or organizations that have a role in hazard mitigation planning and implementation in the County. The role of the Planning Team is to help provide input on development of the plan, including prioritization of mitigation strategies and identification of projects for implementation; assist with public outreach and participate in public meetings, review draft plan and facilitate the required final adoption of the MHMP by local government.

Each individual jurisdiction will also have a role in hazard mitigation planning and implementation within their cities. Each local jurisdiction will be asked to submit input on the plan, to include mitigation strategies and identification of projects for implementation specific to the needs of their city. **Local participation is required by FEMA for the final plan to be approved.**

**You have been identified as a key local government official or stakeholder to participate in the Hazard Mitigation Planning process.** Your city will be able to identify, design and develop mitigation projects to be completed within your community. By identifying these projects in the plan, they will be eligible for Hazard Mitigation Grant Program funding.

Please attend our initial planning meeting at:

**August 27, 2015, 4pm-5:30pm**  
Regional Training Facility  
17706 Valley View Drive, Jordan, MN

If you cannot participate, please provide an alternate representative to participate in this meeting. The agenda will include presentations from the consultants (Geospatial Analysis Center at the University of Minnesota Duluth) on the content of the plan and the development of hazard mitigation actions.

Thank you for your support to work together towards a safer and more disaster-resilient Scott County. Please contact me with any questions.

Respectfully,

Ron Holbeck, Deputy Emergency Management Director

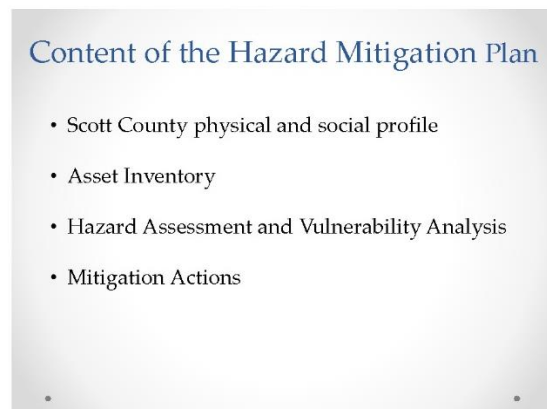
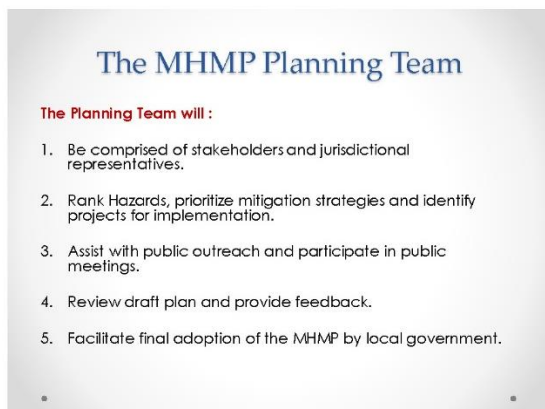
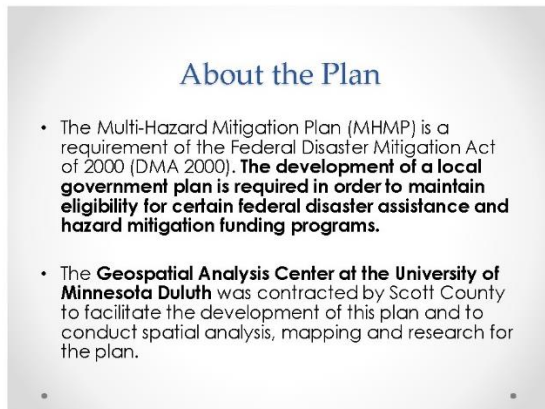
# **HAZARD MITIGATION PLAN MEETING SIGN-IN SHEET**

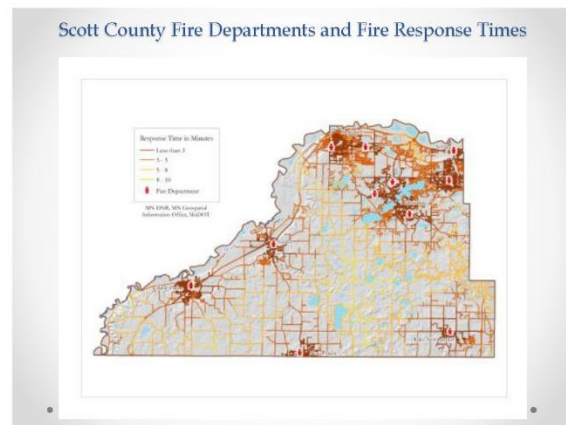
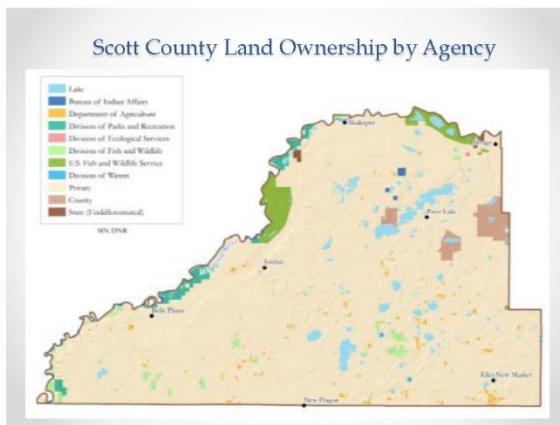
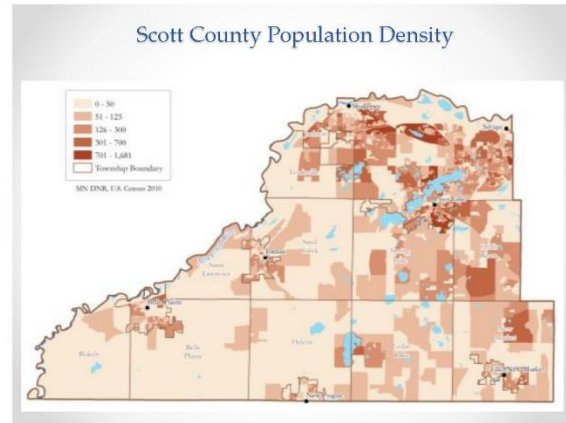
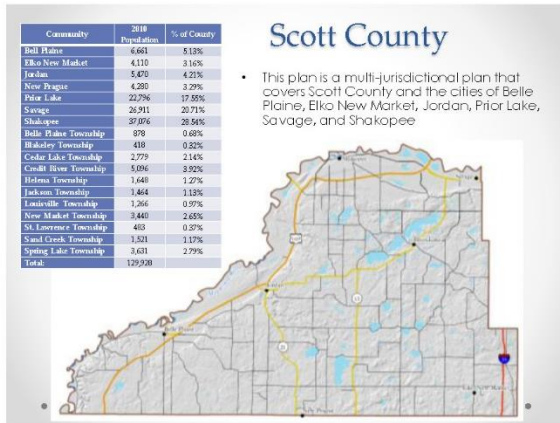
Meeting Date: 27 AUG 2015

Place/Room: SCALE/Regional Training Facility

	NAME	SIGNATURE	Jurisdiction/Agency
1	Ron Halbeck	Ron Halbeck	SCOTT COUNTY EM. MGMT
2	Lisa Broadsky	Lisa Broadsky	SCOTT COUNTY Public Health
3	Chad Ostlund	Chad Ostlund	HSEM
4	Jen Nelson	Jen Nelson	HSEM
5	Bob Koenig	Bob Koenig	Belle Plaine Twp
6	John Basse	John Basse	Blakeley Township
7	Maurcen Bussac	Maurcen Bussac	Blakeley township
8	Rita Tauer	Rita Tauer	Sand Creek Twp.
9	Cy Wolk	Cy Wolk	" "
10	Brent Sticha	Brent Sticha	New Prague Fire Dept
11	Matt McLees	Matt McLees	Scott County GIS
12	Tony Monseur	Tony Monseur	SC GIS
13	Tom Stalee	Tom Stalee	Belle Plaine PD
14	Brent Emery	Brent Emery	Jordan PD
15	Steve Martenson	Steve Martenson	EKO New Market PD
16	Joel McCall	Joel McCall	CITY OF SPOUSE E.M.
17	DeAnn Croatt	DeAnn Croatt	Helena Twp
18	Paul Nelson	Paul Nelson	Scott County
19	Sean Young-Stephens	Sean Young-Stephens	Scott County Dispatch
20	CHRIS WELDON	Chris Weldon	SCOTT COUNTY E.M.
21	John Swanson	John Swanson	SC Transit + Fleet
22	Adam Pirri	Adam Pirri	Scott County Sheriff's Office
23	Frank Laker	Frank Laker	SC Loss Control & Safety
24	Kurt Fowdick	Kurt Fowdick	Mdewakanton Public Safety
25	Pick Turner	Pick Turner	SC, E.M.







## FEMA-declared Disasters in Scott County

Incident	Declaration Date and Disaster Number	Incident Period	Total PAs Obligated by FEMA for Disasters in Missouri	Total PAs Obligated by FEMA for Disasters in Scott County	Individual Assistance in Missouri	Individual Assistance in Scott County
Severe Storms, Straight-line Winds, Flooding, Landslides, Mudslides	7/21/2014 DR-4102	6/1/2014 - 7/1/2014	\$15,995,142	\$2,659,888	Unknown	Unknown
Severe Storms, Flooding	5/01/2011 DR-1982	3/16/2011 - 5/25/2011	\$20,633,792	\$203,172	Unknown	None
Flooding	4/19/2010 DR-1900	3/5/2010 - 4/26/2010	\$12,740,604	\$31,156	None	None
Flooding	5/16/2005 DR-1370	3/21/2005 - 7/6/2005	\$36,227,572	\$89,584	\$3,650,492	\$1,172
Severe Storms, Straight-line Winds, Tornadoes	6/28/1998 DR-1225	5/15/1998 - 6/20/1998	\$30,005,556	Unknown	Unknown	None
Severe Storms, Flooding	4/8/1997 DR-1175	3/21/1997 - 5/24/1997	\$230,486,730	Unknown	Unknown	Unknown
Flooding, Severe Storms, Tornadoes	6/11/1993 DR-993	5/6/1993 - 8/25/1993	\$98,169,530	Unknown	Unknown	Unknown
Severe Storms, Tornadoes, Flooding	8/6/1987 DR-797	7/20/1987 - 8/5/1987	Unknown	Unknown	Unknown	Unknown
Flooding	4/18/1969 DR-235	4/18/1969	Unknown	Unknown	Unknown	Unknown
Flooding	4/11/1965 DR-180	4/11/1965	Unknown	Unknown	Unknown	Unknown

## What Hazards are Addressed?

- A Multi-Hazard Mitigation Plan looks primarily at natural disasters, including:

Flooding	Dam/Levee Failure	Wildfire
Windstorms	Tornadoes	Hail
Lightning	Winter Storms	Landslides/ Soil Erosion
Land Subsidence	Drought	Extreme Heat
Extreme Cold		

- Manmade hazards are not required by the DMA 2000 to be addressed in the MHMP

## Ranking Hazards

Natural Hazards	2015 THIRA CPRI Score	2015 MHMP Ranking
Lightning	3.1	
Extreme Cold	2.85	
Tornadoes	2.8	
Flooding	2.75	
Wildfire	2.7	
Thunderstorm	2.65	
Fog	2.65	
Hail	2.5	
Levee Failure	2.5	
Landslide	2.4	
Drought	2.35	
Severe Winter Storms	2.3	
Sinkholes	2.2	
Earthquake	2.05	
Dam Failure	1.85	
Extreme Heat	1.8	
Expansive Soils	1.6	
Land Subsidence	1.45	
Soil Erosion & Dust	1.1	

## Mitigation Strategies

- Prevention** - Government, administrative, or regulatory actions
- Property Protection** - Removal or modification of existing buildings or structures to protect them from a hazard.
- Public Education and Awareness** - Actions to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them.
- Natural Resource Protection** - Actions that minimize hazard losses and preserve or restore the functions of natural systems.
- Emergency Services** - Actions that protect people and property during and immediately after a disaster or hazard event. Services include warning systems, emergency response services, and protection of critical facilities.
- Structural Projects** - Actions that involve the construction of structures to reduce the impact of a hazard, for example: floodwalls, safe rooms.

## Implementation of Mitigation Actions

- Happens at every jurisdictional level.
- Happens in partnership with other local, State, Federal agencies and non-profit organizations.
- Can be inexpensive ("low-hanging fruit")
- Can be high-cost (some are HMA eligible)
- Some may be implemented quickly, others may be on-going, and some may occur over several years.

**The impact of hazards on people and property can only be reduced when efforts are made to mitigate against them before they occur.**

## Mitigation Actions Eligible for HMA

- Retrofit or construction of safe room facilities to protect public during extreme wind events.**  
(Locations may include schools, mobile home parks, campgrounds or other areas where there are populations vulnerable to high winds and tornado events).
- Purchase of generators for backup power to support the operation of essential functions in critical facilities in the event of severe storms.**  
(Critical facilities may include police and fire stations, hospitals, and water and sewer treatment facilities, and other facilities that the county deems critical.)



- **Burying or strengthening of power lines to reduce the risk of power outages from downed lines during a severe storm.** (Where it is feasible and cost effective as part of new construction or retrofit).
- **Install new warning systems in identified vulnerable locations.** (Used to alert people in high risk, vulnerable areas such as campgrounds, parks and rural residents out of reach of other existing warning siren systems to approaching severe weather).
- **Mitigation measures to reduce the threat of wildfire.** (Activities such as creation of defensible space, application of ignition-resistant construction, hazardous fuels reduction, and installation of external wildfire sprinkler systems).

- **Infrastructure retrofit for flood prone areas.** (To make mitigation improvements for structures such as culverts, road, bridges and government buildings).
- **Minor localized flood reduction projects to lessen the frequency or severity of flooding and decrease predicted flood damages.** (Such as installation or modification of culverts; stormwater management activities, such as creating retention and detention basins, protection of sanitary sewer lift stations in flood-prone areas, installation of flow-rate meters (stream gauges) on rivers and streams that are prone to flooding high-risk, vulnerable properties.)
- **Relocate flood prone properties or acquire and demolish flood prone properties.** (Located in the special flood hazard area and outside of the special flood hazard area).

- **Dry proof or wet proof facilities that are flood prone.** (Reduce potential infrastructure flood damages on utilities such as wastewater treatment, pipelines, and power facilities by dry proofing or wet proofing facilities that are flood prone).

### Scott County MHMP Contact:

**Ron Holbeck, Deputy Emergency Management Director**  
Scott County Law Enforcement Center  
301 Fuller Street South  
Shakopee, MN 55379

952-496-8181  
rholbeck@co.scott.mn.us  
www.co.scott.mn.us

### GAC MHMP Contact:

- Adam Pine, Assistant Professor, Geography, UMD, [apine@d.umn.edu](mailto:apine@d.umn.edu)
- Stacey Stark, Director: Geospatial Analysis Center [slstark@d.umn.edu](mailto:slstark@d.umn.edu) (218) 726-7438



College of Liberal Arts  
UNIVERSITY OF MINNESOTA DULUTH  
Driven to Discover

MITIGATION CATEGORY	Note Hazard Category and Mitigation Action Ideas
<p><b>1. Prevention:</b> Government, administrative, or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. <i>Examples include planning and zoning, building codes, capital improvement programs, open space preservation, and storm water management regulations.</i></p>	<p>Have much of this in place, including building set backs from/in bluff areas.</p>
<p><b>2. Property Protection:</b> Actions that involve the modification of existing buildings or structures to protect them from a hazard or removal from the hazard area. <i>Examples include acquisition, elevation, structural retrofits, storm shutters, and shatter-resistant glass.</i></p>	<p>A number of homes are at risk in Prior Lake from flooding... could look at flood proofing; buy out's given property values is probably not practical.</p>
<p><b>3. Public Education and Awareness:</b> Actions to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them. <i>Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.</i></p>	<p>New FEMA flood panels will be published soon.</p>
<p><b>4. Natural Resource Protection:</b> Actions that, in addition to minimizing hazard losses, preserve or restore the functions of natural systems. <i>These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.</i></p>	<p>Lots of plans/ideas for this sort of stuff in Comp Plans, and Watershed Plan Four Watershed Organizations in our County can have Plans be incorporated by reference.</p>
<p><b>5. Emergency Services:</b> Actions that protect people and property during and immediately after a disaster or hazard event. <i>Services include warning systems, emergency response services, and protection of critical facilities.</i></p>	<p>Not my area of expertise</p>
<p><b>6. Structural Projects:</b> Actions that involve the construction of structures to reduce the impact of a hazard. <i>Such structures include dams, levees, floodwalls, seawalls, retaining walls, and safe rooms.</i></p>	<p>Jordan sits in harms way from Sand Lake flooding - USACE studies have not found cost effective solution</p>
<p>not controllable by us.</p>	<p>So...?? Half of Sand Lake watershed in Ordway County, MN River crosses - get stuff moved, floodwalls</p>



MITIGATION CATEGORY	Note Hazard Category and Mitigation Action Ideas
<p><b>1. Prevention:</b> Government, administrative, or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. <i>Examples include planning and zoning, building codes, capital improvement programs, open space preservation, and storm water management regulations.</i></p>	
<p><b>2. Property Protection:</b> Actions that involve the modification of existing buildings or structures to protect them from a hazard or removal from the hazard area. <i>Examples include acquisition, elevation, structural retrofits, storm shutters, and shatter-resistant glass.</i></p>	
<p><b>3. Public Education and Awareness:</b> Actions to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them. <i>Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.</i></p>	
<p><b>4. Natural Resource Protection:</b> Actions that, in addition to minimizing hazard losses, preserve or restore the functions of natural systems. <i>These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.</i></p>	<p><i>What about Ice + snow storms? this should be included in Hazards. And of course these also cause Spring flooding.</i></p>
<p><b>5. Emergency Services:</b> Actions that protect people and property during and immediately after a disaster or hazard event. <i>Services include warning systems, emergency response services, and protection of critical facilities.</i></p>	
<p><b>6. Structural Projects:</b> Actions that involve the construction of structures to reduce the impact of a hazard. <i>Such structures include dams, levees, floodwalls, seawalls, retaining walls, and safe rooms.</i></p>	

MITIGATION CATEGORY	Note Hazard Category and Mitigation Action Ideas
<p><b>1. Prevention:</b> Government, administrative, or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. <i>Examples include planning and zoning, building codes, capital improvement programs, open space preservation, and storm water management regulations.</i></p>	<p><i>Zone erosion areas - no development</i></p>
<p><b>2. Property Protection:</b> Actions that involve the modification of existing buildings or structures to protect them from a hazard or removal from the hazard area. <i>Examples include acquisition, elevation, structural retrofits, storm shutters, and shatter-resistant glass.</i></p>	
<p><b>3. Public Education and Awareness:</b> Actions to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them. <i>Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.</i></p>	
<p><b>4. Natural Resource Protection:</b> Actions that, in addition to minimizing hazard losses, preserve or restore the functions of natural systems. <i>These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.</i></p>	
<p><b>5. Emergency Services:</b> Actions that protect people and property during and immediately after a disaster or hazard event. <i>Services include warning systems, emergency response services, and protection of critical facilities.</i></p>	
<p><b>6. Structural Projects:</b> Actions that involve the construction of structures to reduce the impact of a hazard. <i>Such structures include dams, levees, floodwalls, seawalls, retaining walls, and safe rooms.</i></p>	

The Scott County Deputy Emergency Management Director corresponded with communities unable to take part in all of the steering committee and public meetings:

Conversation with:	Jurisdiction	When	Topic
Craig Robson	Shakopee	December 2015	Action to protect the fleet of city-owned vehicles against the elements.
Jake Theisen, Maintenance Superintendent	Prior Lake	December 2015	Action to acquire jersey barriers for road closures and keeping water out (Watersedge).
Randy Hofstad	Prior Lake	August/September 2015	CPRI spreadsheet, planning meetings
Mark Elliot, Police Chief	Prior Lake	December 2015	Public meetings
Brett Empey, Chief of Police	Jordan	August/October/December 2015	CPRI Spreadsheet/Flood Damage Study/Public meetings
Joel McColl, Emergency Manager	Savage	August/December 2015	CPRI Spreadsheet/Public meetings
Steve Mortenson, Chief of Police/Director of Emergency Management	Elko New Market	August/November/December 2015	CPRI Spreadsheet/Action to add a generator to the Elko New Market PD headquarters/Public meetings

*This page is intentionally left blank*

# **Appendix F**

## **Public Meeting Notices and Meeting Notes**



# Scott County Emergency Management

## Greetings:

Two public meetings will be held on December 7th 2015 regarding the Scott County Multi-Hazard Mitigation Plan. Please plan to attend one of these two meetings where we will discuss the purpose and content of the Scott County Multi-Hazard Mitigation Plan that has been prepared by the Geospatial Analysis Center at University of Minnesota Duluth. These two public meetings will be held in Shakopee at 2:00 p.m. and at the Regional Training Facility in Jordan at 6:00 p.m.

This plan was prepared based on mitigation actions (projects) submitted by participating agencies and organizations within Scott County. These meetings on December 7th will allow you one last chance to submit any project that should be included for possible grant funding over the next 5 years.

These meetings will also provide local residents, businesses, agencies, and organizations an opportunity to learn about the draft plan, ask questions, and provide feedback on mitigation strategies and recommended actions for implementation. A draft of the Scott County Multi-Hazard Mitigation Plan content is available for public review at the Scott County Sheriff's Office website:

<http://www.co.scott.mn.us/PublicSafetyJustice/CountySheriff/emhs/Pages/Hazard-Mitigation-Plan--Updated-Draft.aspx>

Please email or telephone to RSVP your planned attendance at this important meeting.

Thank you. Please feel free to telephone or email me with any questions.

**Ron Holbeck**

**Deputy Emergency Management Director**

Scott County Law Enforcement Center | Emergency Management

301 Fuller Street South | Shakopee | MN | 55379

Direct: [952-496-8181](tel:952-496-8181) | Mobile: [952-292-9398](tel:952-292-9398)

[rholtbeck@co.scott.mn.us](mailto:rholtbeck@co.scott.mn.us)

<http://www.co.scott.mn.us>

November 10, 2015

NEWS

RELEASE

FOR IMMEDIATE RELEASE

Contact: Ron Holbeck

Direct: 952-496-8181 | Mobile: 952-292-9398

*rholbeck@co.scott.mn.us*

## Scott County to Hold Public Input Meetings on Multi-Hazard Mitigation Plan

(Shakopee, MN) Two public meetings regarding the Scott County Multi-Hazard Mitigation Plan (MHMP) will be held on Monday, December 7<sup>th</sup>, 2015. The first meeting will be held in Shakopee at 2:00 p.m. The second meeting will be held at the Regional Training Facility in Jordan at 6:00 p.m. The Plan details the natural and man-made hazards that face the County and identifies specific mitigation strategies and actions to reduce the impact of disasters.

This is a multi-jurisdictional plan that covers Scott County, including the cities of Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, and Shakopee. The Scott County risks and mitigation activities identified in this plan also incorporate the concerns and needs of townships, school districts, and other entities participating in this plan. The Geospatial Analysis Center at the University of Minnesota Duluth is facilitating the planning process.

Public input is a required step in the MHMP planning process. Community members and staff from the County and participating cities are strongly encouraged to attend the scheduled public meetings. The meetings will provide local residents, businesses, agencies, and organizations an opportunity to learn about the draft plan, ask questions, provide feedback on mitigation strategies, and recommend actions for implementation.

A draft of the Scott County Multi-Hazard Mitigation Plan is available for public review at <http://www.co.scott.mn.us/PublicSafetyJustice/CountySheriff/emhs/Pages/Hazard-Mitigation-Plan--Updated-Draft.aspx>. Comments or questions on the plan or public meetings may be directed to Ron Holbeck, Deputy Emergency Management Director, (952) 496-8181 or *rholbeck@co.scott.mn.us*



**Scott County Sheriff's Office**

November 17 at 2:39pm · 🌐

Two public meetings regarding the Scott County Multi-Hazard Mitigation Plan (MHMP) will be held on Monday, December 7th, 2015. The first meeting will be held at the Scott County Law Enforcement Center, 301 Fuller St. S. in Shakopee at 2:00 p.m.

The second meeting will be held at the Regional Training Facility in Jordan at 6:00 p.m. The Plan details the natural and man-made hazards that face the County and identifies specific mitigation strategies and actions to reduce the impact of disasters.

Public input is a required step in the Hazard Mitigation planning process. Community members are strongly encouraged to attend the scheduled public meetings. The meetings will provide local residents, businesses, agencies, and organizations an opportunity to learn about the draft plan, ask questions, provide feedback on mitigation strategies, and recommend actions for implementation.

You can view a draft of the updated Hazard Mitigation Plan at the link below.

<http://www.co.scott.mn.us/.../Multi-Hazard%20Mitigation%20Pla...> 🌐


[www.co.scott.mn.us](http://www.co.scott.mn.us) 🌐

CO.SCOTT.MN.US

👍 Like

💬 Comment

➦ Share



**Scott County Sheriff's Office**  
 15 mins · 🌐

Scott County has had a lot of natural hazards over the past 5 years, and we're giving you a chance to share your ideas on how we can minimize the damages caused by those disasters in the future.

Two public meetings regarding the Scott County Multi-Hazard Mitigation Plan (MHMP) will be held on Monday, December 7th, 2015. The first meeting will be held at the Scott County Law Enforcement Center, 301 Fuller St. S. in Shakopee at 2:00 p.m.

The second meeting will be held at the Regional Training Facility in Jordan at 6:00 p.m. The Plan details the natural and man-made hazards that face the County and identifies specific mitigation strategies and actions to reduce the impact of disasters.




Public input is a required step in the Hazard Mitigation planning process. Community members are strongly encouraged to attend the scheduled public meetings. The meetings will provide local residents, businesses, agencies, and organizations an opportunity to learn about the draft plan, ask questions, provide feedback on mitigation strategies, and recommend actions for implementation.

To view a draft of Scott County's updated Hazard Mitigation Plan, visit this website: <http://www.co.scott.mn.us/.../Multi-Hazard%20Mitigation%20Pla...>

<http://umn.maps.arcgis.com/apps/MapTour/index.html...>

**ArcGIS.com | Web Mapping Application - Scott County Natural Hazards History**

UMN.MAPS.ARCGIS.COM

 Like
  Comment
  Share




# Belle Plaine Herald

Serving Belle Plaine and the Surrounding Communities for Over 131 Years

Home News ▼ Sports Community ▼ Opinion ▼ Obits Announcements ▼ Legals

Classifieds ▼

About Us | Contact Us | Advertise | Subscribe | Archives

 Like Sign Up to see what your friends like.



## Scott County Presenting Hazard Mitigation Plan

Wednesday, November 25, 2015 9:48 AM

Two public meetings regarding the Scott County Multi-Hazard Mitigation Plan (MHMP) will be held Monday (Dec. 7). The plan details the natural and man-made hazards that face the county and identifies specific mitigation strategies and actions to reduce the impact of disasters.

The first meeting will be held at the Scott County Law Enforcement Center, 301 Fuller St. S. in Shakopee at 2 p.m. The second meeting will be held at 6 p.m. at the SCALE Regional Training Facility, 17706 Valley View Drive in Sand Creek Township, west of Highway 169.

The plan is a multi-jurisdictional preparation covering Scott County, including the cities of Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, and Shakopee. The Scott County risks and mitigation activities identified in this plan also incorporate the concerns and needs of townships, school districts, and other entities participating in this plan. The University of Minnesota Duluth Geospatial Analysis Center is facilitating the planning process.

Public input is a required step in the MHMP planning process. Community members and staff from the county and participating cities are strongly encouraged to attend the scheduled public meetings. The meetings will provide local residents, businesses, agencies, and organizations an opportunity to learn about the draft plan, ask questions, provide feedback on mitigation strategies, and recommend actions for implementation.

A draft of the Scott County Multi-Hazard Mitigation Plan is available for public review at <http://www.co.scott.mn.us/PublicSafetyJustice/CountySheriff/emhs/Documents/Multi-Hazard%20Mitigation%20Plan%20%20Draft.pdf>.

Comments or questions on the plan or public meetings may be directed to Ron Holbeck, deputy director of Scott County Emergency Management, (952) 496-8181 or by e-mail at [rolbeck@co.scott.mn.us](mailto:rolbeck@co.scott.mn.us)





Thanks for visiting SWNewsMedia.com. You're entitled to view 5 free articles every 30 days. Then, if you enjoy our site and want full access, we'll ask you to purchase an affordable subscription.

4

Remaining

► Home

## County sets meetings on multi-hazard planning

Story

Print Font Size:



Posted: Friday, December 4, 2015 6:00 am

Two public meetings regarding the Scott County multi-hazard mitigation plan (MHMP) will be on Monday, Dec. 7.

The first meeting will be at the Scott County Law Enforcement Center, 301 Fuller St. S. in Shakopee at 2 p.m. The second will be at the Regional Training Facility in Jordan at 6 p.m.

The plan details the natural and manmade hazards that face the county and identifies specific mitigation strategies and actions to reduce the impact of disasters.

### Scott County

This is a multi-jurisdictional plan that covers Scott County, including the cities of Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage and Shakopee. The Scott County risks and mitigation activities identified in the plan also incorporate the concerns and needs of townships, school districts, and other entities participating in the plan. The Geospatial Analysis Center at the University of Minnesota Duluth is facilitating the planning process.

Public input is a required step in the MHMP planning process. Community members and staff from the county and participating cities have been encouraged to attend the public meetings. The meetings will provide local residents, businesses, agencies and organizations an opportunity to learn about the draft plan, ask questions, provide feedback on mitigation strategies, and recommend actions for implementation.

A draft of the Scott County Multi-Hazard Mitigation Plan is available for public review at [www.co.scott.mn.us/PublicSafetyJustice/CountySheriff/emhs/Documents/Multi-Hazard%20Mitigation%20Plan%20%20Draft.pdf](http://www.co.scott.mn.us/PublicSafetyJustice/CountySheriff/emhs/Documents/Multi-Hazard%20Mitigation%20Plan%20%20Draft.pdf).

Comments or questions on the plan or public meetings may be directed to Ron Holbeck, deputy emergency management director, (952) 496-8181 or [rholbeck@co.scott.mn.us](mailto:rholbeck@co.scott.mn.us)

Page | F - 8

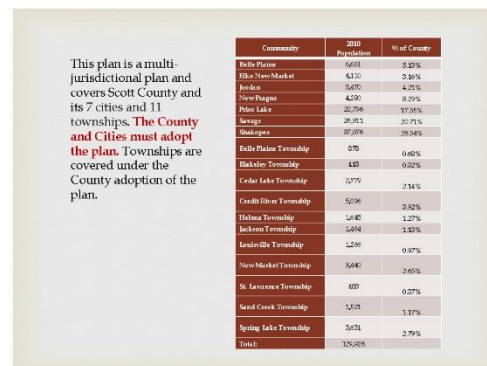
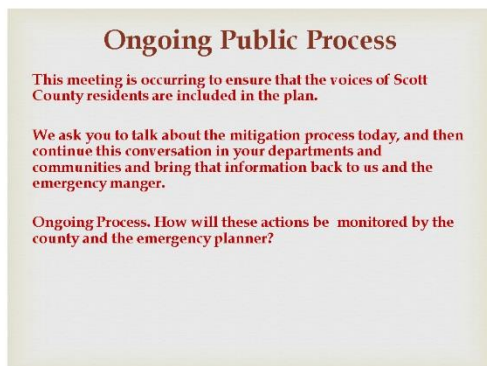
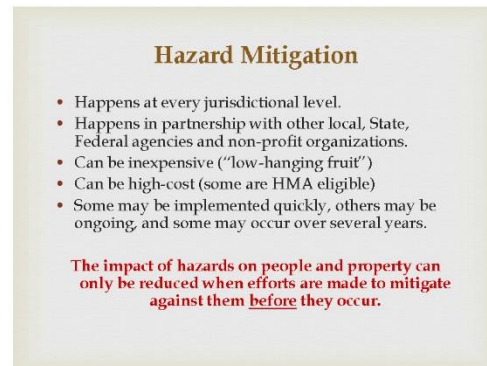
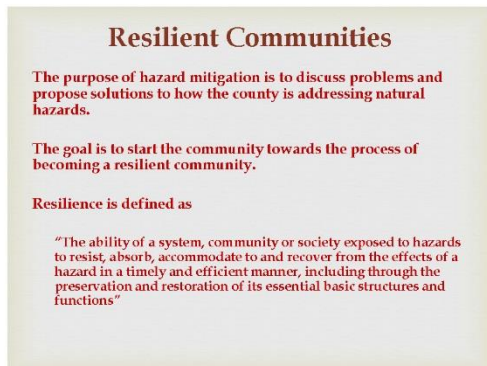
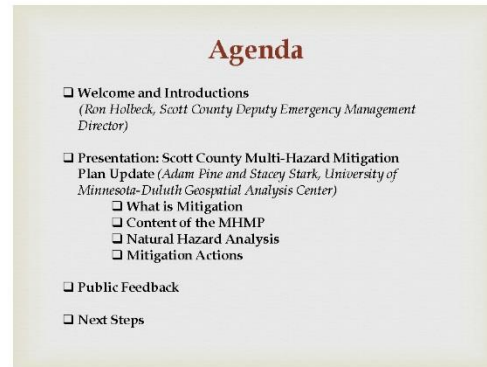
## MEETING SIGN-IN SHEET: HAZARD MITIGATION PLAN UPDATE MEETING

**Meeting Date:** Dec. 7, 2015

**Place/Room:** Regional Training Facility

[illegible]

12/8/2015





- Scott County physical and social profile
- Asset Inventory
- Hazard Assessment and Vulnerability Analysis
- Mitigation Actions

- Existing County Plans
- Hazard Ranking
- Record of Events (FEMA, NCDC)
- GIS and HAZUS-MH (Flood only)



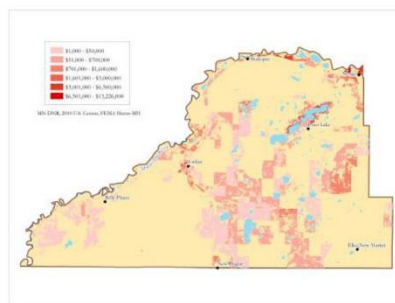
## Scott County Hazard Rankings

Natural Hazards	Hazard Rank
Floods/Floods	High
Landslides	High
Lightning	High
River Floods	High
Severe Winter Storms	High
Thunderstorms	High
Tornadoes	High
Drought	Medium
Excessive Cold	Medium
Extreme Seale	Medium
Extreme Heat	Medium
Wildfires	Medium
Fog	Medium
Hailstorms	Medium
Levee Failure	Medium
Shoalboes	Medium
Salt Intrusion & Dred	Medium
Land Subsidence	Low
Earthquakes	Low
Coastal Erosion	Low
Coastal Flooding	Low

## Flash Flood and Riverine Flood

[illegible]

## Scott County Economic Loss by Census Block in 100-Year Flood



Scott County Highest Loss Census Block in 100-Year Flood (Savage)



Estimated Loss: \$13 million



12/8/2015

## Mitigation Strategies

**Prevention** - Government, administrative, or regulatory actions

**Property Protection** - Removal or modification of existing buildings or structures to protect them from a hazard.

**Public Education and Awareness** - Actions to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them.

**Natural Resource Protection** - Actions that minimize hazard losses and preserve or restore the functions of natural systems.

**Emergency Services** - Actions that protect people and property during and immediately after a disaster or hazard event. Services include warning systems, emergency response services, and protection of critical facilities.

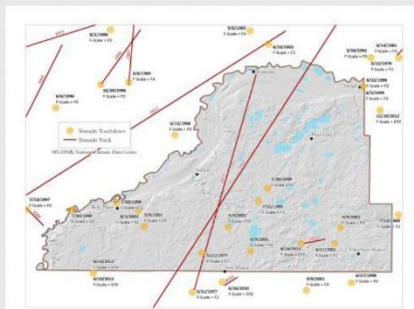
**Structural Projects** - Actions that involve the construction of structures to reduce the impact of a hazard, for example, floodwalls, safe rooms.

## Flash Flood and Riverine Flood

- **SI** - Clean out drainage channel from Prior Lake to the Minnesota River.
- **P** - Coordinate with Municipal Separate Storm Sewer Systems permit requirements.
- **ES** - Obtain additional temporary road closure supplies (i.e. signs, cones, barrels, and concrete barriers).



Scott County Historical Tornadoes



Scott County Historical Tornadoes

Location in County	Date	Magnitude	Deaths	Injuries	Property Damage
Blackley	4/30/2010	F0	0	0	\$250,000
St. Paul	4/26/2010	F0	0	0	0
Flinton	8/8/2002	F0	0	0	0
Neve	4/11/2001	F1	0	0	\$50,000
Flinton	8/9/2001	F0	0	0	0
Neve	5/9/2001	F0	0	0	0
Flinton	5/9/2001	F0	0	0	0
Neve	5/9/2001	F0	0	0	0
Blackley	7/30/1999	F0	0	0	0
Flinton	7/30/1999	F1	0	0	0
Lucas	7/30/1999	F0	0	0	0
Neve	8/22/1996	F0	0	0	0
Lucas	7/31/1996	F1	0	0	0
Concord	5/24/1997	F2	0	0	\$250,000



June 10, 2012



June 10, 2012

## Severe Summer Storms

- According to the 64-year NCDC record, there is a 52% chance of a significant hailstorm any year in Scott County and a 30% chance in each year that there will be a hailstorm that produces hail greater than one inch in size.
- The NCDC has recorded 4 lightning events in Scott County, resulting in one injury in 1996. No deaths were reported.
- The county has experienced tornadoes in 8 of the 64 years on record. According to these statistics, there is a 12.5% chance of a tornado affecting Scott County each year.

## Severe Winter Storms

Date	Type	Cost	Deaths	Injuries	Description
December 2012	Winter Storm	0	0	0	Heavy snowfall across the county on December 28th. The snow began to fall around 10:00 am, with heavy bands of snow between 2 and 5 pm. By early evening, total snowfall from 25 to 35 inches across the county.
December 2010	Hailstorm	0	0	0	Heavy hail across the county on December 10th. The hail was reported to be 1 to 2 inches in size. The hail caused damage to several homes and businesses. The hail also caused damage to several vehicles. The hail also caused damage to several crops.
December 2009	Blizzard	0	0	0	Heavy snowfall across the county on December 10th. The snow began to fall around 10:00 am, with heavy bands of snow between 2 and 5 pm. By early evening, total snowfall from 25 to 35 inches across the county.

12/8/2015

### Violent Storms (Winter & Summer )

- PP - Develop a debris clearance program that can be utilized countywide.
- SI - Obtain funding to build mobile home community storm shelters.
- PE: Assist power utilities in implementing a power outage alerting program for the public.



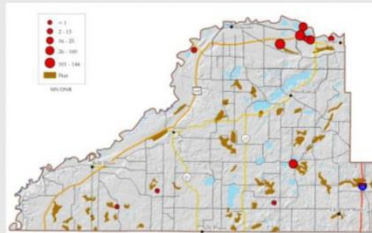
### Extreme Temperatures (Heat & Cold)

- ES - Identify citizens subject to suffering from extreme temperatures.
- ES - Assure availability of information for non-English speaking residents.



### Wildfire

The Minnesota DNR tracked 12 wildfires in Scott County between 1985 and April 2015, burning a total of 514 acres



### Wildfire

- PE - Distribute wildfire awareness and preparedness information to schools and the public
- P: Adopt Appendix H of the MN Fire Code to eliminate BBQ grills on balconies and patios of structures with 3 or more units.
- P: Provide rural vegetation management educational information.



### All Hazards

- PE - Assist citizens to develop emergency preparedness, response and recovery plans.
- PP - Obtain & install emergency generators or "pigtailed" for critical government facilities and fuel depots.
- ES - Install new warning sirens in new developments and replace older sirens.



### Mitigation Actions Eligible for HMA in the Scott County MHMP

- Retrofit or construction of safe room facilities to protect public during extreme wind events.
- Purchase of generators for backup power to support the operation of essential functions in critical facilities in the event of severe storms.

12/8/2015


- Burying or strengthening of power lines to reduce the risk of power outages from downed lines during a severe storm.
- Install new warning systems in identified vulnerable locations.
- Mitigation measures to reduce the threat of wildfire.

- Infrastructure retrofit for flood prone areas.
- Minor localized flood reduction projects to lessen the frequency or severity of flooding and decrease predicted flood damages.
- Relocate flood prone properties or acquire and demolish flood prone properties.
- Dry proof or wet proof facilities that are flood prone.

Thanks!

☞ Adam Pine, Assistant Professor, Geography, UMD  
☞ Stacey Stark, Director: Geospatial Analysis Center

218-726-7438  
slstark@d.umn.edu



College of Liberal Arts  
UNIVERSITY OF MINNESOTA DULUTH  
Drive to Discover

Scott County MHMP Contact:

☞ Ron Holbeck, Deputy Emergency Management Director  
Scott County Law Enforcement Center  
301 Fuller Street South  
Shakopee, MN 55379

952-496-8181  
rholbeck@co.scott.mn.us  
www.co.scott.mn.us

**Meeting notes, 12/7/2015, 2:00 PM**

Prior Lake: watershed being expanded, flood mitigation study being done, will be completed spring of 2016. Will need to add in more dams, need funding for purchasing easements.

Create a Community Service Response Team to mobilize during events.

Jordan doing a study on the landslide behind the brewery in 2014.

Public education: how do people stay safe during storms? Need to promote emergency kits and 72-hour shelter in place kits.

Power restoration in critical facilities: particularly needed where people are on respirators.

No storm shelters at county fair, baseball fields, Valley Fair.

Cooling/warming shelter needed, esp. for elderly. Public education on extreme heat needs to target outdoor workers and kids playing sports.

Difficult to get to a shelter during a storm.

County purchased CodeRED last year, but difficult getting people to sign up for it. Only 285 of 6,500 residents in Jordan have signed up for it. Need to increase marketing of it.

**Meeting notes, 12/7/2015, 6:00 PM**

Prior Lake Watershed Project: need to help implement results of the study.

How can sand-bagging be speeded up?

Blakeley fixed up after 2014 storms with FEMA grant.

Erosion: sediment results in flooding. Difficult to get DNR to cooperate. Need a joint process to get the DNR to cooperate with cleaning out sediment.

CodeRED needs to be promoted more.

Rural townships need more warning sirens. Cedar Lake is asking for a second one.

Grassfires are a concern. South of Spring Lake concern about fire caused by dry cattails in an area with lots of homes nearby, with growing populations.

What happens if cell tower use is lost? Communication on Wheels (COW) brought in if enough demand. Public safety "First Net" and GETS" network.

How secure are water treatment plans from flooding?

*This page is intentionally left blank*



# **Appendix G**

## **Mitigation Actions by Jurisdiction**

Table G - 1. Mitigation Actions for the City of Belle Plaine

Number (in Master Table)	Hazard	City of Belle Plaine Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
1	All Hazards	Assist citizens to develop emergency preparedness, response and recovery plans.	High	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Fire Depts Sheriff's office	Cnty/City/Twp Budget	\$2,000	Ongoing	
2	All Hazards	Train and equip 1 <sup>st</sup> responders for search and rescue missions.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Fire Depts, EMA	Cnty/City/Twp Budget, Grants	\$50,000	Ongoing	
3	All Hazards	Train and equip 1 <sup>st</sup> responders to respond to mass-casualty events.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA Public Health	Cnty/City/Twp Public Health Budget, Grants	\$50,000	Ongoing	
4	All Hazards	Train 1 <sup>st</sup> responders and community officials on the National Incident Mgmt. System.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> responder Agencies, EMA	Cnty/City/Twp Budget	\$2,000	Ongoing	
5	All Hazards	Obtain & install emergency generators or "pigtales" for critical government facilities and fuel depots.	Medium	PP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget, Grants	\$500,000	In Progress	

Number (in Master Table)	Hazard	City of Belle Plaine Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
6	All Hazards	Assist non-governmental critical facilities to obtain emergency generators and/or pigtails.	Low	PP	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget, Grants	\$500,000	Deferred	
7	All Hazards	Obtain funding to add disaster shelters as necessary.	Medium	SI	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Red Cross County Commission	Cnty/City/Twp Budget, Grants	\$400,000	Deferred	
8	All Hazards	Assist schools to implement a disaster phone line.	Low	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA Board of Education	Cnty/Education Budget, Grants	\$2,000	Deferred	
9	All Hazards	Assist utilities in developing restoration and mitigation plans.	Low	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Utilities EMA	County Utility Budget, Grants	\$2,000	Deferred	
10	All Hazards	Assist businesses, schools, the special needs population and public facilities to post evacuation routes.	Low	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Law Enforcement EMA, Public Works	County Budget, Grants	\$2,000	Deferred	

Number (in Master Table)	Hazard	City of Belle Plaine Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
14	All Hazards	Obtain funds for critical government departments to develop Continuity of Operations Plans.	Medium	ES	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	County Budget, Grants	\$52,000	Deferred	
15	All Hazards	Assist businesses to develop Business Continuity Plans.	Low	ES	2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	County/Business Budget, Grants	\$2,000	Deferred	
16	All Hazards	Assist communities in developing strategies to prevent loss of public records.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget	\$12,000	Deferred	
17	All Hazards	Ensure mutual aid, shelter, response, mass casualty & recovery agreements are current.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA County Commission	Cnty/City/Twp Budget	\$2,000	Ongoing	
18	All Hazards	Assist critical sites to develop and provide an emergency plan to the EMA.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA	County/City Budget, Grants	\$12,000	Deferred	

Number (in Master Table)	Hazard	City of Belle Plaine Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
21	All Hazards	Educate public on how to sign up for CodeRED.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$2,000	New	Scott County purchased CodeRED in 2014, but getting people to sign up for it has been a challenge. Only 285 of 6,500 residents in Jordan have signed up. Information is currently posted on every city's website.
25	All Hazards	Proactively determine policies/process for post-disaster FEMA response and mitigation applications.	Low	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$4,000	New	
26	All Hazards	Host debriefing meeting to assess what was learned from the June 2014 disaster.	Medium	P	2016	Scott County, Belle Plaine, Jordan, Shakopee, Prior Lake	Scott County	County/City Budget	\$1,000	New	Public safety does this for almost all large incidents, including the 2014 flooding. However, when the community as a whole is impacted during a disaster, a debriefing should be held including all departments involved.
27	Summer Storms, Winter Storms	Distribute safe room/shelter in place information to schools, the special needs population, and the community.	High	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA, BOE, Red Cross	Cnty/City/Twp Budget	\$2,000	Ongoing	
33	Summer Storms, Winter Storms	Train & equip 1 <sup>st</sup> responders to respond to high wind events.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City Budget Grants	\$12,000	Deferred	



Number (in Master Table)	Hazard	City of Belle Plaine Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
34	Summer Storms, Winter Storms	Develop a debris clearance program that can be utilized countywide.	Medium	PP	2016	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Public Works County Commission	County/Dept Budget	\$8,000	In Progress	
35	Summer Storms, Winter Storms	Obtain funding to build mobile home community storm shelters.	High	SI	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA County Commission	County/City Budget Grants	\$500,000	Deferred	
36	Summer Storms, Winter Storms	Adopt & enforce mobile home tie down and skirting legislation.	Medium	SI	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Commission	County Budget	\$2,000	In Progress	
38	Summer Storms, Winter Storms	Research the feasibility of requiring the burying of power lines in all new rural cluster subdivisions.	Low	SI	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Community Services	County/Utility Budget, Grants	\$20,000	Ongoing	
40	Summer Storms, Winter Storms	Identify special needs populations that rely on electricity for medical equipment.	High	P	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	Scott County Public Health has talked to Xcel Energy which has a list, and while they cannot release this information, during an emergency Scott County Public Health could work with Xcel.

Number (in Master Table)	Hazard	City of Belle Plaine Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
42	Summer Storms, Winter Storms	Educate public on how to stay safe during storms and promote the use of emergency kits and 72-hour shelter-in-place kits	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Cnty/City/Emergency Management/Public Health budget	\$4,000	New	
47	Flooding	Distribute flood preparedness and response information to schools, the special needs population, and the community.	Low	PE	2016-2020	Scott County, Belle Plaine, Jordan, Prior Lake, Shakopee, Savage	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	
49	Flooding	Adopt & enforce floodplain legislation requiring new structures be elevated above the BSE.	High	PP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget	\$2,000	In Progress	
50	Flooding	Obtain funding to retrofit, elevate or relocate repetitive flooding structures in floodplains.	Medium	SI	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget Grants	\$2,000,000	Deferred	
51	Flooding	Adopt & enforce floodplain, wetlands, and watershed land-use zoning.	High	NRP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget	\$2,000	In Progress	

Number (in Master Table)	Hazard	City of Belle Plaine Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
52	Flooding	Update Local Water Plans and include in Comprehensive Land Use Plans by end of 2018.	Medium	ES	2016-2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/Dept Budget	\$22,000	In Progress	All of the Cities in the County and the County have approved Local Water Management Plans. Most cover stormwater management. Approved Local Water Plans are now a required part of Comp plans which are due by the end of 2018.
53	Flooding	Obtain equipment to mitigate flooding on bridges, culverts, and roads.	High	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Public Works County Commission	County/City Budget Grants	\$200,000	In Progress	
54	Flooding	Update Land Use Plans to identify areas where development should be restrictive.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/Dept Budget	\$12,000	In Progress	Updated Comprehensive Land Use Plans are due by the end of 2018.
55	Flooding	Perform a study of the feasibility of community waterways flood control.	Low	SI	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Cnty Budget Grants	\$5,000	Deferred	
56	Flooding	Coordinate between Scott Watershed Mgmt. Organization and local governments' stormwater discharges to ensure sufficient downstream capacity.	High	NRP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County and City Planning Departments	County Budget, Grants	\$10,000	Ongoing	Assessed as part of development reviews by County and city planning departments.

Number (in Master Table)	Hazard	City of Belle Plaine Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
62	Flooding	Work with local units of government to insure completion of local flooding risk projects.	Medium	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott Watershed Mgmt. Organization EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget, Grants	\$10,000	Ongoing	Cities and County should be identifying local projects in Local Water Plans.
76	Flooding	Purchase sandbag filling machines for flood-prone jurisdictions.	Low	P	2019	Scott County, Belle Plaine, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$20,000	New	
77	Flooding	Explore with the DNR the potential for a General Permit for cleaning sediment where it is impacting storm sewers and other public infrastructure, in addition to current General Permits for transportation authorities.	Medium	P	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee, townships, SCALE, Watershed Organizations	County Budget	\$10,000	New	Sediment can result in flooding, and there has been difficulty cooperating with the DNR on this issue. A joint process is needed to work with the DNR on cleaning out sediment.
82	Landslides/ Erosion	Develop a map of potential landslide and mudslide areas.	Medium	ES	2018	Scott County, Jordan, Belle Plaine	EMA, County Commission	County/City Budget	\$2,000	In Progress	Bluff overlay map was created a number of years ago by the SWMO. Could be a starting point for this. We have also completed digital terrain modeling for much of the county.
83	Landslides/ Erosion	Review existing bluff overlay requirements.	Medium	P	2018	Scott County, Jordan, Belle Plaine	Scott County, Jordan, Belle Plaine	County/City Budget	\$10,000	New	This should be done given the June 2014 storm to determine whether they are adequate.

Number (in Master Table)	Hazard	City of Belle Plaine Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
86	Extreme Heat, Extreme Cold	Identify citizens subject to suffering from extreme temperatures.	High	ES	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	
87	Extreme Heat, Extreme Cold	Create a Power Outage Policy for critical facilities.	High	ES	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$10,000	New	This is particularly important where people are on respirators.
88	Extreme Heat, Extreme Cold	Educate the public on the dangers of extreme temperatures, particularly outdoor workers and kids playing sports.	Medium	PE	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City/ Emergency Management/Public Health budget	\$4,000	New	
89	Extreme Heat, Extreme Cold	Create cooling/warming shelters for vulnerable populations.	Medium	SI	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$200,000	New	This is particularly important for the elderly.
92	Wildfires	Distribute wildfire awareness and preparedness information to schools and the public.	Low	PE	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Lower Minnesota River Watershed District	County/State Budget, Grants	\$25,000	In Progress	



Number (in Master Table)	Hazard	City of Belle Plaine Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
93	Wildfires	Provide rural vegetation management educational information.	Low	NRP	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$6,000	New	
95	Wildfires, Structure Fires	Complete proactive life safety inspections of high density housing.	High	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$12,000	New	
96	Wildfires, Structure Fires	Adopt Appendix H of the MN Fire Code to eliminate BBQ grills on balconies and patios of structures with 3 or more units.	Medium	P	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$4,000	New	
97	Wildfires, Structure Fires	Complete Fire Prevention Programs in schools and adult assisted living facilities.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$12,000	New	
98	Structure Fires	Assist in obtaining a fire education-training trailer for the jurisdiction.	Low	ES	2019	Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Svcs, County Commission	County/Dept Budget Grants	\$52,000	Deferred	

Number (in Master Table)	Hazard	City of Belle Plaine Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
100	Structure Fires	Acquire and install six-inch water mains and hydrants communitywide.	High	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, Public Works County Commission	County/Dept Budget Grants	\$2,000,000	In Progress	
120	Hazardous Materials	Obtain hazmat containment equipment for water, roads, and railroads.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City/Dept Budget Grants	\$20,000	In Progress	
121	Hazardous Materials	Adopt & enforce hazardous materials site building setback legislation.	Low	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Commission	County Budget	\$2,000	Deferred	
122	Terrorism	Distribute terrorism preparedness and awareness information to schools and the public.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Sheriff Dept EMA BOE	Cnty/Dept/BOE Budget	\$2,000	Ongoing	
123	Terrorism	Educate government officials, the special needs population, and schools on procedures for handling suspicious mail.	Low	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	Ongoing	

Number (in Master Table)	Hazard	City of Belle Plaine Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
124	Terrorism	Post terrorism and bomb identification information in buildings and schools.	Low	PE	2016-2020	Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA Education Officials Law Enforcement	County/Dept Budget	\$2,000	Deferred	
125	Terrorism	Identify & distribute to appropriate officials potential terrorism targets information.	High	PE	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Police Dept County Commission	County/Dept Budget	\$2,000	In Progress	
126	Terrorism	Fund/maintain a trained bomb dog and handler to serve the entire county.	Medium	P	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Law Enforcement Agencies, EMA	County/City Budget Grants	\$102,000	In Progress	
127	Terrorism	Develop evacuation plans for identified terrorism targets.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Sheriff Dept EMA, Public Works	County/Dept Budget	\$2,000	Deferred	

*This page is intentionally left blank*

Table G - 2. Mitigation Actions for the City of Elko New Market

Number (in Master Table)	Hazard	City of Elko New Market Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
1	All Hazards	Assist citizens to develop emergency preparedness, response and recovery plans.	High	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Fire Depts Sheriff's office	Cnty/City/Twp Budget	\$2,000	Ongoing	
2	All Hazards	Train and equip 1 <sup>st</sup> responders for search and rescue missions.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Fire Depts, EMA	Cnty/City/Twp Budget, Grants	\$50,000	Ongoing	
3	All Hazards	Train and equip 1 <sup>st</sup> responders to respond to mass-casualty events.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA Public Health	Cnty/City/Twp Public Health Budget, Grants	\$50,000	Ongoing	
4	All Hazards	Train 1 <sup>st</sup> responders and community officials on the National Incident Mgmt. System.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> responder Agencies, EMA	Cnty/City/Twp Budget	\$2,000	Ongoing	
5	All Hazards	Obtain & install emergency generators or "pigtales" for critical government facilities and fuel depots.	Medium	PP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget, Grants	\$500,000	In Progress	



Number (in Master Table)	Hazard	City of Elko New Market Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
6	All Hazards	Assist non-governmental critical facilities to obtain emergency generators and/or pigtails.	Low	PP	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget, Grants	\$500,000	Deferred	
7	All Hazards	Obtain funding to add disaster shelters as necessary.	Medium	SI	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Red Cross County Commission	Cnty/City/Twp Budget, Grants	\$400,000	Deferred	
8	All Hazards	Assist schools to implement a disaster phone line.	Low	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA Board of Education	Cnty/Education Budget, Grants	\$2,000	Deferred	
9	All Hazards	Assist utilities in developing restoration and mitigation plans.	Low	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Utilities EMA	County Utility Budget, Grants	\$2,000	Deferred	
10	All Hazards	Assist businesses, schools, the special needs population and public facilities to post evacuation routes.	Low	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Law Enforcement EMA, Public Works	County Budget, Grants	\$2,000	Deferred	

Number (in Master Table)	Hazard	City of Elko New Market Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
14	All Hazards	Obtain funds for critical government departments to develop Continuity of Operations Plans.	Medium	ES	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	County Budget, Grants	\$52,000	Deferred	
15	All Hazards	Assist businesses to develop Business Continuity Plans.	Low	ES	2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	County/Business Budget, Grants	\$2,000	Deferred	
16	All Hazards	Assist communities in developing strategies to prevent loss of public records.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget	\$12,000	Deferred	
17	All Hazards	Ensure mutual aid, shelter, response, mass casualty & recovery agreements are current.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA County Commission	Cnty/City/Twp Budget	\$2,000	Ongoing	
18	All Hazards	Assist critical sites to develop and provide an emergency plan to the EMA.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA	County/City Budget, Grants	\$12,000	Deferred	

Number (in Master Table)	Hazard	City of Elko New Market Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
21	All Hazards	Educate public on how to sign up for CodeRED.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$2,000	New	Scott County purchased CodeRED in 2014, but getting people to sign up for it has been a challenge. Only 285 of 6,500 residents in Jordan have signed up. Information is currently posted on every city's website.
25	All Hazards	Proactively determine policies/process for post-disaster FEMA response and mitigation applications.	Low	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$4,000	New	
27	Summer Storms, Winter Storms	Distribute safe room/shelter in place information to schools, the special needs population, and the community.	High	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA, BOE, Red Cross	Cnty/City/Twp Budget	\$2,000	Ongoing	
33	Summer Storms, Winter Storms	Train & equip 1 <sup>st</sup> responders to respond to high wind events.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City Budget Grants	\$12,000	Deferred	
34	Summer Storms, Winter Storms	Develop a debris clearance program that can be utilized countywide.	Medium	PP	2016	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Public Works County Commission	County/Dept Budget	\$8,000	In Progress	

Number (in Master Table)	Hazard	City of Elko New Market Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
35	Summer Storms, Winter Storms	Obtain funding to build mobile home community storm shelters.	High	SI	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA County Commission	County/City Budget Grants	\$500,000	Deferred	
36	Summer Storms, Winter Storms	Adopt & enforce mobile home tie down and skirting legislation.	Medium	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Commission	County Budget	\$2,000	In Progress	
38	Summer Storms, Winter Storms	Research the feasibility of requiring the burying of power lines in all new rural cluster subdivisions.	Low	SI	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Community Services	County/Utility Budget, Grants	\$20,000	Ongoing	
40	Summer Storms, Winter Storms	Identify special needs populations that rely on electricity for medical equipment.	High	P	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	Scott County Public Health has talked to Xcel Energy which has a list, and while they cannot release this information, during an emergency Scott County Public Health could work with Xcel.
41	Summer Storms, Winter Storms	Install generator at the Elko New Market Police Department Headquarters.	High	ES	2016-2018	Elko New Market	Elko New Market Police Department	FEMA HMA grant funding	\$9,000	New	The Elko New Market Police Department Headquarters serves as their backup EOC and they currently have no backup power source.

Number (in Master Table)	Hazard	City of Elko New Market Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
42	Summer Storms, Winter Storms	Educate public on how to stay safe during storms and promote the use of emergency kits and 72-hour shelter-in-place kits	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Cnty/City/Emergency Management/Public Health budget	\$4,000	New	
49	Flooding	Adopt & enforce floodplain legislation requiring new structures be elevated above the BSE.	High	PP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget	\$2,000	In Progress	
50	Flooding	Obtain funding to retrofit, elevate or relocate repetitive flooding structures in floodplains.	Medium	SI	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget Grants	\$2,000,000	Deferred	
51	Flooding	Adopt & enforce floodplain, wetlands, and watershed land-use zoning.	High	NRP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget	\$2,000	In Progress	
52	Flooding	Update Local Water Plans and include in Comprehensive Land Use Plans by end of 2018.	Medium	ES	2016-2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/Dept Budget	\$22,000	In Progress	All of the Cities in the County and the County have approved Local Water Management Plans. Most cover stormwater management. Approved Local Water Plans are now a required part of Comp plans which are due by the end of 2018.



Number (in Master Table)	Hazard	City of Elko New Market Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
53	Flooding	Obtain equipment to mitigate flooding on bridges, culverts, and roads.	High	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Public Works County Commission	County/City Budget Grants	\$200,000	In Progress	
54	Flooding	Update Land Use Plans to identify areas where development should be restrictive.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/Dept Budget	\$12,000	In Progress	Updated Comprehensive Land Use Plans are due by the end of 2018.
55	Flooding	Perform a study of the feasibility of community waterways flood control.	Low	SI	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Cnty Budget Grants	\$5,000	Deferred	
56	Flooding	Coordinate between Scott Watershed Mgmt. Organization and local governments' stormwater discharges to ensure sufficient downstream capacity.	High	NRP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County and City Planning Departments	County Budget, Grants	\$10,000	Ongoing	Assessed as part of development reviews by County and city planning departments.

Number (in Master Table)	Hazard	City of Elko New Market Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
62	Flooding	Work with local units of government to insure completion of local flooding risk projects.	Medium	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott Watershed Mgmt. Organization EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget, Grants	\$10,000	Ongoing	Cities and County should be identifying local projects in Local Water Plans.
77	Flooding	Explore with the DNR the potential for a General Permit for cleaning sediment where it is impacting storm sewers and other public infrastructure, in addition to current General Permits for transportation authorities.	Medium	P	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee, townships, SCALE, Watershed Organizations	County Budget	\$10,000	New	Sediment can result in flooding, and there has been difficulty cooperating with the DNR on this issue. A joint process is needed to work with the DNR on cleaning out sediment.
86	Extreme Heat, Extreme Cold	Identify citizens subject to suffering from extreme temperatures.	High	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	
87	Extreme Heat, Extreme Cold	Create a Power Outage Policy for critical facilities.	High	ES	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$10,000	New	This is particularly important where people are on respirators.

Number (in Master Table)	Hazard	City of Elko New Market Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
88	Extreme Heat, Extreme Cold	Educate the public on the dangers of extreme temperatures, particularly outdoor workers and kids playing sports.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City/ Emergency Management/Public Health budget	\$4,000	New	
89	Extreme Heat, Extreme Cold	Create cooling/warming shelters for vulnerable populations.	Medium	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$200,000	New	This is particularly important for the elderly.
92	Wildfires	Distribute wildfire awareness and preparedness information to schools and the public.	Low	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Lower Minnesota River Watershed District	County/State Budget, Grants	\$25,000	In Progress	
93	Wildfires	Provide rural vegetation management educational information.	Low	NRP	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$6,000	New	
95	Wildfires, Structure Fires	Complete proactive life safety inspections of high density housing.	High	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$12,000	New	

Number (in Master Table)	Hazard	City of Elko New Market Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
96	Wildfires, Structure Fires	Adopt Appendix H of the MN Fire Code to eliminate BBQ grills on balconies and patios of structures with 3 or more units.	Medium	P	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$4,000	New	
97	Wildfires, Structure Fires	Complete Fire Prevention Programs in schools and adult assisted living facilities.	Medium	PE	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$12,000	New	
98	Structure Fires	Assist in obtaining a fire education-training trailer for the jurisdiction.	Low	ES	2019	Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Svcs, County Commission	County/Dept Budget Grants	\$52,000	Deferred	
100	Structure Fires	Acquire and install six-inch water mains and hydrants communitywide.	High	SI	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, Public Works County Commission	County/Dept Budget Grants	\$2,000,000	In Progress	
120	Hazardous Materials	Obtain hazmat containment equipment for water, roads, and railroads.	Medium	ES	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City/Dept Budget Grants	\$20,000	In Progress	

Number (in Master Table)	Hazard	City of Elko New Market Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
121	Hazardous Materials	Adopt & enforce hazardous materials site building setback legislation.	Low	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Commission	County Budget	\$2,000	Deferred	
122	Terrorism	Distribute terrorism preparedness and awareness information to schools and the public.	Medium	PE	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Sheriff Dept EMA BOE	Cnty/Dept/BOE Budget	\$2,000	Ongoing	
123	Terrorism	Educate government officials, the special needs population, and schools on procedures for handling suspicious mail.	Low	PE	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	Ongoing	
124	Terrorism	Post terrorism and bomb identification information in buildings and schools.	Low	PE	2016- 2020	Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA Education Officials Law Enforcement	County/Dept Budget	\$2,000	Deferred	
125	Terrorism	Identify & distribute to appropriate officials potential terrorism targets information.	High	PE	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Police Dept County Commission	County/Dept Budget	\$2,000	In Progress	



Number (in Master Table)	Hazard	City of Elko New Market Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
126	Terrorism	Fund/maintain a trained bomb dog and handler to serve the entire county.	Medium	P	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Law Enforcement Agencies, EMA	County/City Budget Grants	\$102,000	In Progress	
127	Terrorism	Develop evacuation plans for identified terrorism targets.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Sheriff Dept EMA, Public Works	County/Dept Budget	\$2,000	Deferred	

Table G - 3. Mitigation Actions for the City of Jordan

Number (in Master Table)	Hazard	City of Jordan Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
1	All Hazards	Assist citizens to develop emergency preparedness, response and recovery plans.	High	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Fire Depts Sheriff's office	Cnty/City/Twp Budget	\$2,000	Ongoing	
2	All Hazards	Train and equip 1 <sup>st</sup> responders for search and rescue missions.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Fire Depts, EMA	Cnty/City/Twp Budget, Grants	\$50,000	Ongoing	
3	All Hazards	Train and equip 1 <sup>st</sup> responders to respond to mass-casualty events.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA Public Health	Cnty/City/Twp Public Health Budget, Grants	\$50,000	Ongoing	
4	All Hazards	Train 1 <sup>st</sup> responders and community officials on the National Incident Mgmt. System.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> responder Agencies, EMA	Cnty/City/Twp Budget	\$2,000	Ongoing	
5	All Hazards	Obtain & install emergency generators or "pigtales" for critical government facilities and fuel depots.	Medium	PP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget, Grants	\$500,000	In Progress	

Number (in Master Table)	Hazard	City of Jordan Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
6	All Hazards	Assist non-governmental critical facilities to obtain emergency generators and/or pigtails.	Low	PP	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget, Grants	\$500,000	Deferred	
7	All Hazards	Obtain funding to add disaster shelters as necessary.	Medium	SI	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Red Cross County Commission	Cnty/City/Twp Budget, Grants	\$400,000	Deferred	
8	All Hazards	Assist schools to implement a disaster phone line.	Low	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA Board of Education	Cnty/Education Budget, Grants	\$2,000	Deferred	
9	All Hazards	Assist utilities in developing restoration and mitigation plans.	Low	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Utilities EMA	County Utility Budget, Grants	\$2,000	Deferred	
10	All Hazards	Assist businesses, schools, the special needs population and public facilities to post evacuation routes.	Low	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Law Enforcement EMA, Public Works	County Budget, Grants	\$2,000	Deferred	

Number (in Master Table)	Hazard	City of Jordan Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
14	All Hazards	Obtain funds for critical government departments to develop Continuity of Operations Plans.	Medium	ES	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	County Budget, Grants	\$52,000	Deferred	
15	All Hazards	Assist businesses to develop Business Continuity Plans.	Low	ES	2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	County/Business Budget, Grants	\$2,000	Deferred	
16	All Hazards	Assist communities in developing strategies to prevent loss of public records.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget	\$12,000	Deferred	
17	All Hazards	Ensure mutual aid, shelter, response, mass casualty & recovery agreements are current.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA County Commission	Cnty/City/Twp Budget	\$2,000	Ongoing	
18	All Hazards	Assist critical sites to develop and provide an emergency plan to the EMA.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA	County/City Budget, Grants	\$12,000	Deferred	

Number (in Master Table)	Hazard	City of Jordan Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
21	All Hazards	Educate public on how to sign up for CodeRED.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$2,000	New	Scott County purchased CodeRED in 2014, but getting people to sign up for it has been a challenge. Only 285 of 6,500 residents in Jordan have signed up. Information is currently posted on every city's website.
25	All Hazards	Proactively determine policies/process for post-disaster FEMA response and mitigation applications.	Low	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$4,000	New	
26	All Hazards	Host debriefing meeting to assess what was learned from the June 2014 disaster.	Medium	P	2016	Scott County, Belle Plaine, Jordan, Shakopee, Prior Lake	Scott County	County/City Budget	\$1,000	New	Public safety does this for almost all large incidents, including the 2014 flooding. However, when the community as a whole is impacted during a disaster, a debriefing should be held including all departments involved.
27	Summer Storms, Winter Storms	Distribute safe room/shelter in place information to schools, the special needs population, and the community.	High	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA, BOE, Red Cross	Cnty/City/Twp Budget	\$2,000	Ongoing	
33	Summer Storms, Winter Storms	Train & equip 1 <sup>st</sup> responders to respond to high wind events.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City Budget Grants	\$12,000	Deferred	



Number (in Master Table)	Hazard	City of Jordan Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
34	Summer Storms, Winter Storms	Develop a debris clearance program that can be utilized countywide.	Medium	PP	2016	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Public Works County Commission	County/Dept Budget	\$8,000	In Progress	
35	Summer Storms, Winter Storms	Obtain funding to build mobile home community storm shelters.	High	SI	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA County Commission	County/City Budget Grants	\$500,000	Deferred	
36	Summer Storms, Winter Storms	Adopt & enforce mobile home tie down and skirting legislation.	Medium	SI	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Commission	County Budget	\$2,000	In Progress	
38	Summer Storms, Winter Storms	Research the feasibility of requiring the burying of power lines in all new rural cluster subdivisions.	Low	SI	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Community Services	County/Utility Budget, Grants	\$20,000	Ongoing	
40	Summer Storms, Winter Storms	Identify special needs populations that rely on electricity for medical equipment.	High	P	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	Scott County Public Health has talked to Xcel Energy which has a list, and while they cannot release this information, during an emergency Scott County Public Health could work with Xcel.

Number (in Master Table)	Hazard	City of Jordan Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
42	Summer Storms, Winter Storms	Educate public on how to stay safe during storms and promote the use of emergency kits and 72-hour shelter-in-place kits	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Cnty/City/Emergency Management/Public Health budget	\$4,000	New	
47	Flooding	Distribute flood preparedness and response information to schools, the special needs population, and the community.	Low	PE	2016-2020	Scott County, Belle Plaine, Jordan, Prior Lake, Shakopee, Savage	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	
49	Flooding	Adopt & enforce floodplain legislation requiring new structures be elevated above the BSE.	High	PP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget	\$2,000	In Progress	
50	Flooding	Obtain funding to retrofit, elevate or relocate repetitive flooding structures in floodplains.	Medium	SI	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget Grants	\$2,000,000	Deferred	
51	Flooding	Adopt & enforce floodplain, wetlands, and watershed land-use zoning.	High	NRP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget	\$2,000	In Progress	

Number (in Master Table)	Hazard	City of Jordan Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
52	Flooding	Update Local Water Plans and include in Comprehensive Land Use Plans by end of 2018.	Medium	ES	2016-2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/Dept Budget	\$22,000	In Progress	All of the Cities in the County and the County have approved Local Water Management Plans. Most cover stormwater management. Approved Local Water Plans are now a required part of Comp plans which are due by the end of 2018.
53	Flooding	Obtain equipment to mitigate flooding on bridges, culverts, and roads.	High	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Public Works County Commission	County/City Budget Grants	\$200,000	In Progress	
54	Flooding	Update Land Use Plans to identify areas where development should be restrictive.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/Dept Budget	\$12,000	In Progress	Updated Comprehensive Land Use Plans are due by the end of 2018.
55	Flooding	Perform a study of the feasibility of community waterways flood control.	Low	SI	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Cnty Budget Grants	\$5,000	Deferred	
56	Flooding	Coordinate between Scott Watershed Mgmt. Organization and local governments' stormwater discharges to ensure sufficient downstream capacity.	High	NRP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County and City Planning Departments	County Budget, Grants	\$10,000	Ongoing	Assessed as part of development reviews by County and city planning departments.

Number (in Master Table)	Hazard	City of Jordan Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
57	Flooding	Complete flood damage study for downtown Jordan.	High	SI	2016-2020	Jordan	Community Services	County, City Budget, Grants	\$500,000	In Progress	
61	Flooding	Work with the City of Jordan on flood damage reduction efforts.	Medium	SI	2016-2020	Scott County, Jordan	Scott Watershed Mgmt. Organization	County Budget, Grants	\$25,000	Ongoing	Some studies completed, otherwise this is ongoing.
62	Flooding	Work with local units of government to insure completion of local flooding risk projects.	Medium	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott Watershed Mgmt. Organization EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget, Grants	\$10,000	Ongoing	Cities and County should be identifying local projects in Local Water Plans.
76	Flooding	Purchase sandbag filling machines for flood-prone jurisdictions.	Low	P	2019	Scott County, Belle Plaine, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$20,000	New	
77	Flooding	Explore with the DNR the potential for a General Permit for cleaning sediment where it is impacting storm sewers and other public infrastructure, in addition to current General Permits for transportation authorities.	Medium	P	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee, townships, SCALE, Watershed Organizations	County Budget	\$10,000	New	Sediment can result in flooding, and there has been difficulty cooperating with the DNR on this issue. A joint process is needed to work with the DNR on cleaning out sediment.
82	Landslides/ Erosion	Develop a map of potential landslide and mudslide areas.	Medium	ES	2018	Scott County, Jordan, Belle Plaine	EMA, County Commission	County/City Budget	\$2,000	In Progress	Bluff overlay map was created a number of years ago by the SWMO. Could be a starting point for this. We have also completed digital terrain modeling for much of the county.

Number (in Master Table)	Hazard	City of Jordan Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
83	Landslides/ Erosion	Review existing bluff overlay requirements.	Medium	P	2018	Scott County, Jordan, Belle Plaine	Scott County, Jordan, Belle Plaine	County/City Budget	\$10,000	New	This should be done given the June 2014 storm to determine whether they are adequate.
85	Landslides/ Erosion	Work to support actions identified in Jordan's landslide study.	High	P, ES, SI	2016-2020	Scott County, Jordan	Scott County, Jordan	County/City Budget	\$500,000	New	Jordan is currently doing a study on the landslide that occurred behind the brewery in 2014.
86	Extreme Heat, Extreme Cold	Identify citizens subject to suffering from extreme temperatures.	High	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	
87	Extreme Heat, Extreme Cold	Create a Power Outage Policy for critical facilities.	High	ES	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$10,000	New	This is particularly important where people are on respirators.
88	Extreme Heat, Extreme Cold	Educate the public on the dangers of extreme temperatures, particularly outdoor workers and kids playing sports.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City/ Emergency Management/Public Health budget	\$4,000	New	
89	Extreme Heat, Extreme Cold	Create cooling/warming shelters for vulnerable populations.	Medium	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$200,000	New	This is particularly important for the elderly.



Number (in Master Table)	Hazard	City of Jordan Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
92	Wildfires	Distribute wildfire awareness and preparedness information to schools and the public.	Low	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Lower Minnesota River Watershed District	County/State Budget, Grants	\$25,000	In Progress	
93	Wildfires	Provide rural vegetation management educational information.	Low	NRP	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$6,000	New	
95	Wildfires, Structure Fires	Complete proactive life safety inspections of high density housing.	High	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$12,000	New	
96	Wildfires, Structure Fires	Adopt Appendix H of the MN Fire Code to eliminate BBQ grills on balconies and patios of structures with 3 or more units.	Medium	P	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$4,000	New	
97	Wildfires, Structure Fires	Complete Fire Prevention Programs in schools and adult assisted living facilities.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$12,000	New	

Number (in Master Table)	Hazard	City of Jordan Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
98	Structure Fires	Assist in obtaining a fire education-training trailer for the jurisdiction.	Low	ES	2019	Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Svcs, County Commission	County/Dept Budget Grants	\$52,000	Deferred	
100	Structure Fires	Acquire and install six-inch water mains and hydrants communitywide.	High	SI	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, Public Works County Commission	County/Dept Budget Grants	\$2,000,000	In Progress	
120	Hazardous Materials	Obtain hazmat containment equipment for water, roads, and railroads.	Medium	ES	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City/Dept Budget Grants	\$20,000	In Progress	
121	Hazardous Materials	Adopt & enforce hazardous materials site building setback legislation.	Low	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Commission	County Budget	\$2,000	Deferred	
122	Terrorism	Distribute terrorism preparedness and awareness information to schools and the public.	Medium	PE	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Sheriff Dept EMA BOE	Cnty/Dept/BOE Budget	\$2,000	Ongoing	

Number (in Master Table)	Hazard	City of Jordan Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
123	Terrorism	Educate government officials, the special needs population, and schools on procedures for handling suspicious mail.	Low	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	Ongoing	
124	Terrorism	Post terrorism and bomb identification information in buildings and schools.	Low	PE	2016-2020	Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA Education Officials Law Enforcement	County/Dept Budget	\$2,000	Deferred	
125	Terrorism	Identify & distribute to appropriate officials potential terrorism targets information.	High	PE	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Police Dept County Commission	County/Dept Budget	\$2,000	In Progress	
126	Terrorism	Fund/maintain a trained bomb dog and handler to serve the entire county.	Medium	P	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Law Enforcement Agencies, EMA	County/City Budget Grants	\$102,000	In Progress	
127	Terrorism	Develop evacuation plans for identified terrorism targets.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Sheriff Dept EMA, Public Works	County/Dept Budget	\$2,000	Deferred	

*This page is intentionally left blank*

Table G - 4. Mitigation Actions for the City of Prior Lake

Number (in Master Table)	Hazard	City of Prior Lake Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
1	All Hazards	Assist citizens to develop emergency preparedness, response and recovery plans.	High	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Fire Depts Sheriff's office	Cnty/City/Twp Budget	\$2,000	Ongoing	
2	All Hazards	Train and equip 1 <sup>st</sup> responders for search and rescue missions.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Fire Depts, EMA	Cnty/City/Twp Budget, Grants	\$50,000	Ongoing	
3	All Hazards	Train and equip 1 <sup>st</sup> responders to respond to mass-casualty events.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA Public Health	Cnty/City/Twp Public Health Budget, Grants	\$50,000	Ongoing	
4	All Hazards	Train 1 <sup>st</sup> responders and community officials on the National Incident Mgmt. System.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> responder Agencies, EMA	Cnty/City/Twp Budget	\$2,000	Ongoing	
5	All Hazards	Obtain & install emergency generators or "pigtales" for critical government facilities and fuel depots.	Medium	PP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget, Grants	\$500,000	In Progress	



Number (in Master Table)	Hazard	City of Prior Lake Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
6	All Hazards	Assist non-governmental critical facilities to obtain emergency generators and/or pigtails.	Low	PP	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget, Grants	\$500,000	Deferred	
7	All Hazards	Obtain funding to add disaster shelters as necessary.	Medium	SI	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Red Cross County Commission	Cnty/City/Twp Budget, Grants	\$400,000	Deferred	
8	All Hazards	Assist schools to implement a disaster phone line.	Low	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA Board of Education	Cnty/Education Budget, Grants	\$2,000	Deferred	
9	All Hazards	Assist utilities in developing restoration and mitigation plans.	Low	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Utilities EMA	County Utility Budget, Grants	\$2,000	Deferred	
10	All Hazards	Assist businesses, schools, the special needs population and public facilities to post evacuation routes.	Low	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Law Enforcement EMA, Public Works	County Budget, Grants	\$2,000	Deferred	

Number (in Master Table)	Hazard	City of Prior Lake Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
14	All Hazards	Obtain funds for critical government departments to develop Continuity of Operations Plans.	Medium	ES	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	County Budget, Grants	\$52,000	Deferred	
15	All Hazards	Assist businesses to develop Business Continuity Plans.	Low	ES	2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	County/Business Budget, Grants	\$2,000	Deferred	
16	All Hazards	Assist communities in developing strategies to prevent loss of public records.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget	\$12,000	Deferred	
17	All Hazards	Ensure mutual aid, shelter, response, mass casualty & recovery agreements are current.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA County Commission	Cnty/City/Twp Budget	\$2,000	Ongoing	
18	All Hazards	Assist critical sites to develop and provide an emergency plan to the EMA.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA	County/City Budget, Grants	\$12,000	Deferred	
20	All Hazards	Install new warning sirens in new developments rural townships and replace older sirens.	High	ES	2016-2017	Prior Lake	Prior Lake Police and Fire	County/City Budget Grants	\$75,000	New	The township of Cedar Lake is asking for another warning siren.

Number (in Master Table)	Hazard	City of Prior Lake Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
21	All Hazards	Educate public on how to sign up for CodeRED.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$2,000	New	Scott County purchased CodeRED in 2014, but getting people to sign up for it has been a challenge. Only 285 of 6,500 residents in Jordan have signed up. Information is currently posted on every city's website.
25	All Hazards	Proactively determine policies/process for post-disaster FEMA response and mitigation applications.	Low	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$4,000	New	
26	All Hazards	Host debriefing meeting to assess what was learned from the June 2014 disaster.	Medium	P	2016	Scott County, Belle Plaine, Jordan, Shakopee, Prior Lake	Scott County	County/City Budget	\$1,000	New	Public safety does this for almost all large incidents, including the 2014 flooding. However, when the community as a whole is impacted during a disaster, a debriefing should be held including all departments involved.
27	Summer Storms, Winter Storms	Distribute safe room/shelter in place information to schools, the special needs population, and the community.	High	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA, BOE, Red Cross	Cnty/City/Twp Budget	\$2,000	Ongoing	
33	Summer Storms, Winter Storms	Train & equip 1 <sup>st</sup> responders to respond to high wind events.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City Budget Grants	\$12,000	Deferred	

Number (in Master Table)	Hazard	City of Prior Lake Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
34	Summer Storms, Winter Storms	Develop a debris clearance program that can be utilized countywide.	Medium	PP	2016	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Public Works County Commission	County/Dept Budget	\$8,000	In Progress	
35	Summer Storms, Winter Storms	Obtain funding to build mobile home community storm shelters.	High	SI	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA County Commission	County/City Budget Grants	\$500,000	Deferred	
36	Summer Storms, Winter Storms	Adopt & enforce mobile home tie down and skirting legislation.	Medium	SI	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Commission	County Budget	\$2,000	In Progress	
38	Summer Storms, Winter Storms	Research the feasibility of requiring the burying of power lines in all new rural cluster subdivisions.	Low	SI	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Community Services	County/Utility Budget, Grants	\$20,000	Ongoing	
40	Summer Storms, Winter Storms	Identify special needs populations that rely on electricity for medical equipment.	High	P	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	Scott County Public Health has talked to Xcel Energy which has a list, and while they cannot release this information, during an emergency Scott County Public Health could work with Xcel.

Number (in Master Table)	Hazard	City of Prior Lake Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
42	Summer Storms, Winter Storms	Educate public on how to stay safe during storms and promote the use of emergency kits and 72-hour shelter-in-place kits	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Cnty/City/Emergency Management/Public Health budget	\$4,000	New	
47	Flooding	Distribute flood preparedness and response information to schools, the special needs population, and the community.	Low	PE	2016-2020	Scott County, Belle Plaine, Jordan, Prior Lake, Shakopee, Savage	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	
49	Flooding	Adopt & enforce floodplain legislation requiring new structures be elevated above the BSE.	High	PP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget	\$2,000	In Progress	
50	Flooding	Obtain funding to retrofit, elevate or relocate repetitive flooding structures in floodplains.	Medium	SI	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget Grants	\$2,000,000	Deferred	
51	Flooding	Adopt & enforce floodplain, wetlands, and watershed land-use zoning.	High	NRP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget	\$2,000	In Progress	



Number (in Master Table)	Hazard	City of Prior Lake Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
52	Flooding	Update Local Water Plans and include in Comprehensive Land Use Plans by end of 2018.	Medium	ES	2016-2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/Dept Budget	\$22,000	In Progress	All of the Cities in the County and the County have approved Local Water Management Plans. Most cover stormwater management. Approved Local Water Plans are now a required part of Comp plans which are due by the end of 2018.
53	Flooding	Obtain equipment to mitigate flooding on bridges, culverts, and roads.	High	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Public Works County Commission	County/City Budget Grants	\$200,000	In Progress	
54	Flooding	Update Land Use Plans to identify areas where development should be restrictive.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/Dept Budget	\$12,000	In Progress	Updated Comprehensive Land Use Plans are due by the end of 2018.
55	Flooding	Perform a study of the feasibility of community waterways flood control.	Low	SI	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Cnty Budget Grants	\$5,000	Deferred	
56	Flooding	Coordinate between Scott Watershed Mgmt. Organization and local governments' stormwater discharges to ensure sufficient downstream capacity.	High	NRP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County and City Planning Departments	County Budget, Grants	\$10,000	Ongoing	Assessed as part of development reviews by County and city planning departments.

Number (in Master Table)	Hazard	City of Prior Lake Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
59	Flooding	Obtain grant funding to study for Markley Lake and O'Dowd Lake outlet improvements.	High	NRP	2018	Scott County, Prior Lake	Community Services	County Budget, Grants	\$200,000	In Progress	Markley Lake effort lead by City of Prior Lake which is using compensatory storage as the solution. Study of O'Dowd outlet recommended picking up necessary land right and improvements with as development occurs, however, development has been slow. No grants have been applied for.
60	Flooding	Acquire & prepare property to increase stormwater storage capacity for Spring Lake TWP.	Medium	NRP	2016-2020	Prior Lake, Scott County	Prior Lake Soil and Water District	County Budget, Grants	2,000,000	In Progress	
62	Flooding	Work with local units of government to insure completion of local flooding risk projects.	Medium	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott Watershed Mgmt. Organization EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget, Grants	\$10,000	Ongoing	Cities and County should be identifying local projects in Local Water Plans.
64	Flooding	Reconstruct outlet structure on Prior Lake.	High	SI	2016-2020	Prior Lake	Prior Lake Soil and Water District	County Budget, Grants	\$500,000	In Progress	
70	Flooding	Clean out drainage channel from Prior Lake to the Minnesota River.	High	SI	2018	Scott County, Prior Lake, Shakopee	Prior Lake Soil and Water District	County, City Budget, Grants	\$250,000	Ongoing	
75	Flooding	Work to support the Prior Lake Floodplain Study/Watershed Project and implement the results.	High	P	2016-2020	Scott County, Prior Lake, Shakopee	Scott County, Prior Lake	HMA Grants, County/City Budget	\$500,000	New	A flood mitigation study is currently being done, to be completed Spring 2016. New dams will be built, and funds are needed for purchasing easements.

Number (in Master Table)	Hazard	City of Prior Lake Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
76	Flooding	Purchase sandbag filling machines for flood-prone jurisdictions.	Low	P	2019	Scott County, Belle Plaine, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$20,000	New	
77	Flooding	Explore with the DNR the potential for a General Permit for cleaning sediment where it is impacting storm sewers and other public infrastructure, in addition to current General Permits for transportation authorities.	Medium	P	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee, townships, SCALE, Watershed Organizations	County Budget	\$10,000	New	Sediment can result in flooding, and there has been difficulty cooperating with the DNR on this issue. A joint process is needed to work with the DNR on cleaning out sediment.
86	Extreme Heat, Extreme Cold	Identify citizens subject to suffering from extreme temperatures.	High	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	
87	Extreme Heat, Extreme Cold	Create a Power Outage Policy for critical facilities.	High	ES	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$10,000	New	This is particularly important where people are on respirators.
88	Extreme Heat, Extreme Cold	Educate the public on the dangers of extreme temperatures, particularly outdoor workers and kids playing sports.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City/ Emergency Management/Public Health budget	\$4,000	New	

Number (in Master Table)	Hazard	City of Prior Lake Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
89	Extreme Heat, Extreme Cold	Create cooling/warming shelters for vulnerable populations.	Medium	SI	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$200,000	New	This is particularly important for the elderly.
92	Wildfires	Distribute wildfire awareness and preparedness information to schools and the public.	Low	PE	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Lower Minnesota River Watershed District	County/State Budget, Grants	\$25,000	In Progress	
93	Wildfires	Provide rural vegetation management educational information.	Low	NRP	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$6,000	New	
95	Wildfires, Structure Fires	Complete proactive life safety inspections of high density housing.	High	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$12,000	New	
96	Wildfires, Structure Fires	Adopt Appendix H of the MN Fire Code to eliminate BBQ grills on balconies and patios of structures with 3 or more units.	Medium	P	2019	Scott County, Belle Plaine, Elko New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$4,000	New	

Number (in Master Table)	Hazard	City of Prior Lake Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
97	Wildfires, Structure Fires	Complete Fire Prevention Programs in schools and adult assisted living facilities.	Medium	PE	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$12,000	New	
98	Structure Fires	Assist in obtaining a fire education-training trailer for the jurisdiction.	Low	ES	2019	Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Svcs, County Commission	County/Dept Budget Grants	\$52,000	Deferred	
100	Structure Fires	Acquire and install six-inch water mains and hydrants communitywide.	High	SI	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, Public Works County Commission	County/Dept Budget Grants	\$2,000,000	In Progress	
120	Hazardous Materials	Obtain hazmat containment equipment for water, roads, and railroads.	Medium	ES	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City/Dept Budget Grants	\$20,000	In Progress	
121	Hazardous Materials	Adopt & enforce hazardous materials site building setback legislation.	Low	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Commission	County Budget	\$2,000	Deferred	



Number (in Master Table)	Hazard	City of Prior Lake Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
122	Terrorism	Distribute terrorism preparedness and awareness information to schools and the public.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Sheriff Dept EMA BOE	Cnty/Dept/BOE Budget	\$2,000	Ongoing	
123	Terrorism	Educate government officials, the special needs population, and schools on procedures for handling suspicious mail.	Low	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	Ongoing	
124	Terrorism	Post terrorism and bomb identification information in buildings and schools.	Low	PE	2016-2020	Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA Education Officials Law Enforcement	County/Dept Budget	\$2,000	Deferred	
125	Terrorism	Identify & distribute to appropriate officials potential terrorism targets information.	High	PE	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Police Dept County Commission	County/Dept Budget	\$2,000	In Progress	
126	Terrorism	Fund/maintain a trained bomb dog and handler to serve the entire county.	Medium	P	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Law Enforcement Agencies, EMA	County/City Budget Grants	\$102,000	In Progress	

Number (in Master Table)	Hazard	City of Prior Lake Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
127	Terrorism	Develop evacuation plans for identified terrorism targets.	Medium	ES	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Sheriff Dept EMA, Public Works	County/Dept Budget	\$2,000	Deferred	

*This page is intentionally left blank*

Table G - 5. Mitigation Actions for the City of Savage

Number (in Master Table)	Hazard	City of Savage Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
1	All Hazards	Assist citizens to develop emergency preparedness, response and recovery plans.	High	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Fire Depts Sheriff's office	Cnty/City/Twp Budget	\$2,000	Ongoing	
2	All Hazards	Train and equip 1 <sup>st</sup> responders for search and rescue missions.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Fire Depts, EMA	Cnty/City/Twp Budget, Grants	\$50,000	Ongoing	
3	All Hazards	Train and equip 1 <sup>st</sup> responders to respond to mass-casualty events.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA Public Health	Cnty/City/Twp Public Health Budget, Grants	\$50,000	Ongoing	
4	All Hazards	Train 1 <sup>st</sup> responders and community officials on the National Incident Mgmt. System.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> responder Agencies, EMA	Cnty/City/Twp Budget	\$2,000	Ongoing	
5	All Hazards	Obtain & install emergency generators or "pigtales" for critical government facilities and fuel depots.	Medium	PP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget, Grants	\$500,000	In Progress	

Number (in Master Table)	Hazard	City of Savage Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
6	All Hazards	Assist non-governmental critical facilities to obtain emergency generators and/or pigtails.	Low	PP	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget, Grants	\$500,000	Deferred	
7	All Hazards	Obtain funding to add disaster shelters as necessary.	Medium	SI	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Red Cross County Commission	Cnty/City/Twp Budget, Grants	\$400,000	Deferred	
8	All Hazards	Assist schools to implement a disaster phone line.	Low	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA Board of Education	Cnty/Education Budget, Grants	\$2,000	Deferred	
9	All Hazards	Assist utilities in developing restoration and mitigation plans.	Low	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Utilities EMA	County Utility Budget, Grants	\$2,000	Deferred	
10	All Hazards	Assist businesses, schools, the special needs population and public facilities to post evacuation routes.	Low	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Law Enforcement EMA, Public Works	County Budget, Grants	\$2,000	Deferred	



Number (in Master Table)	Hazard	City of Savage Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
14	All Hazards	Obtain funds for critical government departments to develop Continuity of Operations Plans.	Medium	ES	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	County Budget, Grants	\$52,000	Deferred	
15	All Hazards	Assist businesses to develop Business Continuity Plans.	Low	ES	2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	County/Business Budget, Grants	\$2,000	Deferred	
16	All Hazards	Assist communities in developing strategies to prevent loss of public records.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget	\$12,000	Deferred	
17	All Hazards	Ensure mutual aid, shelter, response, mass casualty & recovery agreements are current.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA County Commission	Cnty/City/Twp Budget	\$2,000	Ongoing	
18	All Hazards	Assist critical sites to develop and provide an emergency plan to the EMA.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA	County/City Budget, Grants	\$12,000	Deferred	

Number (in Master Table)	Hazard	City of Savage Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
21	All Hazards	Educate public on how to sign up for CodeRED.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$2,000	New	Scott County purchased CodeRED in 2014, but getting people to sign up for it has been a challenge. Only 285 of 6,500 residents in Jordan have signed up. Information is currently posted on every city's website.
25	All Hazards	Proactively determine policies/process for post-disaster FEMA response and mitigation applications.	Low	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$4,000	New	
27	Summer Storms, Winter Storms	Distribute safe room/shelter in place information to schools, the special needs population, and the community.	High	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA, BOE, Red Cross	Cnty/City/Twp Budget	\$2,000	Ongoing	
33	Summer Storms, Winter Storms	Train & equip 1 <sup>st</sup> responders to respond to high wind events.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City Budget Grants	\$12,000	Deferred	
34	Summer Storms, Winter Storms	Develop a debris clearance program that can be utilized countywide.	Medium	PP	2016	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Public Works County Commission	County/Dept Budget	\$8,000	In Progress	

Number (in Master Table)	Hazard	City of Savage Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
35	Summer Storms, Winter Storms	Obtain funding to build mobile home community storm shelters.	High	SI	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA County Commission	County/City Budget Grants	\$500,000	Deferred	
36	Summer Storms, Winter Storms	Adopt & enforce mobile home tie down and skirting legislation.	Medium	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Commission	County Budget	\$2,000	In Progress	
38	Summer Storms, Winter Storms	Research the feasibility of requiring the burying of power lines in all new rural cluster subdivisions.	Low	SI	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Community Services	County/Utility Budget, Grants	\$20,000	Ongoing	
40	Summer Storms, Winter Storms	Identify special needs populations that rely on electricity for medical equipment.	High	P	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	Scott County Public Health has talked to Xcel Energy which has a list, and while they cannot release this information, during an emergency Scott County Public Health could work with Xcel.
42	Summer Storms, Winter Storms	Educate public on how to stay safe during storms and promote the use of emergency kits and 72-hour shelter-in-place kits	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Cnty/City/Emergency Management/Public Health budget	\$4,000	New	

Number (in Master Table)	Hazard	City of Savage Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
47	Flooding	Distribute flood preparedness and response information to schools, the special needs population, and the community.	Low	PE	2016-2020	Scott County, Belle Plaine, Jordan, Prior Lake, Shakopee, Savage	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	
49	Flooding	Adopt & enforce floodplain legislation requiring new structures be elevated above the BSE.	High	PP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget	\$2,000	In Progress	
50	Flooding	Obtain funding to retrofit, elevate or relocate repetitive flooding structures in floodplains.	Medium	SI	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget Grants	\$2,000,000	Deferred	
51	Flooding	Adopt & enforce floodplain, wetlands, and watershed land-use zoning.	High	NRP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget	\$2,000	In Progress	
52	Flooding	Update Local Water Plans and include in Comprehensive Land Use Plans by end of 2018.	Medium	ES	2016-2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/Dept Budget	\$22,000	In Progress	All of the Cities in the County and the County have approved Local Water Management Plans. Most cover stormwater management. Approved Local Water Plans are now a required part of Comp plans which are due by the end of 2018.

Number (in Master Table)	Hazard	City of Savage Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
53	Flooding	Obtain equipment to mitigate flooding on bridges, culverts, and roads.	High	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Public Works County Commission	County/City Budget Grants	\$200,000	In Progress	
54	Flooding	Update Land Use Plans to identify areas where development should be restrictive.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/Dept Budget	\$12,000	In Progress	Updated Comprehensive Land Use Plans are due by the end of 2018.
55	Flooding	Perform a study of the feasibility of community waterways flood control.	Low	SI	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Cnty Budget Grants	\$5,000	Deferred	
56	Flooding	Coordinate between Scott Watershed Mgmt. Organization and local governments' stormwater discharges to ensure sufficient downstream capacity.	High	NRP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County and City Planning Departments	County Budget, Grants	\$10,000	Ongoing	Assessed as part of development reviews by County and city planning departments.



Number (in Master Table)	Hazard	City of Savage Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
62	Flooding	Work with local units of government to insure completion of local flooding risk projects.	Medium	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott Watershed Mgmt. Organization EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget, Grants	\$10,000	Ongoing	Cities and County should be identifying local projects in Local Water Plans.
72	Flooding	Develop a maintenance plan and identify funding for maintenance of the 4-foot channel from river mile 14.7 (Savage) to river mile 25 (Shakopee).	Low	ES	2018	Scott County, Savage, Shakopee	Lower Minnesota River Watershed District	County/State Budget, Grants	\$500,000	Deferred	
73	Flooding	Develop a plan to provide for the safe coexistence of commercial and recreational navigation.	Low	ES	2018	Scott County, Savage	Lower Minnesota River Watershed District	County/State Budget, Grants	\$25,000	Deferred	
76	Flooding	Purchase sandbag filling machines for flood-prone jurisdictions.	Low	P	2019	Scott County, Belle Plain, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plain, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$20,000	New	
77	Flooding	Explore with the DNR the potential for a General Permit for cleaning sediment where it is impacting storm sewers and other public infrastructure, in addition to current General Permits for transportation authorities.	Medium	P	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee, townships, SCALE, Watershed Organizations	County Budget	\$10,000	New	Sediment can result in flooding, and there has been difficulty cooperating with the DNR on this issue. A joint process is needed to work with the DNR on cleaning out sediment.

Number (in Master Table)	Hazard	City of Savage Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
86	Extreme Heat, Extreme Cold	Identify citizens subject to suffering from extreme temperatures.	High	ES	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	
87	Extreme Heat, Extreme Cold	Create a Power Outage Policy for critical facilities.	High	ES	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$10,000	New	This is particularly important where people are on respirators.
88	Extreme Heat, Extreme Cold	Educate the public on the dangers of extreme temperatures, particularly outdoor workers and kids playing sports.	Medium	PE	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City/ Emergency Management/Public Health budget	\$4,000	New	
89	Extreme Heat, Extreme Cold	Create cooling/warming shelters for vulnerable populations.	Medium	SI	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$200,000	New	This is particularly important for the elderly.
92	Wildfires	Distribute wildfire awareness and preparedness information to schools and the public.	Low	PE	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Lower Minnesota River Watershed District	County/State Budget, Grants	\$25,000	In Progress	

Number (in Master Table)	Hazard	City of Savage Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
93	Wildfires	Provide rural vegetation management educational information.	Low	NRP	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$6,000	New	
95	Wildfires, Structure Fires	Complete proactive life safety inspections of high density housing.	High	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$12,000	New	
96	Wildfires, Structure Fires	Adopt Appendix H of the MN Fire Code to eliminate BBQ grills on balconies and patios of structures with 3 or more units.	Medium	P	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$4,000	New	
97	Wildfires, Structure Fires	Complete Fire Prevention Programs in schools and adult assisted living facilities.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$12,000	New	
98	Structure Fires	Assist in obtaining a fire education-training trailer for the jurisdiction.	Low	ES	2019	Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Svcs, County Commission	County/Dept Budget Grants	\$52,000	Deferred	

Number (in Master Table)	Hazard	City of Savage Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
100	Structure Fires	Acquire and install six-inch water mains and hydrants communitywide.	High	SI	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, Public Works County Commission	County/Dept Budget Grants	\$2,000,000	In Progress	
120	Hazardous Materials	Obtain hazmat containment equipment for water, roads, and railroads.	Medium	ES	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City/Dept Budget Grants	\$20,000	In Progress	
121	Hazardous Materials	Adopt & enforce hazardous materials site building setback legislation.	Low	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Commission	County Budget	\$2,000	Deferred	
122	Terrorism	Distribute terrorism preparedness and awareness information to schools and the public.	Medium	PE	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Sheriff Dept EMA BOE	Cnty/Dept/BOE Budget	\$2,000	Ongoing	
123	Terrorism	Educate government officials, the special needs population, and schools on procedures for handling suspicious mail.	Low	PE	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	Ongoing	

Number (in Master Table)	Hazard	City of Savage Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
124	Terrorism	Post terrorism and bomb identification information in buildings and schools.	Low	PE	2016-2020	Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA Education Officials Law Enforcement	County/Dept Budget	\$2,000	Deferred	
125	Terrorism	Identify & distribute to appropriate officials potential terrorism targets information.	High	PE	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Police Dept County Commission	County/Dept Budget	\$2,000	In Progress	
126	Terrorism	Fund/maintain a trained bomb dog and handler to serve the entire county.	Medium	P	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Law Enforcement Agencies, EMA	County/City Budget Grants	\$102,000	In Progress	
127	Terrorism	Develop evacuation plans for identified terrorism targets.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Sheriff Dept EMA, Public Works	County/Dept Budget	\$2,000	Deferred	



Table G - 6. Mitigation Actions for the City of Shakopee

Number (in Master Table)	Hazard	City of Shakopee Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
1	All Hazards	Assist citizens to develop emergency preparedness, response and recovery plans.	High	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Fire Depts Sheriff's office	Cnty/City/Twp Budget	\$2,000	Ongoing	
2	All Hazards	Train and equip 1 <sup>st</sup> responders for search and rescue missions.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Fire Depts, EMA	Cnty/City/Twp Budget, Grants	\$50,000	Ongoing	
3	All Hazards	Train and equip 1 <sup>st</sup> responders to respond to mass-casualty events.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA Public Health	Cnty/City/Twp Public Health Budget, Grants	\$50,000	Ongoing	
4	All Hazards	Train 1 <sup>st</sup> responders and community officials on the National Incident Mgmt. System.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> responder Agencies, EMA	Cnty/City/Twp Budget	\$2,000	Ongoing	
5	All Hazards	Obtain & install emergency generators or "pigtales" for critical government facilities and fuel depots.	Medium	PP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget, Grants	\$500,000	In Progress	

Number (in Master Table)	Hazard	City of Shakopee Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
6	All Hazards	Assist non-governmental critical facilities to obtain emergency generators and/or pigtails.	Low	PP	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget, Grants	\$500,000	Deferred	
7	All Hazards	Obtain funding to add disaster shelters as necessary.	Medium	SI	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Red Cross County Commission	Cnty/City/Twp Budget, Grants	\$400,000	Deferred	
8	All Hazards	Assist schools to implement a disaster phone line.	Low	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA Board of Education	Cnty/Education Budget, Grants	\$2,000	Deferred	
9	All Hazards	Assist utilities in developing restoration and mitigation plans.	Low	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Utilities EMA	County Utility Budget, Grants	\$2,000	Deferred	
10	All Hazards	Assist businesses, schools, the special needs population and public facilities to post evacuation routes.	Low	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Law Enforcement EMA, Public Works	County Budget, Grants	\$2,000	Deferred	

Number (in Master Table)	Hazard	City of Shakopee Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
14	All Hazards	Obtain funds for critical government departments to develop Continuity of Operations Plans.	Medium	ES	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	County Budget, Grants	\$52,000	Deferred	
15	All Hazards	Assist businesses to develop Business Continuity Plans.	Low	ES	2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	County/Business Budget, Grants	\$2,000	Deferred	
16	All Hazards	Assist communities in developing strategies to prevent loss of public records.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, County Commission	Cnty/City/Twp Budget	\$12,000	Deferred	
17	All Hazards	Ensure mutual aid, shelter, response, mass casualty & recovery agreements are current.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA County Commission	Cnty/City/Twp Budget	\$2,000	Ongoing	
18	All Hazards	Assist critical sites to develop and provide an emergency plan to the EMA.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA	County/City Budget, Grants	\$12,000	Deferred	

Number (in Master Table)	Hazard	City of Shakopee Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
21	All Hazards	Educate public on how to sign up for CodeRED.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$2,000	New	Scott County purchased CodeRED in 2014, but getting people to sign up for it has been a challenge. Only 285 of 6,500 residents in Jordan have signed up. Information is currently posted on every city's website.
23	All Hazards	Improve protection against the elements for the City of Shakopee's fleet of city-owned vehicles.	Medium	SI	2019	Scott County, Shakopee	Shakopee	City Budget	\$35,000	New	The protection of squad cars is of particular concern to the Shakopee Police Dept., due to their limited shelter availability.
25	All Hazards	Proactively determine policies/process for post-disaster FEMA response and mitigation applications.	Low	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$4,000	New	
26	All Hazards	Host debriefing meeting to assess what was learned from the June 2014 disaster.	Medium	P	2016	Scott County, Belle Plaine, Jordan, Shakopee, Prior Lake	Scott County	County/City Budget	\$1,000	New	Public safety does this for almost all large incidents, including the 2014 flooding. However, when the community as a whole is impacted during a disaster, a debriefing should be held including all departments involved.
27	Summer Storms, Winter Storms	Distribute safe room/shelter in place information to schools, the special needs population, and the community.	High	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA, BOE, Red Cross	Cnty/City/Twp Budget	\$2,000	Ongoing	

Number (in Master Table)	Hazard	City of Shakopee Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
33	Summer Storms, Winter Storms	Train & equip 1 <sup>st</sup> responders to respond to high wind events.	Medium	ES	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City Budget Grants	\$12,000	Deferred	
34	Summer Storms, Winter Storms	Develop a debris clearance program that can be utilized countywide.	Medium	PP	2016	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Public Works County Commission	County/Dept Budget	\$8,000	In Progress	
35	Summer Storms, Winter Storms	Obtain funding to build mobile home community storm shelters.	High	SI	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA County Commission	County/City Budget Grants	\$500,000	Deferred	
36	Summer Storms, Winter Storms	Adopt & enforce mobile home tie down and skirting legislation.	Medium	SI	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Commission	County Budget	\$2,000	In Progress	
38	Summer Storms, Winter Storms	Research the feasibility of requiring the burying of power lines in all new rural cluster subdivisions.	Low	SI	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Community Services	County/Utility Budget, Grants	\$20,000	Ongoing	



Number (in Master Table)	Hazard	City of Shakopee Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
40	Summer Storms, Winter Storms	Identify special needs populations that rely on electricity for medical equipment.	High	P	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	I <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	Scott County Public Health has talked to Xcel Energy which has a list, and while they cannot release this information, during an emergency Scott County Public Health could work with Xcel.
42	Summer Storms, Winter Storms	Educate public on how to stay safe during storms and promote the use of emergency kits and 72-hour shelter-in-place kits	Medium	PE	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Cnty/City/Emergency Management/Public Health budget	\$4,000	New	
47	Flooding	Distribute flood preparedness and response information to schools, the special needs population, and the community.	Low	PE	2016- 2020	Scott County, Belle Plaine, Jordan, Prior Lake, Shakopee, Savage	I <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	
49	Flooding	Adopt & enforce floodplain legislation requiring new structures be elevated above the BSE.	High	PP	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget	\$2,000	In Progress	
50	Flooding	Obtain funding to retrofit, elevate or relocate repetitive flooding structures in floodplains.	Medium	SI	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget Grants	\$2,000,000	Deferred	

Number (in Master Table)	Hazard	City of Shakopee Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
51	Flooding	Adopt & enforce floodplain, wetlands, and watershed land-use zoning.	High	NRP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget	\$2,000	In Progress	
52	Flooding	Update Local Water Plans and include in Comprehensive Land Use Plans by end of 2018.	Medium	ES	2016-2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/Dept Budget	\$22,000	In Progress	All of the Cities in the County and the County have approved Local Water Management Plans. Most cover stormwater management. Approved Local Water Plans are now a required part of Comp plans which are due by the end of 2018.
53	Flooding	Obtain equipment to mitigate flooding on bridges, culverts, and roads.	High	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Public Works County Commission	County/City Budget Grants	\$200,000	In Progress	
54	Flooding	Update Land Use Plans to identify areas where development should be restrictive.	Medium	ES	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/Dept Budget	\$12,000	In Progress	Updated Comprehensive Land Use Plans are due by the end of 2018.
55	Flooding	Perform a study of the feasibility of community waterways flood control.	Low	SI	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Cnty Budget Grants	\$5,000	Deferred	

Number (in Master Table)	Hazard	City of Shakopee Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
56	Flooding	Coordinate between Scott Watershed Mgmt. Organization and local governments' stormwater discharges to ensure sufficient downstream capacity.	High	NRP	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County and City Planning Departments	County Budget, Grants	\$10,000	Ongoing	Assessed as part of development reviews by County and city planning departments.
62	Flooding	Work with local units of government to insure completion of local flooding risk projects.	Medium	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott Watershed Mgmt. Organization EMA, Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Budget, Grants	\$10,000	Ongoing	Cities and County should be identifying local projects in Local Water Plans.
70	Flooding	Clean out drainage channel from Prior Lake to the Minnesota River.	High	SI	2018	Scott County, Prior Lake, Shakopee	Prior Lake Soil and Water District	County, City Budget, Grants	\$250,000	Ongoing	
72	Flooding	Develop a maintenance plan and identify funding for maintenance of the 4-foot channel from river mile 14.7 (Savage) to river mile 25 (Shakopee).	Low	ES	2018	Scott County, Savage, Shakopee	Lower Minnesota River Watershed District	County/State Budget, Grants	\$500,000	Deferred	
75	Flooding	Work to support the Prior Lake Floodplain Study/Watershed Project and implement the results.	High	P	2016-2020	Scott County, Prior Lake, Shakopee	Scott County, Prior Lake	HMA Grants, County/City Budget	\$500,000	New	A flood mitigation study is currently being done, to be completed Spring 2016. New dams will be built, and funds are needed for purchasing easements.
76	Flooding	Purchase sandbag filling machines for flood-prone jurisdictions.	Low	P	2019	Scott County, Belle Plain, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plain, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$20,000	New	

Number (in Master Table)	Hazard	City of Shakopee Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
77	Flooding	Explore with the DNR the potential for a General Permit for cleaning sediment where it is impacting storm sewers and other public infrastructure, in addition to current General Permits for transportation authorities.	Medium	P	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee, townships, SCALE, Watershed Organizations	County Budget	\$10,000	New	Sediment can result in flooding, and there has been difficulty cooperating with the DNR on this issue. A joint process is needed to work with the DNR on cleaning out sediment.
86	Extreme Heat, Extreme Cold	Identify citizens subject to suffering from extreme temperatures.	High	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	In Progress	
87	Extreme Heat, Extreme Cold	Create a Power Outage Policy for critical facilities.	High	ES	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$10,000	New	This is particularly important where people are on respirators.
88	Extreme Heat, Extreme Cold	Educate the public on the dangers of extreme temperatures, particularly outdoor workers and kids playing sports.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City/ Emergency Management/Public Health budget	\$4,000	New	
89	Extreme Heat, Extreme Cold	Create cooling/warming shelters for vulnerable populations.	Medium	SI	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County/City Budget	\$200,000	New	This is particularly important for the elderly.

Number (in Master Table)	Hazard	City of Shakopee Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
92	Wildfires	Distribute wildfire awareness and preparedness information to schools and the public.	Low	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Lower Minnesota River Watershed District	County/State Budget, Grants	\$25,000	In Progress	
93	Wildfires	Provide rural vegetation management educational information.	Low	NRP	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$6,000	New	
95	Wildfires, Structure Fires	Complete proactive life safety inspections of high density housing.	High	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$12,000	New	
96	Wildfires, Structure Fires	Adopt Appendix H of the MN Fire Code to eliminate BBQ grills on balconies and patios of structures with 3 or more units.	Medium	P	2019	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$4,000	New	
97	Wildfires, Structure Fires	Complete Fire Prevention Programs in schools and adult assisted living facilities.	Medium	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, EMA	County/City Budget Grants	\$12,000	New	



Number (in Master Table)	Hazard	City of Shakopee Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
98	Structure Fires	Assist in obtaining a fire education-training trailer for the jurisdiction.	Low	ES	2019	Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Svcs, County Commission	County/Dept Budget Grants	\$52,000	Deferred	
100	Structure Fires	Acquire and install six-inch water mains and hydrants communitywide.	High	SI	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Fire Agencies, Public Works County Commission	County/Dept Budget Grants	\$2,000,000	In Progress	
120	Hazardous Materials	Obtain hazmat containment equipment for water, roads, and railroads.	Medium	ES	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City/Dept Budget Grants	\$20,000	In Progress	
121	Hazardous Materials	Adopt & enforce hazardous materials site building setback legislation.	Low	P	2018	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	County Commission	County Budget	\$2,000	Deferred	
122	Terrorism	Distribute terrorism preparedness and awareness information to schools and the public.	Medium	PE	2016- 2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Sheriff Dept EMA BOE	Cnty/Dept/BOE Budget	\$2,000	Ongoing	

Number (in Master Table)	Hazard	City of Shakopee Mitigation Actions	Priority	Type	Time- frame	Jurisdictions	Responsible Agencies	Possible Funding	Est. Cost	2016 Mitigation Action Status	Scott County Comments on Planning Mechanisms for Implementation
123	Terrorism	Educate government officials, the special needs population, and schools on procedures for handling suspicious mail.	Low	PE	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	1 <sup>st</sup> Responder Agencies, EMA	County/Dept Budget	\$2,000	Ongoing	
124	Terrorism	Post terrorism and bomb identification information in buildings and schools.	Low	PE	2016-2020	Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA Education Officials Law Enforcement	County/Dept Budget	\$2,000	Deferred	
125	Terrorism	Identify & distribute to appropriate officials potential terrorism targets information.	High	PE	2017	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	EMA, Police Dept County Commission	County/Dept Budget	\$2,000	In Progress	
126	Terrorism	Fund/maintain a trained bomb dog and handler to serve the entire county.	Medium	P	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Law Enforcement Agencies, EMA	County/City Budget Grants	\$102,000	In Progress	
127	Terrorism	Develop evacuation plans for identified terrorism targets.	Medium	ES	2016-2020	Scott County, Belle Plaine, Elko New Market, Jordan, Prior Lake, Savage, Shakopee	Police/Sheriff Dept EMA, Public Works	County/Dept Budget	\$2,000	Deferred	

*This page is intentionally left blank*

# **Appendix H**

## **Completed Mitigation Actions from 2009 Plan**

Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost	Completion Date	Status/Comments
AH1a	Obtain and/or expand audible warning units to all uncovered community areas	EMA, Cnty Commission	Cnty/City/Twp Budget, Grants	\$260,000	2012	Done
AH1d	Obtain/install an automated community wide rapid notification system	EMA, Cnty IT Cnty Commission	Cnty/City/Twp Budget, Grants	\$150,000	2014	Done
AH1e	Develop a media warning program to warn the community of a potential hazard event	EMA, Media NWS 1 <sup>st</sup> Responder Agencies	Cnty Budget Grants	\$4,000	2010	Done
AH1h	Add hazard preparedness and response Information to a community web site	EMA, Cnty IT Cnty Commission	Cnty Budget	\$2,000	2010	Done
AH2a	Obtain/distribute interoperable radios for all 1 <sup>st</sup> responders	EMA, 1 <sup>st</sup> Responder Depts Cnty Commission	Cnty/City/Twp Budget, Grants	\$82,000	2012	Done
AH2e	Recruit/train and equip volunteers for CERT, a Medical Reserve Corps, SAFCOM, etc	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City/Twp Budget, Grants	\$5,000	2010	Done
AH2g	Train 1 <sup>st</sup> responders and community officials on EOC Operations and the EOP	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City/Twp Budget	\$2,000	Annually	Done
AH3b	Obtain and continually update 911 technology and capabilities	911, Fire/Police, Cnty Commission	Cnty/City/Twp 911 Budget, Grants	\$100,000	2013	Done
AH3c	Obtain Crisis Mgmt Software and Equipment for primary and secondary EOC's	EMA, Cnty Commission	Cnty/City/Twp Budget, Grants	\$150,000	2013	Done
AH3g	Develop EOP ESF's/annexes for all hazards that may impact the community	EMA, Cnty Commission	Cnty/Dept Budget	\$1,000	2011	Done

Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost	Completion Date	Status/Comments
AH3g	Review/revise the Emergency Operations Plan annually and after each disaster	EMA, Cnty Commission	Cnty Budget, Grants	\$2,000	Annually	Done
AH3i	Coordinate a shelter program with the Red Cross and volunteers	EMA, Red Cross Volunteer Groups	Cnty Red Cross Budget, Grants	\$2,000	Ongoing	Done
AH3t	Annually review and update hazard related legislation	EMA, Cnty Commission	Cnty/City/Twp Budget	\$2,000	Annually	Done
AH3w	Insure building code compliance Inspections are conducted on construction projects	Cnty Commission	Cnty/City/Twp Budget	\$12,000	Ongoing	Done
AH4a	Identify/deliver CPR, First Aid, Search and Rescue, NIMS, etc. disaster training to volunteers	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City/Twp Budget, Grants	\$15,000	2011	Done
AH4b	Improve/upgrade facilities & equip. at the Scott County Regional Training Facility	EMA, Police/Fire Cnty Commission	Cnty/City/Twp Budget, Grants	\$2,000,000	2011	Done
AH4e	Identify/obtain resources needed to process storm debris. (i.e., chippers, backhoes, etc.)	EMA Public Works Community Development	Cnty Budget, Grants	\$2,000	2011	Done
ET1a	Distribute Extreme Temperature preparation/response information to school, special needs and the community	EMA, Red Cross BOE, Business	Cnty/Dept Budget	\$2,000	Annually	Done
FL2a	Train and equip 1 <sup>st</sup> responders to respond to flood events and exercise response	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City Budget Grants	\$22,000	Ongoing	Done



Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost	Completion Date	Status/Comments
FL3c	Adopt/enforce an NFIP flood plain Mgmt plan by reviewing all building permits to ensure compliance	EMA, Scott Cnty, Belle Plaine, Elko New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee	Cnty/Dept Budget	\$2,000	Ongoing	Done
FL3e	Obtain and maintain NFIP FIRMS to identify community flood plains	EMA, EMA, Scott Cnty, Belle Plaine, Elko New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee	Cnty/Dept Budget	\$2,000	Annually	Done
FL3i	Install/replace/maintain culverts and bridges to reduce flooding	Public Works Cnty Commission	Cnty/City Budget Grants	\$502,000	2011	Done
FL3n	Obtain equipment to build water flow and water retention areas to mitigate flooding	EMA, Public Works EMA, Scott Cnty, Belle Plaine, Elko New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee	Cnty/City Budget Grants	\$500,000	2012	Done
FL4d	Conduct a study to identify hillside erosion cost/benefit on Scott Cnty Rd 51 and 6.	Scott County Public Works	Cnty Budget, Grants	75,000	2010	Feasibility Study completed. Design also completed for CR6 erosion and construction initiated starting Nov. 2015.
FL4e	Assist each local government to Adopt Elevation standards legislation for new structures	Scott Watershed Mgmt Organization, EMA, Scott Cnty, Belle Plaine, Elko New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee	Cnty Budget, Grants	\$5,000	2011	Done (Incorporated in Local Water Plans by the Cities and approved by the Scott WMO).

Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost	Completion Date	Status/Comments
FL4g	Promote disconnected storm water Mgmt. and low impact development.	Scott Watershed Mgmt Organization	Cnty Budget, Grants	\$10,000	Ongoing	Done (Incorporated into Scott WMO Standards and then Local Water Plans)
FL4h	Require floodplain and shoreline ordinances to comply with MN DNR requirements	Scott Watershed Mgmt Organization EMA, Scott Cnty, Belle Plaine, Elko New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee	Cnty Budget, Grants	\$5,000	2010	Done (Incorporated in Local Water Plans by the Cities and approved by the Scott WMO)
FL4i	Require peak runoff rate control standards for new developments.	Scott Watershed Mgmt Organization	Cnty Budget, Grants	\$5,000	2011	Done (Incorporated into Scott WMO Standards and then Local Water Plans)
FL4j	Require analysis for major drainage alterations.	Scott Watershed Mgmt Organization	Cnty Budget, Grants	\$50,000	2012	Done (Incorporated into Scott WMO Standards and then Local Water Plans)
FL4l	Require an analysis of landlocked areas prior to the installation of outlets	Scott Watershed Mgmt Organization	Cnty Budget, Grants	\$25,000	2012	Done (Incorporated into Scott WMO standards)
FL4m	Conduct a feasibility study on the need for a new outlet on O'Dowd/Thole lake.	Scott Watershed Mgmt Organization	Cnty Budget, Grants	\$25,000	2010	Done
FL4x	Communicate with local governments to understand local flooding risks	Scott Watershed Mgmt Organization	Cnty Budget, Grants	\$10,000	Ongoing	Done

Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost	Completion Date	Status/Comments
FL4y	Use digital terrain modeling to identify potential flooding areas.	Scott Watershed Mgmt Organization, EMA, EMA, Scott Cnty, Belle Plaine, Elko New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee	Cnty Budget, Grants	\$15,000	2012	Done
FL4z	Require a floodplain capacity standard.	Scott Watershed Mgmt Organization	Cnty Budget, Grants	\$5,000	2011	Done (Incorporated into Scott WMO Standards and then Local Water Plans)
HM1b	Educate the public on common hazardous materials in home	1 <sup>st</sup> Responder Agencies, EMA	Cnty/Dept Budget	\$2,000	Annually	Done
HM2a	Train and equip 1 <sup>st</sup> responders to respond to hazmat incidents and exercise response	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City Budget Grants	\$52,000	Ongoing	Done
HM2b	Maintain inventories of Mark I packs to respond to chemical agents	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City Budget Grants	\$20,000	Annually	Done
HM2d	Obtain and equip a hazardous materials response vehicle	Fire/Hazmat Agencies, EMA	Cnty/City Budget Grants	\$102,000	2011	Done
HM3a	Develop evacuation perimeters and routes for high risk hazmat sites	Police/Fire Depts EMA	Cnty/Dept Budget	\$2,000	2011	Done
HM3b	Maintain and annually update an inventory of hazmat sites	1 <sup>st</sup> Responder Agencies, EMA	Cnty/Dept Budget	\$2,000	Annually	Done
HM3c	Develop/maintain a countywide hazard materials response plan	1 <sup>st</sup> Responder Agencies, EMA	Cnty/Dept Budget	\$12,000	Annually	Done

Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost	Completion Date	Status/Comments
HM3d	Obtain monitoring equipment for high risk hazmat sites	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City Budget Grants	\$29,000	2012	Done
HM3f	Enforce SARA. Title III/Tier II facility hazardous materials reporting.	EMA Fire Svcs	Cnty/Dept Budget	\$2,000	Ongoing	Done
IL1a	Distribute Meth Lab awareness information to schools and the community	Law Enforcement Agencies, EMA	Cnty/Dept Budget	\$2,000	Annually	Done
IL2a	Train/equip 1 <sup>st</sup> responders to respond to Meth Lab incidents	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City Budget Grants	\$22,000	Ongoing	Done
IL3a	Join/participate in local state and federal drug task forces	Police/Sheriff Dept Cnty Commission	Cnty/Dept Budget	\$2,000	Ongoing	Done
IS13b	Establish with the media and NWS an Ice and snow community alert system	EMA, Media NWS Cnty Commission	Cnty/Dept Budget	\$2,000	2010	Done
IS1a	Distribute Ice/Snow preparedness and response information to schools, special needs and the community	1 <sup>st</sup> Responder Agencies, EMA	Cnty/Dept Budget	\$2,000	Annually	Done
IS3b	Assist communities to establish an Ice/snow removal program for roadways	EMA, Public Works Cnty Commission	Cnty/City Budget Grants	\$2,000	Ongoing	Done
IS4a	Identify and purchase appropriate equipment needed to help remove large amounts of snow. (Large snow blowers for use on front-end loaders, or other heavy equipment.)	Public Works EMA Community Development	Cnty Budget, Grants	\$500,000	2012	Done

<b>Hazard &amp; Action</b>	<b>Action/Project Description</b>	<b>Responsibility</b>	<b>Funding Source</b>	<b>Estimated Cost</b>	<b>Completion Date</b>	<b>Status/Comments</b>
LM1b	Develop with the DOT and media a process to alert the public on landslide/mudslide locations	EMA, Media NWS DOT Cnty Commission	Cnty/City/State Budget	\$2,000	2010	Done
LM2a	Assist in obtaining equipment to respond to landslide/mudslide events	Public Works DOT Cnty Commission	Cnty/City Budget Grants	\$200,000	2012	Done
LM3b	Adopt/enforce landslide/mudslide legislation to restrict development in hazard areas	EMA, Cnty Commission	Cnty Budget	\$2,000	2011	Done
LS1b	Develop with the appropriate agencies an alerting process to alert the public of sinkhole locations	Public Works, DOT, EMA	Cnty/City Budget	\$2,000	2010	Done
LS3a	Assist in obtaining equipment to respond to Land subsidence events	EMA, Public Works Cnty Commission	Cnty/City Budget Grants	\$200,000	2014	Done
LT1a	Distribute lightning awareness information to the public	Fire Agencies, EMA	Cnty/Dept Budget	\$2,000	Annually	Done
LT1b	Develop with media and the NWS a lightning alerting process for the public	EMA, Media NWS Cnty Commission	Cnty/City Budget	\$2,000	2010	Done
PD1a	Distribute Pandemic awareness and response information schools, special needs and the community	EMA Public Health	Cnty/City Public Health Budget Grants	\$2,000	Annually	Done
PD1b	Develop a program to direct citizens to the Department of Public Health and CDC Web-page for Pandemic Event preparedness	EMA Public Health Cnty Commission	Cnty/City Public Health Budget Grants	\$2,000	2010	Done

Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost	Completion Date	Status/Comments
PD3a	Assist in developing a traffic flow and security plan for Pandemic vaccination sites	EMA Public Works Law Enforcement	Cnty/City Public Health Budget	\$2,000	2010	Done
PD3c	Adopt/enforce Pandemic Flu legislation to cancel large public and private events	EMA, Cnty Commission	Cnty/City Budget	\$2,000	2010	Done
PD3d	Assist in developing procedures to prevent an outbreak of agriculture related hazards	EMA Dept Of Agriculture DNR	Cnty/DOA/DNR Budget	\$2,000	Ongoing	Done
TR2a	Train/equip all terrorism 1 <sup>st</sup> responders in terrorism attack techniques	1 <sup>st</sup> Responder Agencies, EMA	Cnty/City Budget Grants	\$22,000	2011	Done
TR2b	Train/equip 1st responders on CBRNE agents, responding to a CBRNE event and exercise response	1 <sup>st</sup> Responder Agencies, EMA	Cnty/Dept Budget Grants	\$12,000	2011	Done
TR3a	Assist schools in developing terrorism preparedness and response plans	EMA, BOE Police Dept/Sheriff	Cnty/City/BOE Budget Grants	\$2,000	Ongoing	Done
UF1a	Distribute to schools, special needs and the public fire safety and response information	Fire Svcs, BOE	Cnty/Dept/BOE Budget	\$2,000	Annually	Done
UF1b	Educate school, special needs and citizens on fire extinguisher use	Fire Departments	Cnty/City/Dept Budget	\$2,000	Annually	Done
UF2a	Train/equip 1 <sup>st</sup> responders to respond to fire incidents and exercise response	Fire Svcs, Cnty Commission	Cnty/Dept Budget Grants	\$22,000	Ongoing	Done
UF2b	Obtain/maintain firefighting supplies at all fire departments	Fire Svcs, Cnty Commission	Cnty/Dept Budget Grants	\$25,000	Annually	Done



Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost	Completion Date	Status/Comments
UF2c	Obtain fire equipment to combat fires in high rise buildings	Fire Agencies, Cnty Commission	Cnty/Dept Budget Grants	\$500,000	2012	Done
UF2d	Train fire 1 <sup>st</sup> responders to at least the "Awareness and Operations level"	Fire Svcs	Cnty/Dept Budget	\$20,000	Ongoing	Done
UF3a	Ensure that NFPA standards and codes are followed and that fire codes are enforced with citations issued for violations	Fire Departments, EMA	Cnty/Dept Budget	\$2,000	Ongoing	Done
UF3b	Develop fire plans for all major businesses and critical facilities	Fire Departments	Cnty/City/Dept Budget	\$25,000	Ongoing	Done
UF3d	Obtain fire equipment to combat fires where water hydrants are non-existent	Fire Agencies, Cnty Commission	Cnty/Dept Budget Grants	\$300,000	2012	Done
UP2a	Train 1 <sup>st</sup> responders on dealing with downed power lines during a response	1 <sup>st</sup> Responder Agencies, EMA, Utilities	Cnty/Utility Budget Grants	\$12,000	Annually	Done
UW1a	Develop with the water utilities a process to alert the public of water contamination	Utility Agencies, EMA	Cnty/Dept Budget	\$2,000	2010	Done
UW2a	Train/equip utility workers with water testing and monitoring processes and equipment	Utility Agencies, Cnty Commission	Cnty/Dept Budget Grants	\$28,000	2010	Done
UW4d	Establish Stormwater infiltration criteria to protect the quality of groundwater.	Lower Mn. River Watershed District	Cnty/State Budget, Grants	\$10,000	2011	Done

Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost	Completion Date	Status/Comments
WF1b	Assist DNR in distributing USFS fuels reduction information (Firewise.)	Fire Svc Agencies, EMA	Cnty/Dept/DNR Budget	\$2,000	Annually	Done
WF1c	Publish outdoor burn ban info in area newspapers during Wild-land fire seasons	EMA, Cnty Commission	Cnty/Dept Budget	\$2,000	Annually	Done
WF1d	Develop with the media and fire responders a public alerting process for the public	EMA, Media NWS Cnty Commission	Cnty/Dept Budget	\$2,000	2010	Done
WF2a	Train/equip 1 <sup>st</sup> responders on techniques to respond to wild-land fire events	Fire Agencies, EMA	Cnty/Dept Budget Grants	\$92,000	Annually	Done
WF2b	Obtain specialized equipment to combat wildfires.(4-wheel drive brush fire truck)	Fire Agencies, Cnty Commission	Cnty/Dept Budget Grants	\$202,000	2014	Done
WF2c	Exercise fire response regularly for residences, businesses and industry	Fire Agencies, EMA	Cnty/Dept Budget Grants	\$24,000	Ongoing	Done
WF2d	Identify Private contractors to assist in wild-land fire response	1 <sup>st</sup> Responder Agencies, EMA	Cnty/Dept Budget	\$2,000	Ongoing	Done
WF3a	Adopt/enforce wildfire legislation that includes burning bans	EMA, Cnty Commission	Cnty Budget	\$2,000	2010	Done

*This page is intentionally left blank*

# **Appendix I**

## **Works Cited**

## Works Cited

- (2013). *Adapting to Climate Change in Minnesota: 2013 Report of the Interagency Climate Adaptation Team*.
- Anderson, G., & Bell, M. (2011). Heat Waves in the United States: Mortality Risk during Heat Waves and Effect Modification by Heat Wave Characteristics in 43 U.S. Communities. *Environmental Health Perspectives*, 210-218.
- Belle Plaine Herald. (2015, April 8). *Scott County Promoting Severe Weather Awareness Week*. Retrieved from <http://www.belleplaineherald.com/Content/News/News/Article/Scott-County-Promoting-Severe-Weather-Awareness-Week/7/48/6111>
- Blume, P. (2014, June 24). *Prior Lake flood fight could last until fall, mayor says*. Retrieved from Fox9: <http://www.myfoxtwincities.com/story/25851049/prior-lake-flood-fight-could-last-until-fall-mayor-says>
- Carlson, L. (2015, February 20). *Flood study kicks off in Prior Lake*. Retrieved from Prior Lake American: [http://www.swnewsmedia.com/prior\\_lake\\_american/news/local/flood-study-kicks-off-in-prior-lake/article\\_ea2b0afe-cde2-56f0-9b64-da836d82e2a6.html](http://www.swnewsmedia.com/prior_lake_american/news/local/flood-study-kicks-off-in-prior-lake/article_ea2b0afe-cde2-56f0-9b64-da836d82e2a6.html)
- Census of Agriculture. (2012). *2012 Census of Agriculture County Profile*. United States Department of Agriculture.
- Dai, A. (2011). Drought under global warming: a review. *WIREs Climate Change*, 45-65.
- Del Genio, A., Yao, M., & Jonas, J. (2007). Will moist convection be stronger in a warmer climate? *Geophys. Res. Lett.*
- Douglas, P. (2011, July 20). "Heat Storm" (record-setting dew point of 82 at MSP, heat index tied all-time record at 119!). Retrieved from StarTribune: <http://www.startribune.com/blogs/125847178.html>
- FEMA. (2013, January). *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards*. Retrieved from [http://www.fema.gov/media-library-data/20130726-1904-25045-0186/fema\\_mitigation\\_ideas\\_final508.pdf](http://www.fema.gov/media-library-data/20130726-1904-25045-0186/fema_mitigation_ideas_final508.pdf)
- Feyder, S. (2014, July 3). *StarTribune*. Retrieved from Jordan's 150-year-old brewery suffers a big hit from landslide: <http://www.startribune.com/local/south/265778011.html>
- Georgakakos, A., Fleming, P., Dettinger, M., Peters-Lidard, C., Richmond, T., Reckhow, K., . . . Yates, D. (2014). *Climate Change Impacts in the United States: The Third National Climate Assessment, Ch. 3: Water Resources*. Washington, D.C.: U.S. Global Change Research Program.
- Hales, D., Hohenstein, W., Bidwell, M. D., Landry, C., McGranahan, D., Molnar, J., . . . Jadin, J. (2014). *Climate Change Impacts in the United States: The Third National Climate Assessment*. Washington, D.C.: U.S. Global Change Research Program.

- High Plains Regional Climate Center. (2013). Retrieved May 12, 2014, from [http://www.hprcc.unl.edu/cgi-bin/cli\\_perl\\_lib/cliMAIN.pl?mn3076](http://www.hprcc.unl.edu/cgi-bin/cli_perl_lib/cliMAIN.pl?mn3076)
- High Plains Regional Climate Center. (2013). *Jordan I S, Minnesota (214176)*. Retrieved from [http://www.hprcc.unl.edu/cgi-bin/cli\\_perl\\_lib/cliMAIN.pl?mn4176](http://www.hprcc.unl.edu/cgi-bin/cli_perl_lib/cliMAIN.pl?mn4176)
- High Plains Regional Climate Center. (2014). *Current Climate Summary Maps - Powered by ACIS*. Retrieved from [http://www.hprcc.unl.edu/maps/current/index.php?action=update\\_userdate&daterange=Feb&year=14](http://www.hprcc.unl.edu/maps/current/index.php?action=update_userdate&daterange=Feb&year=14)
- Huttner, P. (2010, September 28). *Minnesota River: All time flood record...In September!* Retrieved from Minnesota Public Radio News: [http://blogs.mprnews.org/updraft/2010/09/minnesota\\_river\\_all\\_time\\_flood/](http://blogs.mprnews.org/updraft/2010/09/minnesota_river_all_time_flood/)
- Intellicast. (2015, April 21). *Historic Average, Shakopee, Minnesota*. Retrieved from <http://www.intellicast.com/Local/History.aspx?location=USMN0685>
- International Climate Adaptation Team. (2013). *Adapting to Climate Change in Minnesota*.
- KARE-Sky 11. (2014, July 3). *Valleyfair reopens 2 roller coasters after floods*. Retrieved from <http://www.kare11.com/story/news/local/2014/07/03/valleyfair-opens-roller-coasters-flood/12151669/>
- Klein, J. (2014, June 23). *Blakeley homeowners get update on flood damage*. Retrieved from KARE 11: <http://www.kare11.com/story/news/local/2014/06/23/blakeley-homeowners-get-update-flood-damage/11296391/>
- KSTP.com. (2014, June 19). *RAW: Chopper 5 Aerial Tour of Blakely Township*. Retrieved from KSTP: <https://www.youtube.com/watch?v=F4BGPIVXkG4>
- Kunkel, K., Stevens, L., Stevens, S., Sun, L., Janssen, E., Wuebbles, D., & ... Dobson, J. (2013). *Regional Climate Trends and Scenarios for the U.S. National Climate Assessment. NOAA Technical Report NESDIS, 142-3, 95*.
- McDonough, B. (2014, June 24). *City Officials: Blakeley Residents Could be Evacuated for Weeks*. Retrieved from KSTP: <http://kstp.com/article/stories/s3483459.shtml>
- Meador, R. (2013, February 27). *Climate change comes to Minnesota: Three experts outline the impacts*. Retrieved from MinnPost: <http://www.minnpost.com/earth-journal/2013/02/climate-change-comes-minnesota-three-experts-outline-impacts>
- Minneapolis St. Paul Regional Economic Development Partnership. (2015). *Scott County*. Retrieved April 21, 2015, from <https://www.greatermSP.org/16-county/scott/>
- Minnesota Climatology Working Group. (2010, October 6). *HydroClim Minnesota - October 2010*. Retrieved from <http://www.climate.umn.edu/doc/journal/hc1010.htm>



- Minnesota Department of Health. (2015). *Minnesota Climate and Health Profile Report 2015: An Assessment of Climate Change Impacts on the Health and Well-Being of Minnesotans*. Retrieved from <http://www.health.state.mn.us/divs/climatechange/>
- Minnesota Pollution Control Agency. (2014). Retrieved from [http://pca-gis02.pca.state.mn.us/eda\\_surfacewater/](http://pca-gis02.pca.state.mn.us/eda_surfacewater/)
- MN DNR. (2004). *Heavy Rains Drench Southern Minnesota September 14-15, 2004*. Retrieved from [http://www.dnr.state.mn.us/climate/journal/ff040914\\_15.html](http://www.dnr.state.mn.us/climate/journal/ff040914_15.html)
- MN DNR. (2007). *Heavy Rains Fall on Southeastern Minnesota: August 18-20, 2007*. Retrieved from <http://www.dnr.state.mn.us/climate/journal/ff070820.html>
- MN DNR. (2011). Retrieved from <http://files.dnr.state.mn.us/forestry/wildfire/historialcharts/firesbyyear.pdf>
- MN DNR. (2014, March 3). *Coldest Winters in Twin Cities History: 1873-2014*. Retrieved from [http://www.dnr.state.mn.us/climate/journal/coldest\\_winters.html](http://www.dnr.state.mn.us/climate/journal/coldest_winters.html)
- MN DNR. (2014). *Minnesota Tornado History and Statistics*. Retrieved from [http://www.dnr.state.mn.us/climate/summaries\\_and\\_publications/tornadoes.html](http://www.dnr.state.mn.us/climate/summaries_and_publications/tornadoes.html)
- MN DNR. (2014). *Record-Setting Rainfall in June 2014*. Retrieved from [http://www.dnr.state.mn.us/climate/journal/140630\\_wet\\_june.html](http://www.dnr.state.mn.us/climate/journal/140630_wet_june.html)
- MN DNR. (2015). *Drought Monitor Overview*. Retrieved from [http://www.dnr.state.mn.us/climate/journal/140814\\_drought.html](http://www.dnr.state.mn.us/climate/journal/140814_drought.html)
- MN DNR. (2015, March 17). *Minnesota Department of Natural Resources - List of Infested Waters - March 17, 2015*. Retrieved from [http://files.dnr.state.mn.us/eco/invasives/infested\\_waters.pdf](http://files.dnr.state.mn.us/eco/invasives/infested_waters.pdf)
- MN DNR. (2015). *Statewide contamination susceptibility*. Retrieved from [http://www.dnr.state.mn.us/waters/groundwater\\_section/mapping/gwcontam\\_susceptibility.html](http://www.dnr.state.mn.us/waters/groundwater_section/mapping/gwcontam_susceptibility.html)
- MN DNR. (2015). *Which Minnesota Communities Participate in the National Flood Insurance Program (NFIP)?*
- MN Environmental Quality Board. (2014). *Minnesota and Climate Change: Our Tomorrow Starts Today*.
- Mueller, B., & Seneviratne, S. (2012). Hot days induced by precipitation deficits at the global scale. *Proceedings from the National Academy of Sciences*, 12,398-12,403.
- Multihazard Mitigation Council. (2005). *Natural Hazard Mitigation Saves: An Independent Study to Assess the Future Savings from Mitigation Activities*. Washington, D.C.: National Institute of Building Sciences.
- National Climate Assessment Development Advisory Committee. (2013). Retrieved from <http://ncadac.globalchange.gov/>

- National Climate Assessment Development Advisory Committee. (2013). National Climate Assessment.
- National Weather Service Weather Forecast Office. (2014). Retrieved from [http://www.crh.noaa.gov/mkx/?n=taw-part4-tornado\\_stats](http://www.crh.noaa.gov/mkx/?n=taw-part4-tornado_stats)
- Natural Resources Defence Council. (2015). *The Need for Flood Protection Standards*. Retrieved from <http://www.nrdc.org/water/fema-assistance-grants.asp>
- NOAA National Severe Storms Laboratory. (n.d.). *Severe Weather 101*. Retrieved May 12, 2014, from <https://www.nssl.noaa.gov/education/svrwx101/lightning/faq/>
- Noess, L. (2014, June 27). Retrieved from Shakopee Road Flood Construction 6/27/2014: <https://www.youtube.com/watch?v=4x5MVVVi3pg>
- Perera, E. M., Sanford, T., White-Newsome, J. L., Kalkstein, L. S., Vanos, J. K., & Weir, K. (2012). Heat in the Heartland. *Climate Change and Your Health*.
- Phillips, A. (2014, March 24). *Landslide Kills 8 People In Washington As Climate Change Makes Them More Likely In The Future*. Retrieved from Climate Progress: <http://thinkprogress.org/climate/2014/03/24/3418117/climate-change-landslides-washington/>
- Pryor, S., Scavia, D., Downer, C., Gaden, M., Iverson, L., Nordstrom, R., . . . Robertson, G. (2014). *Climate Change Impacts in the United States: The Third National Climate Assessment, Ch. 18: Midwest*. Washington, D.C.: U.S. Global Change Research Program.
- Salter, C. (2012, August). *The threat of sand mining in Minnesota*. Retrieved from Hennepin County Attorney: <http://www.hennepinattorney.org/news/news/2012/august/threat-sand-mining>
- Schoof, J. (2012). Scale Issues in the Development of Future Precipitation Scenarios. *Journal of Contemporary Water Research and Education*, 8-16.
- Scott County. (2015). *Silica Sand Mine Proposals in Scott County*. Retrieved from Scott County: <http://www.co.scott.mn.us/ParksLibraryEnv/Environment/EnvReview/Pages/Silica-Sand-Mining-Operations.aspx>
- Seeley, M. (2013). Current status of climate change in Minnesota. *Preparing Minnesota for Climate Change: A Conference on Climate Adaptation*. St. Paul.
- Seeley, M. (2015). *Minnesota Weather Almanac*. St. Paul: Minnesota Historical Society Press.
- Shakopee Valley News. (2015, April 8). *Flood-damage funds available to some Scott County homeowners*. Retrieved from [http://www.swnewsmedia.com/shakopee\\_valley\\_news/flood-damage-funds-available-to-some-scott-county-homeowners/article\\_1a378fc2-483e-5853-9bc5-eafe4c7e88b1.html](http://www.swnewsmedia.com/shakopee_valley_news/flood-damage-funds-available-to-some-scott-county-homeowners/article_1a378fc2-483e-5853-9bc5-eafe4c7e88b1.html)
- Sperling's Best Places. (n.d.). *Climate in Sibley County, Minnesota*. Retrieved 2014, from <http://www.bestplaces.net/climate/county/minnesota/sibley>

- Star Tribune. (2015, November 23). *The Drive: County Road 101 bridge opening is a big deal*. Retrieved from <http://www.startribune.com/the-drive-county-road-101-bridge-opening-is-a-big-deal/352962611/>
- The Weather Channel. (n.d.). Retrieved May 12, 2014, from <http://www.weather.com/weather/wxclimatology/monthly/graph/55334>
- The Weather Channel. (2014, March 13). *NOAA: Winter 2013-2014 Among Coldest on Record in Midwest; Driest, Warmest in Southwest*. Retrieved from <http://www.weather.com/news/news/winter-ncdc-state-climate-report-2013-2014-20140313>
- The White House. (2015, January 30). *FACT SHEET: Taking Action to Protect Communities and Reduce the Cost of Future Flood Disasters*. Retrieved from [https://www.whitehouse.gov/administration/eop/ceq/Press\\_Releases/January\\_30\\_2015](https://www.whitehouse.gov/administration/eop/ceq/Press_Releases/January_30_2015)
- U.S. Climate Data. (2014). Retrieved from <http://www.usclimatedata.com/climate/gaylord/minnesota/united-states/usmn0287>
- U.S. Department of Energy. (2015). *State of Minnesota Energy Sector Risk Profile*. Retrieved from [http://www.energy.gov/sites/prod/files/2015/06/f22/MN\\_Energy%20Sector%20Risk%20Profile.pdf](http://www.energy.gov/sites/prod/files/2015/06/f22/MN_Energy%20Sector%20Risk%20Profile.pdf)
- Union of Concerned Scientists. (2009). *Confronting Climate Change in the U.S. Midwest*.
- USA.com. (2014). *Gaylord, MN Weather*. Retrieved from <http://www.usa.com/gaylord-mn-weather.htm>
- Wikipedia. (2006). Retrieved 2014, from [http://en.wikipedia.org/wiki/August\\_24,\\_2006\\_tornado\\_outbreak](http://en.wikipedia.org/wiki/August_24,_2006_tornado_outbreak)

# **Appendix J**

## **Scott County Plans & Programs in Place**

<b>Plans/Programs</b>	<b>Yes/No</b>
Comprehensive/Master Plan	Yes
Capital Improvements Plan	Yes
Economic Development Plan	No
Emergency Operations Plan	Yes
Continuity of Operations Plan	No
Transportation Plan	Yes
Community Wildfire Protection Plan	No
FireWise Program	No
Water Conservation/Emergency Preparedness Plan	
Wellhead Protection Plan	
Database of dry hydrants/well access	No
Burning permits/restrictions	Yes
Water Management Plan	Yes
Zoning ordinance	Yes
Subdivision ordinance	Yes
Floodplain ordinance	Yes
Natural hazard specific ordinance (stormwater, steep slope, wildfire)	Yes (Bluff, Stormwater, No-Wake)
Flood insurance rate maps	Yes
Acquisition of land for open space and public recreation uses	Yes (Regional Park Plans, Natural Area Corridors ordinances)
School closing policy/communications plan in event of inclement weather/temperatures	Yes
Storm shelters (list all locations)	No
Warning sirens (list all locations)	Yes
SKYWARN Program	Yes
CodeRED Mass Notification System	Yes
Severe Weather Awareness Week	Yes
Winter Weather Awareness Week	Yes
NOAA Weather Radios	No
THIRA	Yes

<b>Administration</b>	<b>Yes/No</b>
Planning Commission	Yes
Mitigation Planning Committee	Yes
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	Yes
Mutual aid agreements	
<b>Staff</b>	<b>Yes/No</b>
Chief Building Official	Yes
Floodplain Administrator	Yes
Emergency Manager	Yes

Community Planner	Yes
Civil Engineer	Yes
GIS Coordinator	Yes
<b>Technical</b>	<b>Yes/No</b>
Warning systems/services (Reverse 911, outdoor warning signals)	Yes
Hazard data and information	Yes
Hazus analysis	No

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