MULTI-JURISDICTIONAL ALL HAZARDS MITIGATION PLAN

SCOTT COUNTY MINNESOTA 2009

TABLE OF CONTENTS

SECTION 1 EXECUTIVE SUMMARY ..... **Error! Bookmark not defined.**
1.1 INTRODUCTION ..... **Error! Bookmark not defined.**
1.2 EMERGENCY MANAGEMENT BACKGROUND... **Error! Bookmark not defined.**
1.3 HAZARD MITIGATION LEGISLATIVE BACKGROUND ....**Error! Bookmark not defined.**
1.3.1 Disaster Mitigation Act of 2000 ..... **Error! Bookmark not defined.**
1.3.2 Regulation 44CFR Part 201..... **Error! Bookmark not defined.**
1.3.3 Hazard Mitigation Grant Program ..... **Error! Bookmark not defined.**
1.3.4 Pre-Disaster Mitigation Program ..... **Error! Bookmark not defined.**
1.3.5 National Flood Insurance Program (NFIP) ..... **Error! Bookmark not defined.**
1.3.5.1 The "100-year/500 year" Standard..... **Error! Bookmark not defined.**
1.3.5.2 Flood Mitigation Assistance Program (FMA)... **Error! Bookmark not defined.**
1.3.5.3 NFIP Repetitive Flood Claims (RFC) Program. **Error! Bookmark not defined.**
1.3.5.4 NFIP Severe Repetitive Loss (SRL) Program... **Error! Bookmark not defined.**
1.3.5.5 Community Rating System (CRS) ..... **Error! Bookmark not defined.**
1.4 PLAN PURPOSE ..... **Error! Bookmark not defined.**
1.5 PLAN SCOPE ..... **Error! Bookmark not defined.**
1.6 PLAN AUTHORITY ..... **Error! Bookmark not defined.**
1.7 PLAN OUTLINE..... **Error! Bookmark not defined.**
SECTION 2 JURISDICTION PROFILE ..... **Error! Bookmark not defined.**
2.1 SCOTT COUNTY PROFILE..... **Error! Bookmark not defined.**
2.1.1 Geography..... **Error! Bookmark not defined.**
2.1.2 History ..... **Error! Bookmark not defined.**
2.1.3 Population Demographics and Households..... **Error! Bookmark not defined.**
2.1.4 Economy Earnings and Employment ..... **Error! Bookmark not defined.**
2.1.5 Infrastructure..... **Error! Bookmark not defined.**
SECTION 3 THE MITIGATION PLANNING PROCESS..... **Error! Bookmark not defined.**
3.1 INTRODUCTION ..... **Error! Bookmark not defined.**
3.2 PLANNING PROCESS OVERVIEW..... **Error! Bookmark not defined.**
3.3 PLAN ADOPTION BY LOCAL GOVERNING BODIES.....**Error! Bookmark not defined.**
3.4 MULTI-JURISDICTIONAL PLANNING PARTICIPATION...**Error! Bookmark not defined.**
3.5 MITIGATION PLANNING PROCESS ..... **Error! Bookmark not defined.**
3.6 THE MITIGATION COMMITTEE..... **Error! Bookmark not defined.**
3.7 MITIGATION PLANNING COMMUNITY MEETINGS .....**Error! Bookmark not defined.**
3.8 INVOLVING THE PUBLIC IN MITIGATION PLANNING....**Error! Bookmark not defined.**
3.8.1 Public Participation During Plan Construction..... **Error! Bookmark not defined.**
3.8.2 Public Participation During Mitigation Plan Final Approval..... **Error! Bookmark not defined.**
3.9 INVOLVING STAKEHOLDERS IN MITIGATION PLANNING ..**Error! Bookmark not defined.**

3.10 REVIEW AND INCORPORATION OF EXISTING PLANS ... **Error! Bookmark not defined.**
3.10.1 Local Data ..... **Error! Bookmark not defined.**
3.10.2 Federal and State Data ..... **Error! Bookmark not defined.**
3.11 PLANNING FOR NATURAL HAZARDS ..... **Error! Bookmark not defined.**
3.11.1 Minnesota State Mitigation Plan ..... **Error! Bookmark not defined.**
3.11.2 Scott County Mitigation Plan ..... **Error! Bookmark not defined.**
3.12 PLANNING FOR MANMADE HAZARDS ..... **Error! Bookmark not defined.**
SECTION 4 RISK ASSESSMENT – HAZARD IDENTIFICATION ..... **Error! Bookmark not defined.**
4.1 INTRODUCTION ..... **Error! Bookmark not defined.**
4.2 HAZARD IDENTIFICATION METHODOLOGY ..... **Error! Bookmark not defined.**
4.3 SCOTT COUNTY HAZARD DISASTER DECLARATIONS.. **Error! Bookmark not defined.**
4.4 STATE OF MINNESOTA 2008 MITIGATION PLAN HAZARD DISPOSITION **Error! Bookmark not defined.**
4.5 NATURAL HAZARDS IDENTIFICATION ..... **Error! Bookmark not defined.**
4.5.1 Drought Identification ..... **Error! Bookmark not defined.**
4.5.2 Earthquake Identification ..... **Error! Bookmark not defined.**
4.5.3 Extreme Temperatures Identification ..... **Error! Bookmark not defined.**
4.5.3.1 Extreme Cold Identification ..... **Error! Bookmark not defined.**
4.5.3.2 Extreme Heat Identification ..... **Error! Bookmark not defined.**
4.5.4 Flooding Identification ..... **Error! Bookmark not defined.**
4.5.4.1 Flooding Thunderstorm Identification ..... **Error! Bookmark not defined.**
4.5.4.2 Flooding Tropical Storm/Hurricane Identification ..... **Error! Bookmark not defined.**
4.5.4.3 Flooding Storm Surge Identification ..... **Error! Bookmark not defined.**
4.5.5 Hail Identification ..... **Error! Bookmark not defined.**
4.5.6 Coastal Erosion Identification ..... **Error! Bookmark not defined.**
4.5.7 High Winds Identification ..... **Error! Bookmark not defined.**
4.5.7.1 High Winds Tropical Storm/Hurricane Identification ..... **Error! Bookmark not defined.**
4.5.7.2 High Winds Tornado Identification ..... **Error! Bookmark not defined.**
4.5.7.3 High Winds Thunderstorm Identification ..... **Error! Bookmark not defined.**
4.5.8 Ice/Snow Storm Identification ..... **Error! Bookmark not defined.**
4.5.9 Landslides/Mudslides Identification ..... **Error! Bookmark not defined.**
4.5.10 Land Subsidence Identification ..... **Error! Bookmark not defined.**
4.5.11 Lightning Identification ..... **Error! Bookmark not defined.**
4.5.12 Wildfires Identification ..... **Error! Bookmark not defined.**
4.6 MANMADE HAZARDS IDENTIFICATION ..... **Error! Bookmark not defined.**
4.6.1 Flooding Dam/Levee Failure Identification ..... **Error! Bookmark not defined.**
4.6.2 Hazardous Materials Incident Identification ..... **Error! Bookmark not defined.**
4.6.3 Illegal Methamphetamine Labs Identification ..... **Error! Bookmark not defined.**
4.6.4 Pandemics/Epidemics/Vectors Identification ..... **Error! Bookmark not defined.**
4.6.4.1 Human Pandemic/Epidemic Hazard Identification ..... **Error! Bookmark not defined.**

4.6.4.2 Animal and Vector-Based Agriculture Hazard Identification . **Error! Bookmark not defined.**
4.6.5 Terrorism Identification..... **Error! Bookmark not defined.**
4.6.5.1 Bombings Identification ..... **Error! Bookmark not defined.**
4.6.5.2 Chemical/Biological Agents Identification ..... **Error! Bookmark not defined.**
4.6.5.3 Radiation Device Identification ..... **Error! Bookmark not defined.**
4.6.5.4 Cyber-Terrorism Identification..... **Error! Bookmark not defined.**
4.6.6 Transportation Accident Identification ..... **Error! Bookmark not defined.**
4.6.7 Urban Fire Identification ..... **Error! Bookmark not defined.**
4.6.8 Utility Power Failure Identification ..... **Error! Bookmark not defined.**
4.6.9 Water Contamination Identification..... **Error! Bookmark not defined.**
SECTION 5 RISK ASSESSMENT – HAZARD PROFILES..... **Error! Bookmark not defined.**
5.1 HAZARD PROFILES OVERVIEW ..... **Error! Bookmark not defined.**
5.2 STATE OF MINNESOTA 2008 MITIGATION PLAN HAZARD DISPOSITION **Error! Bookmark not defined.**
5.3 NATURAL HAZARDS PROFILED ..... **Error! Bookmark not defined.**
5.3.1 Drought Profile ..... **Error! Bookmark not defined.**
Location..... **Error! Bookmark not defined.**
Extent ..... **Error! Bookmark not defined.**
Future Probability ..... **Error! Bookmark not defined.**
Historic Occurrences..... **Error! Bookmark not defined.**
Major Historic Occurrences Discussion..... **Error! Bookmark not defined.**
5.3.2 . Earthquake Profile..... **Error! Bookmark not defined.**
Location..... **Error! Bookmark not defined.**
Extent ..... **Error! Bookmark not defined.**
Future Probability ..... **Error! Bookmark not defined.**
Historic Occurrences..... **Error! Bookmark not defined.**
Major Historic Occurrences Discussion..... **Error! Bookmark not defined.**
5.3.3 Extreme Temperatures Profile ..... **Error! Bookmark not defined.**
Location..... **Error! Bookmark not defined.**
Extent ..... **Error! Bookmark not defined.**
Future Probability ..... **Error! Bookmark not defined.**
Historic Occurrences..... **Error! Bookmark not defined.**
Major Historic Occurrences Discussion..... **Error! Bookmark not defined.**
5.3.4 Flooding Profile ..... **Error! Bookmark not defined.**
5.3.4.1 Flooding Dam/Levee Failure Profile..... **Error! Bookmark not defined.**
Location..... **Error! Bookmark not defined.**
Extent ..... **Error! Bookmark not defined.**
Future Probability ..... **Error! Bookmark not defined.**
Historic Occurrences..... **Error! Bookmark not defined.**
Major Historic Occurrences Discussion..... **Error! Bookmark not defined.**
5.3.4.2 Flash and Riverine Flooding Profile ..... **Error! Bookmark not defined.**
Location..... **Error! Bookmark not defined.**
Extent ..... **Error! Bookmark not defined.**
Future Probability ..... **Error! Bookmark not defined.**
Historic Occurrences..... **Error! Bookmark not defined.**

Major Historic Occurrences Discussion ..... **Error! Bookmark not defined.**
5.3.5 Hail Profile ..... **Error! Bookmark not defined.**
Location ..... **Error! Bookmark not defined.**
Extent ..... **Error! Bookmark not defined.**
Future Probability ..... **Error! Bookmark not defined.**
Historic Occurrences ..... **Error! Bookmark not defined.**
Major Historic Occurrences Discussion ..... **Error! Bookmark not defined.**
5.3.6 High Winds Profile ..... **Error! Bookmark not defined.**
5.3.6.1 High Winds/Thunderstorm/Fronts Profile ..... **Error! Bookmark not defined.**
Location ..... **Error! Bookmark not defined.**
Extent ..... **Error! Bookmark not defined.**
Future Probability ..... **Error! Bookmark not defined.**
Historic Occurrences ..... **Error! Bookmark not defined.**
Major Historic Occurrences Discussion ..... **Error! Bookmark not defined.**
5.3.6.2 High Winds Tornado Profile ..... **Error! Bookmark not defined.**
Location ..... **Error! Bookmark not defined.**
Extent ..... **Error! Bookmark not defined.**
Future Probability ..... **Error! Bookmark not defined.**
Historic Occurrences ..... **Error! Bookmark not defined.**
Major Historic Occurrences Discussion ..... **Error! Bookmark not defined.**
5.3.7 Ice/Snow Storm Profile ..... **Error! Bookmark not defined.**
Location ..... **Error! Bookmark not defined.**
Extent ..... **Error! Bookmark not defined.**
Future Probability ..... **Error! Bookmark not defined.**
Historic Occurrences ..... **Error! Bookmark not defined.**
Major Historic Occurrences Discussion ..... **Error! Bookmark not defined.**
5.3.8 Landslide/Mudslide Profile ..... **Error! Bookmark not defined.**
Location ..... **Error! Bookmark not defined.**
Extent ..... **Error! Bookmark not defined.**
Future Probability ..... **Error! Bookmark not defined.**
Historic Occurrences ..... **Error! Bookmark not defined.**
Major Historic Occurrences Discussion ..... **Error! Bookmark not defined.**
5.3.9 Land Subsidence Profile ..... **Error! Bookmark not defined.**
Location ..... **Error! Bookmark not defined.**
Extent ..... **Error! Bookmark not defined.**
Future Probability ..... **Error! Bookmark not defined.**
Historic Occurrences ..... **Error! Bookmark not defined.**
Major Historic Occurrences Discussion ..... **Error! Bookmark not defined.**
5.3.10 Lightning Profile ..... **Error! Bookmark not defined.**
Location ..... **Error! Bookmark not defined.**
Extent ..... **Error! Bookmark not defined.**
Future Probability ..... **Error! Bookmark not defined.**
Historic Occurrences ..... **Error! Bookmark not defined.**
Major Historic Occurrences Discussion ..... **Error! Bookmark not defined.**
5.3.11 Wildfire Profile ..... **Error! Bookmark not defined.**
Location ..... **Error! Bookmark not defined.**

Extent ..... **Error! Bookmark not defined.**
Future Probability ..... **Error! Bookmark not defined.**
Historic Occurrences..... **Error! Bookmark not defined.**
Major Historic Occurrences Discussion..... **Error! Bookmark not defined.**
5.4 MANMADE HAZARDS PROFILE ..... **Error! Bookmark not defined.**
5.4.1 Hazardous Materials Profile ..... **Error! Bookmark not defined.**
Location..... **Error! Bookmark not defined.**
Extent ..... **Error! Bookmark not defined.**
Future Probability ..... **Error! Bookmark not defined.**
Historic Occurrences..... **Error! Bookmark not defined.**
Major Historic Occurrences Discussion..... **Error! Bookmark not defined.**
5.4.2 Illegal Methamphetamine Labs Profile ..... **Error! Bookmark not defined.**
Location..... **Error! Bookmark not defined.**
Extent ..... **Error! Bookmark not defined.**
Future Probability ..... **Error! Bookmark not defined.**
Historic Occurrences..... **Error! Bookmark not defined.**
Major Historic Occurrences Discussion..... **Error! Bookmark not defined.**
5.4.3 Pandemic/Epidemic/Vector Profile..... **Error! Bookmark not defined.**
Location..... **Error! Bookmark not defined.**
Extent ..... **Error! Bookmark not defined.**
Future Probability ..... **Error! Bookmark not defined.**
Historic Occurrences..... **Error! Bookmark not defined.**
Major Historic Occurrences Discussion..... **Error! Bookmark not defined.**
5.4.4 Terrorism Profile..... **Error! Bookmark not defined.**
Location..... **Error! Bookmark not defined.**
Extent ..... **Error! Bookmark not defined.**
Future Probability ..... **Error! Bookmark not defined.**
Historic Occurrences..... **Error! Bookmark not defined.**
Major Historic Occurrences Discussion..... **Error! Bookmark not defined.**
5.4.5 Urban Structure Fire Profile ..... **Error! Bookmark not defined.**
Location..... **Error! Bookmark not defined.**
Extent ..... **Error! Bookmark not defined.**
Future Probability ..... **Error! Bookmark not defined.**
Historic Occurrences..... **Error! Bookmark not defined.**
Major Historic Occurrences Discussion..... **Error! Bookmark not defined.**
SECTION 6 RISK ASSESSMENT - ASSESSING VULNERABILITY....**Error! Bookmark not defined.**
6.1 ASSESSING VULNERABILITY OVERVIEW ..... **Error! Bookmark not defined.**
6.1.1 Hazard Event Disaster Declarations..... **Error! Bookmark not defined.**
6.1.2 Hazard Vulnerability Summary ..... **Error! Bookmark not defined.**
6.2 VULNERABILITY: REPETITIVE LOSS PROPERTIES.....**Error! Bookmark not defined.**
6.2.1 Future Structure Vulnerability ..... **Error! Bookmark not defined.**
6.3 VULNERABILITY: IDENTIFYING STRUCTURES **Error! Bookmark not defined.**
6.3.1 Asset Inventory For Flooding and High Winds Hazards .....**Error! Bookmark not defined.**

6.3.2 Asset Inventory For Secondary Hazards ..... **Error! Bookmark not defined.**
6.4 VULNERABILITY: ESTIMATING POTENTIAL LOSSES ... **Error! Bookmark not defined.**
6.4.1 Vulnerability Loss Estimates For Flooding and High Winds Hazards ..... **Error! Bookmark not defined.**
6.4.2 Vulnerability Loss Estimates For Secondary Hazards ..... **Error! Bookmark not defined.**
6.5 ASSESSING VULNERABILITY: ANALYZING DEVELOPMENT TRENDS **Error! Bookmark not defined.**
6.6 MULTI-JURISDICTIONAL RISK ASSESSMENT.... **Error! Bookmark not defined.**
SECTION 7 CAPABILITY AND HAZARD MITIGATION STRATEGY **Error! Bookmark not defined.**
7.1 JURISDICTION CAPABILITIES..... **Error! Bookmark not defined.**
7.1.1 Capability Assessment Overview..... **Error! Bookmark not defined.**
7.1.2 Conducting the Capability Assessment ..... **Error! Bookmark not defined.**
7.1.3 Capability Assessment..... **Error! Bookmark not defined.**
7.1.4 Participating Jurisdictions Capability Assessment Findings **Error! Bookmark not defined.**
7.1.4.1 Administrative and Technical Capability ..... **Error! Bookmark not defined.**
7.1.4.2 Fiscal Capability..... **Error! Bookmark not defined.**
7.1.4.3 External Resources Capabilities..... **Error! Bookmark not defined.**
7.1.4.4 Shelter Capability ..... **Error! Bookmark not defined.**
7.2 LINKING CAPABILITY, RISK ASSESSMENT AND MITIGATION ..... **Error! Bookmark not defined.**
7.2.1 Repetitive Flooding Mitigation..... **Error! Bookmark not defined.**
7.3 MITIGATION STRATEGY ..... **Error! Bookmark not defined.**
7.3.1 Mitigation Goals and Objectives..... **Error! Bookmark not defined.**
7.3.2 Local and State Goal Continuity ..... **Error! Bookmark not defined.**
7.3.3 Identification of Mitigation Actions..... **Error! Bookmark not defined.**
7.3.4 Selection of Mitigation Actions ..... **Error! Bookmark not defined.**
7.3.5 Reducing Hazard Impact on New Buildings and Infrastructure. **Error! Bookmark not defined.**
7.3.6 Reducing Hazards Impact on Existing Buildings and Infrastructure..... **Error! Bookmark not defined.**
7.3.7 National Flood Insurance Program (NFIP) Compliance ..... **Error! Bookmark not defined.**
7.3.8 Analyzing and Prioritizing NFIP Compliance Actions..... **Error! Bookmark not defined.**
7.3.9 Analyzing and Prioritizing Mitigation Actions..... **Error! Bookmark not defined.**
7.3.10 Mitigation Actions Implementation ..... **Error! Bookmark not defined.**
7.3.11 Mitigation Action Benefit/Cost Review ..... **Error! Bookmark not defined.**
7.3.12 Previously Implemented Mitigation Measures ..... **Error! Bookmark not defined.**
7.3.13 Multi-Jurisdictional Mitigation Actions ..... **Error! Bookmark not defined.**
SECTION 8 PLAN MONITORING, EVALUATING AND UPDATING **Error! Bookmark not defined.**
8.1 INTRODUCTION ..... **Error! Bookmark not defined.**

8.2 MONITORING, EVALUATION AND UPDATING OVERVIEW . **Error! Bookmark not defined.**
8.3 SCHEDULE FOR MONITORING THE PLAN..... **Error! Bookmark not defined.**
8.4 SCHEDULE AND METHODOLOGY FOR PLAN EVALUATION..... **Error! Bookmark not defined.**
8.5 FIVE YEAR PLAN REVIEW SCHEDULE AND METHODOLOGY ..... **Error! Bookmark not defined.**
8.6 INCORPORATING MITIGATION INTO EXISTING PLANNING **Error! Bookmark not defined.**
8.7 CONTINUED PUBLIC INVOLVEMENT ..... **Error! Bookmark not defined.**
SECTION 9 APPENDICES ..... **Error! Bookmark not defined.**
9.1 REFERENCES AND ACKNOWLEDGEMENTS..... **Error! Bookmark not defined.**
9.2 PLAN CERTIFICATION ..... **Error! Bookmark not defined.**
9.3 JURISDICTION PLAN ADOPTION RESOLUTIONS .....**Error! Bookmark not defined.**
9.3.1 City of Belle Plaine ..... **Error! Bookmark not defined.**
9.3.2 City of Elko-New Market..... **Error! Bookmark not defined.**
9.3.3 City of Jordan..... **Error! Bookmark not defined.**
9.3.4 City of New Prague..... **Error! Bookmark not defined.**
9.3.5 City of Prior Lake..... **Error! Bookmark not defined.**
9.3.6 City of Savage..... **Error! Bookmark not defined.**
9.3.7 City of Shakopee..... **Error! Bookmark not defined.**
9.3.8 Mdewakanton Dakota Tribe ..... **Error! Bookmark not defined.**
9.3.9 Scott County ..... **Error! Bookmark not defined.**

LIST OF FIGURES

Figure 1.1 Seven Phases of Homeland Security and Emergency Management .**Error! Bookmark not defined.**
Figure 2.1 Scott County Map ..... **Error! Bookmark not defined.**
Figure 2.2 Scott County Population ..... **Error! Bookmark not defined.**
Figure 2.3 Scott County Race and Ethnicity ..... **Error! Bookmark not defined.**
Figure 2.4 Scott County Age Distribution ..... **Error! Bookmark not defined.**
Figure 2.5 Housing Density ..... **Error! Bookmark not defined.**
Figure 2.6 Housing Units ..... **Error! Bookmark not defined.**
Figure 2.7 Occupation by Sex ..... **Error! Bookmark not defined.**
Figure 2.8 Unemployment Rates ..... **Error! Bookmark not defined.**
Figure 3.1 Mitigation Planning Process ..... **Error! Bookmark not defined.**
Figure 4.1: Depiction of Drought ..... **Error! Bookmark not defined.**
Figure 4.2: Earthquake Example ..... **Error! Bookmark not defined.**
Figure 4.3: Depiction of Extreme Heat ..... **Error! Bookmark not defined.**
Figure 4.4: Special Flood Hazard Area ..... **Error! Bookmark not defined.**
Figure 4.5: Depiction of a Thunderstorm ..... **Error! Bookmark not defined.**
Figure 4.6: Depiction of a Hurricane ..... **Error! Bookmark not defined.**
Figure 4.7: Storm Surge Depiction ..... **Error! Bookmark not defined.**
Figure 4.8: Formation of Hail ..... **Error! Bookmark not defined.**
Figure 4.9 Tornado ..... **Error! Bookmark not defined.**
Figure 4.10: Formation of Ice and Snow ..... **Error! Bookmark not defined.**
Figure 4.11 Landslide Depiction ..... **Error! Bookmark not defined.**
Figure 4.12: Depiction of Land Subsidence ..... **Error! Bookmark not defined.**
Figure 4.13: Depiction of Lightning ..... **Error! Bookmark not defined.**
Figure 4.14: Depiction of a Wildfire ..... **Error! Bookmark not defined.**
Figure 4.15: Depiction of a Dam ..... **Error! Bookmark not defined.**
Figure 4.16: Picture of a Slidell LA Levee ..... **Error! Bookmark not defined.**
Figure 4.17: Hazmat Train Accident ..... **Error! Bookmark not defined.**
Figure 4.18: Hazmat Pipeline ..... **Error! Bookmark not defined.**
Figure 4.19: HAZMAT Nuclear Facility ..... **Error! Bookmark not defined.**
Figure 4.20 Methamphetamine ..... **Error! Bookmark not defined.**
Figure 4.21 Foot and Mouth Disease Animals ..... **Error! Bookmark not defined.**
Figure 4.22 9/11 Terrorist Attack ..... **Error! Bookmark not defined.**
Figure 4.23 Cyber Attack ..... **Error! Bookmark not defined.**
Figure 4.24 Transportation Accident ..... **Error! Bookmark not defined.**
Figure 4.25: Structure Fire ..... **Error! Bookmark not defined.**
Figure 5.1 Palmer Drought Index ..... **Error! Bookmark not defined.**
Figure 5.2 Minnesota Annual Precipitation ..... **Error! Bookmark not defined.**
Figure 5.3 Earthquake Damage ..... **Error! Bookmark not defined.**
Figure 5.4 Earthquake Potential for Scott County ..... **Error! Bookmark not defined.**
Figure 5.5 National Weather Service Wind-chill Chart ..... **Error! Bookmark not defined.**
Figure 5.6 Heat Index Chart ..... **Error! Bookmark not defined.**
Figure 5.7 Precipitation in Minnesota ..... **Error! Bookmark not defined.**

Figure 5.8 Rainfall Totals for Southern Minnesota August 18 – 20-.....**Error! Bookmark not defined.**
Figure 5.9 Large Hail Reports ..... **Error! Bookmark not defined.**
Figure 5.10 Wind Zones in The United States..... **Error! Bookmark not defined.**
Figure 5.11 Average thunderstorms per year in Minnesota ..... **Error! Bookmark not defined.**
Figure 5.12 Tornado Activity in the United States ..... **Error! Bookmark not defined.**
Figure 5.13 Tornadoes in Scott County..... **Error! Bookmark not defined.**
Figure 5.14 Tornadoes in Minnesota and Scott County..... **Error! Bookmark not defined.**
Figure 5.15 Avg. Snowfall In Minnesota and Scott County..... **Error! Bookmark not defined.**
Figure 5.16 Landslide Areas ..... **Error! Bookmark not defined.**
Figure 5.17 Minnesota Karst Lands ..... **Error! Bookmark not defined.**
Figure 5.18 Minnesota Wildfire danger Rating ..... **Error! Bookmark not defined.**
Figure 5.19 Shakopee Wildfire ..... **Error! Bookmark not defined.**
Figure 5.20 Hazardous Materials Sites In Scott County ..... **Error! Bookmark not defined.**
Figure 5.21 Methamphetamine Activity in Minnesota ..... **Error! Bookmark not defined.**
Figure 5.22 Bird Flu Exposure..... **Error! Bookmark not defined.**
Figure 5.23 Fire Deaths in Minnesota and Scott County 1982 - 2007.....**Error! Bookmark not defined.**
Figure 6.1 Scott County Flood Structure Map..... **Error! Bookmark not defined.**
Figure 6.2 City of Belle Plaine Flood Hazard Map ..... **Error! Bookmark not defined.**
Figure 6.3 City of Belle Plaine High Wind Hazard Map ..... **Error! Bookmark not defined.**
Figure 6.4 Scott County Future Urban Growth Areas ..... **Error! Bookmark not defined.**
Figure 6.5 Scott County Agriculture Planning ..... **Error! Bookmark not defined.**
Figure 6.6 Scott County Urban Planning..... **Error! Bookmark not defined.**
Figure 6.7 Scott County Commercial Planning ..... **Error! Bookmark not defined.**

LIST OF TABLES

Table 1.1 CRS Ratings ..... **Error! Bookmark not defined.**
Table 1.2 Participating Jurisdictions ..... **Error! Bookmark not defined.**
Table 1.3 Plan Authority..... **Error! Bookmark not defined.**
Table 2.1 Scott County Households ..... **Error! Bookmark not defined.**
Table 2.2 Scott County Population and Forecasts 1990 to 2030 .. **Error! Bookmark not defined.**
Table 2.3 Age Distribution by Sex, 2000 ..... **Error! Bookmark not defined.**
Table 2.4 Household Characteristic Comparisons, 2000..... **Error! Bookmark not defined.**
Table 2.5 Number of Housing Unit Building Permits by Jurisdiction, 2001 to 2006..... **Error! Bookmark not defined.**
Table 2.6 Household Forecasts, 2000 to 2030 ..... **Error! Bookmark not defined.**
Table 2.7 Median Household Income, 2005 ..... **Error! Bookmark not defined.**
Table 2.8 Wage Information, 2002..... **Error! Bookmark not defined.**
Table 2.9 Labor Force Characteristics by Industry, 2000..... **Error! Bookmark not defined.**
Table 2.10 Major Employers in Each of Scott County's Cities, 2006 ..... **Error! Bookmark not defined.**
Table 2.11 Economic Sales, Receipts, or Shipments (in $1,000s) **Error! Bookmark not defined.**
Table 2.12 Public Schools Districts..... **Error! Bookmark not defined.**
Table 2.13 Private Schools ..... **Error! Bookmark not defined.**
Table 2.14 Current and Future General Service Needs ..... **Error! Bookmark not defined.**
Table 2.15 Scott County Infrastructure ..... **Error! Bookmark not defined.**
Table3.1 Scott County Adoption Resolutions..... **Error! Bookmark not defined.**
Table 3.2 Mitigation Plan Participating Jurisdictions, Agencies and Departments ..... **Error! Bookmark not defined.**
Table 3.3 Scott County Point of Contacts..... **Error! Bookmark not defined.**
Table 3.4 Consultant Point of Contacts ..... **Error! Bookmark not defined.**
Table 3.5 Scott County Mitigation Committee ..... **Error! Bookmark not defined.**
Table 3.6 Mitigation Plan Committee And Mandatory Public Meetings .... **Error! Bookmark not defined.**
Table 3.7 Local Plan Incorporation ..... **Error! Bookmark not defined.**
Table 3.8 State and Federal Plan Incorporation ..... **Error! Bookmark not defined.**
Table 4.1 Scott County Disaster Declarations ..... **Error! Bookmark not defined.**
Table 4.2 Natural Hazard Disposition In The State of Minnesota 2008 Plan Update..... **Error! Bookmark not defined.**
Table 4.3 Manmade Hazards Disposition in the 2008 State Mitigation Plan Update ..... **Error! Bookmark not defined.**
Table 5.1 Natural Hazard Disposition In The State of Minnesota 2008 Plan Update..... **Error! Bookmark not defined.**
Table 5.2 Manmade Hazards Disposition in the 2008 State Mitigation Plan Update ..... **Error! Bookmark not defined.**
Table 5.3 Jurisdiction Historic Drought Events ..... **Error! Bookmark not defined.**
Table 5.4 Mercalli Scale of Earthquake Intensity And The Corresponding Richter Scale ... **Error! Bookmark not defined.**
Table 5.5 Jurisdiction Historic Earthquake Events ..... **Error! Bookmark not defined.**

Table 5.6 Jurisdiction Historic Extreme Temperature (Hot/Cold) Events ...**Error! Bookmark not defined.**
Table 5.7 Dams in Scott County ..... **Error! Bookmark not defined.**
Table 5.8 Historic Riverine Flooding Ice/Snow Melt ..... **Error! Bookmark not defined.**
Table 5.9 Scott County Waterways Prone to Flooding ..... **Error! Bookmark not defined.**
Table 5.10 Historic Riverine/Flash Flooding Thunderstorm/Frontal System .... **Error! Bookmark not defined.**
Table 5.11 Estimating Hail Size ..... **Error! Bookmark not defined.**
Table 5.12 Historic Hail Events ..... **Error! Bookmark not defined.**
Table 5.13 Effects of Wind Speed ..... **Error! Bookmark not defined.**
Table 5.14 Historic High Wind/Thunderstorms/Front Events..... **Error! Bookmark not defined.**
Table 5.15 Enhanced F Scale for Tornado Damage ..... **Error! Bookmark not defined.**
Table 5.16 Historic High Wind-Tornado Events ..... **Error! Bookmark not defined.**
Table 5.17 Historic Ice and Snow Events..... **Error! Bookmark not defined.**
Table 5.18 Jurisdiction Historic Lightning Events ..... **Error! Bookmark not defined.**
Table 5.19 Historic Wildland Fire Events ..... **Error! Bookmark not defined.**
Table 5.20 Manmade Hazards Profiled ..... **Error! Bookmark not defined.**
Table 5.21 Scott County Hazardous Materials Assessment ..... **Error! Bookmark not defined.**
Table 5.22 Historic Illegal Meth laboratories ..... **Error! Bookmark not defined.**
Table 5.23 Historic Pandemic, Epidemic, Infection, Infestation Events.....**Error! Bookmark not defined.**
Table 5.24 Scott County Terrorism Assessment..... **Error! Bookmark not defined.**
Table 5.25 Historic Terrorist (Domestic/International CBRNE, Cyber) Threats/Events ..... **Error! Bookmark not defined.**
Table 5.26 Historic Urban Fire (Commercial/Large Structure, Fatality/Injury) Events ..... **Error! Bookmark not defined.**
Table 6.1 Scott County Disaster Declaration Economic Relief.... **Error! Bookmark not defined.**
Table 6.2 Scott County Hazard Profile Summary..... **Error! Bookmark not defined.**
Table 6.3 Hazard Qualitative Rating Table ..... **Error! Bookmark not defined.**
Table 6.4 Scott County Historic Hazard Profile Vulnerability Assessment.**Error! Bookmark not defined.**
Table 6.5 Scott County Future Hazard Profile Vulnerability Assessment ...**Error! Bookmark not defined.**
Table 6.6 NFIP RLP/SRL Properties ..... **Error! Bookmark not defined.**
Table 6.7 Total NFIP Losses by Jurisdiction..... **Error! Bookmark not defined.**
Table 6.8 Participating Jurisdictions Critical Facility Summary .. **Error! Bookmark not defined.**
Table 6.9 Scott County Asset Inventory (500yr Flood) ..... **Error! Bookmark not defined.**
Table 6.10 City of Belle Plaine Asset Inventory (500yr Flood) ... **Error! Bookmark not defined.**
Table 6.11 Belle Plaine Twp Asset Inventory (500yr Flood)..... **Error! Bookmark not defined.**
Table 6.12 Blakeley Twp Asset Inventory (500yr Flood)..... **Error! Bookmark not defined.**
Table 6.13 Cedar Lake Twp Asset Inventory (500yr Flood)..... **Error! Bookmark not defined.**
Table 6.14 Credit River Twp Asset Inventory (500yr Flood) ..... **Error! Bookmark not defined.**
Table 6.15 Elko New Market Asset Inventory (500yr Flood)..... **Error! Bookmark not defined.**
Table 6.16 Jackson Twp Asset Inventory (500yr Flood) ..... **Error! Bookmark not defined.**
Table 6.17 City of Jordan Asset Inventory (500yr Flood) ..... **Error! Bookmark not defined.**
Table 6.18 Louisville Twp Asset Inventory (500yr Flood)..... **Error! Bookmark not defined.**

Table 6.19 MDEWAKANTON Tribe Asset Inventory (500yr Flood) ..... **Error! Bookmark not defined.**
Table 6.20 New Market Twp Asset Inventory (500yr Flood) ..... **Error! Bookmark not defined.**
Table 6.21 New Prague Asset Inventory (500yr Flood)..... **Error! Bookmark not defined.**
Table 6.22 Prior Lake Asset Inventory (500yr Flood) ..... **Error! Bookmark not defined.**
Table 6.23 Sand Creek Twp Asset Inventory (500yr Flood)..... **Error! Bookmark not defined.**
Table 6.24 Savage Asset Inventory (500yr Flood)..... **Error! Bookmark not defined.**
Table 6.25 Shakopee Asset Inventory (500yr Flood)..... **Error! Bookmark not defined.**
Table 6.26 Spring Lake Asset Inventory (500yr Flood)..... **Error! Bookmark not defined.**
Table 6.27 St Lawrence Twp Asset Inventory..... **Error! Bookmark not defined.**
Table 6.22 Scott County Earthquake Hazard Loss..... **Error! Bookmark not defined.**
Table 6.22 Scott County Extreme Temperature Hazard Loss ..... **Error! Bookmark not defined.**
Table 6.28 Likelihood Of Potential Hazard Incident Occurring... **Error! Bookmark not defined.**
Table 6.29 Impact Of Potential Hazard Incident..... **Error! Bookmark not defined.**
Table 7.1 Scott County Legal And Regulatory Capability..... **Error! Bookmark not defined.**
Table 7.2 Scott County Administrative And Technical Capabilities ..... **Error! Bookmark not defined.**
Table 7.3 Scott County Fiscal Capabilities..... **Error! Bookmark not defined.**
Table 7.4 Planning and Regulatory Capability Summary ..... **Error! Bookmark not defined.**
Table 7.5 Administrative and Technical Capability Summary..... **Error! Bookmark not defined.**
Table 7.6 Fiscal Capability Summary ..... **Error! Bookmark not defined.**
Table 7.7 Scott County Mitigation Capability Assessment..... **Error! Bookmark not defined.**
Table 7.8 Scott County Shelters..... **Error! Bookmark not defined.**
Table 7.9 Repetitive Flooding Mitigation..... **Error! Bookmark not defined.**
Table 7.10 Countywide Community Goals and Objectives..... **Error! Bookmark not defined.**
Table 7.11 Alternative Mitigation Actions ..... **Error! Bookmark not defined.**
Table 7.12 NFIP Status..... **Error! Bookmark not defined.**
Table 7.13 NFIP Mitigation Action Items ..... **Error! Bookmark not defined.**
Table 7.14 STAPLEE Mitigation Action Priority Process..... **Error! Bookmark not defined.**
Table 7.15 Action Identifier Table ..... **Error! Bookmark not defined.**
Table 7.16 Scott County Mitigation Actions ..... **Error! Bookmark not defined.**
Table 7.17 “STAPLEE” Mitigation Actions Prioritization Table. **Error! Bookmark not defined.**
Table 8.1 Plan Integration..... **Error! Bookmark not defined.**

SECTION 1
EXECUTIVE SUMMARY

1.1 INTRODUCTION

Natural and manmade hazards pose a threat to every citizen and community within Scott County on some level and frequency. Often, the reality of potential hazards to a community are not fully understood or realized until a major disaster occurs. It is then that a community experiences the extreme hardship of significant human and economic losses. The process of hazard mitigation planning is a critical part of any community's planning program. Because most hazards occur infrequently, mitigation programs for hazards are usually initiated and funded as a reaction to recover from the most recent disaster event. This form of hazard mitigation response is more costly, both in property and human losses than is pre-disaster planning and mitigation.

Scott County and its jurisdictions received a Pre Disaster Mitigation Grant in 2007 to prepare a countywide hazard mitigation plan that will re-shape Scott County and local communities into a more resilient framework, enabling it to recover more quickly and easily from disasters.

SCOTT COUNTY VISION STATEMENT Scott County is the best public service provider and employer in the business.
SCOTT COUNTY'S MISSION STATEMENT: "To deliver quality public services to all citizens in an effective, professional and efficient manner."
SCOTT COUNTY VALUES STATEMENTS Respect for the Dignity, Rights and Values of Every Citizen Progressive and Visionary Leadership and Planning Fiscal Responsibility Open and Honest Communication Ethics and Integrity Employee Creativity and Innovation Team Work Positive Relations with the Community Excellence Environmental Responsibility
SCOTT COUNTY'S ALL-HAZARD MITIGATION PLAN MISSION: To work with Scott County's communities and townships and local emergency responders to develop a pro-active and results-oriented plan by identifying measures that will prevent loss of life and damage to property as well as reducing future risks for Scott County.

The process of all-hazard mitigation planning is the first step toward protecting a community from losses associated with hazards and resulting disasters. The Federal Emergency Management Agency (FEMA) with regard to hazard mitigation planning provides the following definitions:

Hazard mitigation - Any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards.

Planning - The act or process of making or carrying out plans, specifically, the establishment of goals, policies, and procedures for a social or economic unit.

This Plan provides a framework on which to base comprehensive mitigation of hazards for all Scott County jurisdictions. The hazard risk analysis determines which areas of the community are affected by hazards, how likely it is that a disaster may occur, and what impact a disaster might have. Then by assessing the vulnerability countywide, it can be determined which government and private facilities are at risk and to what degree they may be impacted.

1.2 EMERGENCY MANAGEMENT BACKGROUND

Over the past fifty years, the meaning and scope of emergency management has evolved in response to changes in political, military, and natural environments. Emergency management has grown from a narrow civil defense focus, to its present position of providing a wide array of services in response to natural and manmade hazards, including aspects of homeland security.

Historically, federal and state perspectives have shaped the focus, scope, and policy of emergency management. Prior to and extending through the 1930s, emergency management programs did not exist except for some “New Deal” social programs, administered by federal agencies, that provided assistance in response to specific disasters.

Emergency Management found it’s beginning immediately after World War II as a response to military attack. The federal government created a nationwide shelter program under the provisions of the Civil Defense Act. The first federal assistance to state and local governments was provided under civil defense programs. At the federal level, response and recovery from natural and manmade disasters were perceived to be within the jurisdiction of state and local governments. These disasters were philosophically and legally separate from “war-related” emergencies until the late 1970’s.

In 1979, the Federal Emergency Management Agency (FEMA) was established to assist in responding to war caused emergencies, nuclear events and natural and manmade disasters. In the 1980s, response and recovery efforts from other than war caused disasters became eligible for federal funding. This was the first effort to view emergency management as a comprehensive set of services encompassing four phases - mitigation, preparedness, response, and recovery.

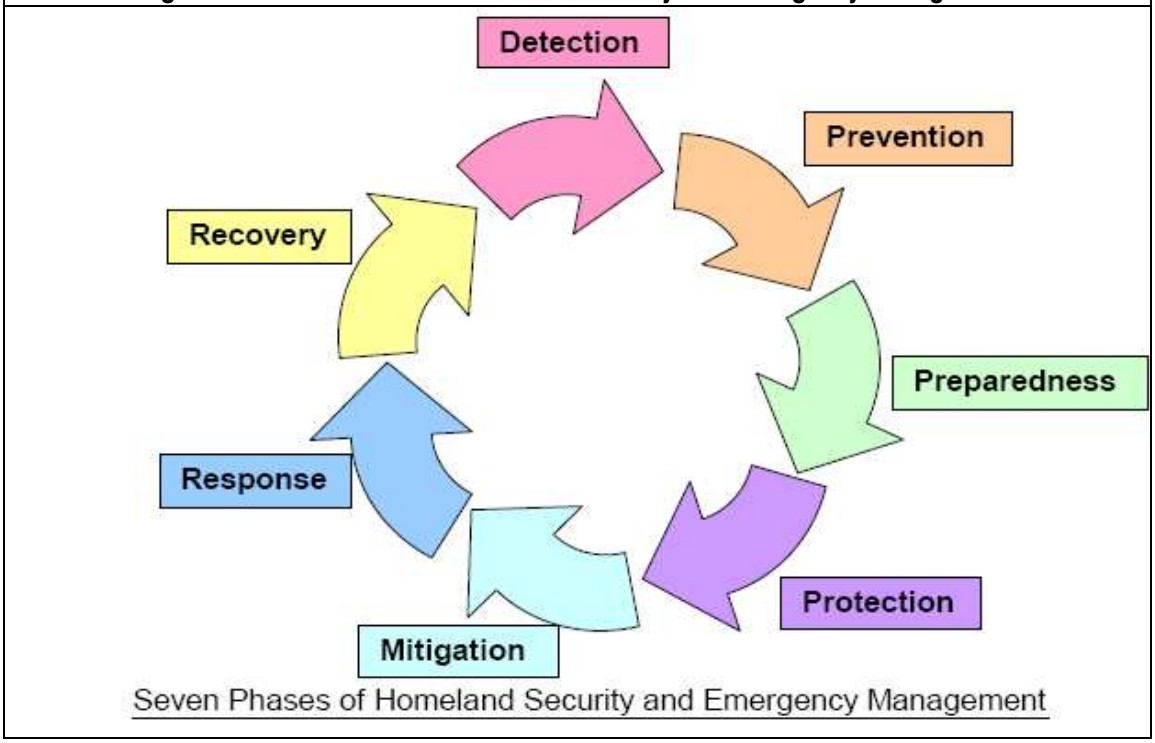
Emergency Management also experienced a key policy shift. Focus shifted from one of nuclear war preparedness to a more balanced focus on natural and manmade hazards and disasters. An “all-hazards” approach was emphasized. Federal assistance became available for preparedness, response and recovery efforts. The increasing demand on federal funds for disaster recovery assistance prompted changes in federal policy to emphasize mitigation and provide technical assistance to build state and local government capabilities to more independently deal with emergencies and disasters that occur within their jurisdictions.

This evolution has resulted in a shift from federal based initiatives to one of fostering local and state developed and delivered programs. Within this framework, local emergency management organizations work to implement local, state, and federal emergency management and homeland security policy. By working collaboratively with governmental agencies, private industry, and citizens, and by providing technical assistance and support, local emergency management organizations are expanding capabilities to contribute a broad spectrum of professional services.

In the 1990s, federal, state, and local governments recognized the increasing threat of terrorism. Domestic and foreign events, including the bombing of the New York World Trade Center in February 1993; the April 1995 bombing of the Alfred P. Murrah Federal Building in Oklahoma County; the bombing of the Khobar Towers in Saudi Arabia in June 1996; and the bombing of the U.S.S. Cole in Yemen in October 2000, demonstrated terrorists' willingness to use weapons of mass destruction. Federal agencies began to examine the causes and effects of these events, to shape U.S. policy, and fund domestic anti-terrorism preparedness activities.

The September 11, 2001 terrorist attacks on the New York World Trade Center and the Pentagon was a defining moment in the war on terrorism. The restructuring of domestic and foreign policy, and the development of nationwide initiatives to detect and prevent terrorist attacks and protect national critical infrastructure and systems witness this. At the federal level, anti-terrorism activities resulted in the creation of the Department of Homeland Security. This expanded the view of emergency management as a comprehensive set of services encompassing seven phases – detection, prevention, preparedness, protection, mitigation, response, and recovery.

Figure 1.1 Seven Phases of Homeland Security and Emergency Management



1.3 HAZARD MITIGATION LEGISLATIVE BACKGROUND

1.3.1 Disaster Mitigation Act of 2000

To support the expanded role of emergency management, Congress passed the Disaster Mitigation Act of 2000, (DMA2K), commonly known as the Stafford Act. Section 322, an amendment to the Act deals with the development of local hazard mitigation plans. DMA2K was signed into law on October 30, 2000 (Public Law 106-390). The Interim Final Rule for planning

provisions (44 CFR Part 201) was published in the Federal Register in February 2002, and again in October 2002. Local hazard mitigation planning requirements are implemented in 44 CFR Part 201.6. The purpose of DMA2K is to amend the Stafford Act to establish a national program for pre-disaster mitigation, streamline administration of disaster relief and control federal costs of disaster assistance. Congress envisioned that implementation of these new requirements would result in the following key benefits:

- Reduction of loss of life and property, human suffering, economic disruption, and disaster costs.
- Prioritization of hazard mitigation planning at the local level, with an increased emphasis placed on planning and public involvement, assessing risks, implementing loss reduction measures, and ensuring critical services/facilities survive a disaster.
- Establishment of economic incentives, awareness and education to state, tribal, and local governments that result in forming community based partnerships, implementing effective hazard mitigation measures, leveraging additional non-federal resources, and establishing commitments to long-term hazard mitigation efforts.

1.3.2 Regulation 44CFR Part 201

FEMA has implemented the various hazard mitigation-planning provisions through regulations at 44 CFR Part 201. These regulations reflect the need for States, Tribal, and local governments to closely coordinate mitigation planning and implementation efforts. A Hazard Mitigation Plan is a condition of pre- and post-disaster assistance. State, local and Tribal governments must have a FEMA-approved Local Mitigation Plan in order to receive FEMA hazard mitigation assistance and to apply for and/or receive project grants under the following assistance programs:

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)
- Repetitive Flood Claims (RFC)
- Severe Repetitive Loss (SRL)
- Community Rating System (CRS)

FEMA may also require a Local Mitigation Plan under the Repetitive Flood Claims (RFC) program that applies to those governments that apply for and/or receive assistance under the RFC program. Each hazard mitigation plan must be submitted to and approved by the state and FEMA. Each plan must, at minimum, address or include the following items:

- Plan Adoption by All Jurisdictions
- Planning Process including Public Involvement
- Hazard Identification and Risk Assessment
- Mitigation Strategy
- Plan Implementation and Maintenance Procedures
- Any Specific State Requirements

The mitigation plan requirements in 44 CFR Part 201 emphasize greater interaction between State and local mitigation activities, and highlight the need for improved linkage between State

and Local Mitigation Plans. Under 44 CFR §201.4(c)(4), States are required to coordinate mitigation planning with Indian Tribal and Local jurisdictions, and document the funding and technical assistance they will provide to these jurisdictions. The information contained in Local Mitigation Plans is also useful for States in developing their State Mitigation Plans. States should refer to Local Mitigation Plans to improve the level of detail and comprehensiveness of statewide risk assessments and coordinate State hazard mitigation goals and objectives with local goals and objectives. Similarly, local governments may refer to their State's mitigation plan where information may be useful for local mitigation strategy development.

1.3.3 Hazard Mitigation Grant Program

In 1988, Congress established the Hazard Mitigation Grant Program (HMGP) by enactment of Section 404 of the Stafford Act. In 2002, regulations pertaining to the HMGP to reflect the Disaster Mitigation Act of 2000 were changed by 44 CFR Part 206, Subpart N. An Interim Final Rule was issued in October 2002, wherein the final compliance date was set to November 1, 2004 for all governments to have a FEMA approved mitigation plan. The HMGP assists states and local communities to implement long-term hazard mitigation measures by providing federal funding after a major disaster declaration. Eligible applicants include state and local agencies, tribal organizations, and certain non-profit organizations. Examples of HMGP projects include:

- Property acquisition and relocation projects
- Structural retrofitting to minimize damages from high winds, earthquake, flood, wildfire, or other natural hazards
- Elevation of flood-prone structures
- Vegetative management programs

1.3.4 Pre-Disaster Mitigation Program

The Pre-Disaster Mitigation (PDM) Program was authorized by section 203 of the 2000 Stafford Act, 42 USC (Public Law 106-390). Funding for the program is provided through the National Pre-Disaster Mitigation Fund to assist state, local, and tribal governments in implementing cost-effective hazard mitigation activities that complement a comprehensive mitigation program. Two types of grants are offered under the PDM Program.

Planning Grants - Allocated funds to be used for hazard mitigation plan development.

Competitive Grants - Distributed funds using a competitive application process.

The minimum eligibility requirements for jurisdictions receiving competitive PDM funds include:

- Participation in the National Flood Insurance Program (NFIP)
- Must not be suspended or on probation from the NFIP
- Must have a FEMA approved Hazard Mitigation Plan

1.3.5 National Flood Insurance Program (NFIP)

The U.S. Congress established the National Flood Insurance Program (NFIP) with the passage of the National Flood Insurance Act of 1968. The NFIP is a Federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses in

exchange for State and community floodplain management regulations that reduce future flood damages. Participation in the NFIP is based on an agreement between communities and the Federal Government. If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to construction in floodplains, the Federal Government will make flood insurance available within the community as a financial protection against flood losses. This insurance is designed to provide an insurance alternative to disaster assistance to reduce the costs of repairing buildings and their contents caused by floods. The goals of the NFIP is to:

- Improve basic knowledge about flood hazards;
- Coordinate and plan new developments in the floodplain;
- Better indemnify individuals for flood losses through insurance;
- Reduce future flood damages through State and community floodplain management regulations;
- Reduce Federal expenditures for disaster assistance and flood control.

In 1994, Congress amended the 1968 Act and the 1973 Act with the National Flood Insurance Reform Act (NFIRA). The 1994 Act included measures, among others, to:

- Increase compliance by mortgage lenders with the mandatory purchase requirement and improve coverage;
- Increase the amount of flood insurance coverage that can be purchased;
- Provide flood insurance coverage for the cost of complying with floodplain management regulations by individual property owners (Increased Cost of Compliance coverage);
- Establish a Flood Mitigation Assistance grant program to assist States and communities to develop mitigation plans and implement measures to reduce future flood damages to structures;
- Codify the NFIP Community Rating System; and
- Require FEMA to assess its flood hazard map inventory at least once every 5 years.

1.3.5.1 The "100-year/500 year" Standard

In order to assess and manage the flood risk, a national standard the U.S. Department of Housing and Urban Development, which initially administered the NFIP before FEMA established the 1-percent-annual-chance of flooding (also referred to as the 100-year or "Base Flood") to be used as the standard for the NFIP. The 1-percent-annual-chance flood (or 100-year flood) represents a magnitude and frequency that has a statistical probability of being equaled or exceeded in any given year, or, stated alternatively, the 100-year flood has a 26 percent (or 1 in 4) chance of occurring over the life of a 30-year mortgage. The 500-year standard (0.2-percent-annual-chance) flooding was also established.

1.3.5.2 Flood Mitigation Assistance Program (FMA)

The Flood Mitigation Assistance Program (FMA) was created as part of the National Flood Insurance Reform Act (NFIRA) of 1994 (42 U.S.C. 4101) with the goal of reducing or eliminating claims under the NFIP. FMA funding is provided by the National Flood Insurance Fund and provides funding to assist states and communities in implementing measures to:

- Reduce the number of repetitively or substantially damaged structures and the associated claims on the National Flood Insurance Fund;
- Encourage long-term, comprehensive mitigation planning;
- Respond to the needs of communities participating in the NFIP to expand their mitigation activities beyond floodplain development review and permitting;
- Complement other federal, state and local mitigation programs with similar, long-term mitigation goals.

There are three types of grants available under FMA:

FMA Planning Grants are available to states and communities to prepare Flood Mitigation Plans.

FMA Project Grants are available to states and NFIP participating communities to implement measures to reduce flood losses. NFIP-participating communities with approved Flood Mitigation Plans can apply for FMA Project Grants.

Technical Assistance Grants Up to 10% of the Project Grant funding is made available to the states for technical assistance. These funds may be used to help administer the program.

In order to be eligible for project funds under the Flood Mitigation Assistance (FMA) program authorized by the National Flood Insurance Act of 1968, as amended, communities are required under 44 CFR §79.6(d)(1) to be participating in the NFIP and have a mitigation plan that addresses flood hazards. Although communities are not required to have a multi-hazard mitigation plan for the FMA program, they are encouraged to consider all hazards that could impact their community. First, a multi-hazard risk assessment may reveal effects or relationships between different hazards. For example, hurricanes have a combination of flood and wind impacts. Second, addressing all hazards will allow a community to be eligible for a wider range of federal mitigation assistance programs.

On October 31, 2007 FEMA published amendments to the 44 CFR Part 201 at 72 Fed.l Reg. 61720 to incorporate mitigation planning requirements for the FMA program. The amendments impacted 44 CFR §201.6, Local Mitigation Plans, as follows:

- Combined the Local Mitigation Plan requirement for all hazard mitigation assistance programs under 44 CFR §201.6 to include the FMA as well as the HMGP, PDM and SRL programs, thus eliminating duplicative mitigation plan regulations;
- Incorporated the requirement for communities with National Flood Insurance Program (NFIP) insured properties that have been repetitively damaged from floods to address such properties in their risk assessment and mitigation strategy; and
- Incorporated the requirement for communities that participate in the NFIP to include a strategy for continued compliance with the NFIP.

1.3.5.3 NFIP Repetitive Flood Claims (RFC) Program

The Repetitive Flood Claims (RFC) grant program provides funding to reduce or eliminate the long-term risk of flood damage to structures insured under the National Flood Insurance Program (NFIP) that have had one or more claim payments for flood damages. The long-term goal of RFC is to reduce or eliminate claims under the NFIP through mitigation activities that are in the best interest of the National Flood Insurance Fund (NFIF). RFC funds may only mitigate

structures that are located within a State or community that cannot meet the cost share or management capacity requirements of the Flood Mitigation Assistance (FMA) program.

Applications will be accepted for any insured property that has one or more claim payments for flood damages and is located within a State or community that can not meet the requirements of the FMA program for either cost share or capacity to manage the activities stipulations. RFC awards will prioritize projects that create the greatest savings to the NFIF based on a Benefit-Cost Analysis (BCA).

1.3.5.4 NFIP Severe Repetitive Loss (SRL) Program

The SRL program was created pursuant to Section 1361A of the National Flood Insurance Act of 1968 (or" the Act"), 42 U.S.C. 4102A, as amended by the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004, Public Law 108-264, with the goal of reducing flood damages to SRL properties. The SRL program provides funding to reduce or eliminate the long-term risk of flood damage to severe repetitive loss residential structures insured under the NFIP. The definition of severe repetitive loss as applied to this program was established in section 1361A of the National Flood Insurance Act, as amended (NFIA), 42 U.S.C. 4102a. An SRL property is defined as a residential property that is covered under an NFIP flood insurance policy and:

a. That has at least four NFIP claim payments (including building and contents) over $5,000 each, and the cumulative amount of such claims payments exceeds $20,000; or
b. For which at least two separate claims payments (building payments only) have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building.

For both (a) and (b) above, at least two of the referenced claims must have occurred within any ten-year period, and must be greater than 10 days apart.

The long-term goal of the SRL program is to reduce or eliminate NFIP claims. The SRL program will fund mitigation projects, which will result in the greatest savings to the National Flood Insurance Fund (NFIF) in the shortest period of time, based on a Benefit-Cost Ratio (BCR) using Federal Emergency Management Agency (FEMA)-approved methodology to conduct the Benefit-Cost Analysis (BCA).

Participation in this program is voluntary. The SRL program differs from other FEMA mitigation grant programs in that those property owners who decline offers of mitigation assistance will be subject to increases in their insurance premium rates.

1.3.5.5 Community Rating System (CRS)

The CRS was implemented in 1990 as a program for recognizing and encouraging community floodplain management activities that exceed the minimum NFIP standards. The National Flood Insurance Reform Act of 1994 codified the Community Rating System. Under the CRS, flood insurance premium rates are adjusted to reflect the reduced flood risk resulting from community activities that meet the three goals of the CRS: (1) reduce flood losses; (2) facilitate accurate insurance rating; and (3) promote the awareness of flood insurance.

The Community Rating System (CRS) provides a flood insurance premium discount in participating communities that implement floodplain management activities above and beyond the minimum criteria of the NFIP. Policyholders receive 5 - 45% discounts on premiums, depending on their flood zone and the community's CRS classification. The more communities

do to prevent and reduce flood losses, the more their residents benefit with reduced premiums. The CRS recognizes 18 creditable activities, organized under four categories: Public Information, Mapping and Regulations, Flood Damage Reduction, and Flood Preparedness.

Communities can develop a CRS plan to improve their CRS rating. The CRS 10-step planning process is consistent with the multi-hazard planning regulations under 44 CFR Part 201. However, the CRS provides additional points for activities that communities take during the planning process that exceed the minimum. An approved multi-hazard mitigation plan under 44 CFR Part 201 that addresses floods could qualify for CRS credit. Communities are not required to participate in CRS in order to receive approval of a Local Mitigation Plan; however, FEMA encourages jurisdictions to integrate the CRS planning steps into their hazard mitigation plan.

Effective May 1, 2008, FEMA instituted a new CRS policy. Flood insurance policies for buildings having the lowest floor one foot or more below the base flood elevation will no longer be eligible for the community's CRS discount. Some clarifications:

- In most cases, the affected structures are non-compliant, i.e., in violation of the NFIP construction criteria. They may have received a variance from the community. If so, the variance applicant was advised that "the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance".
- This new policy only affects elevation-rated buildings. Typically, these are new construction or "post- FIRM buildings, not older buildings that qualify for the pre-FIRM "subsidized" rates.
- Only buildings in the mapped Special Flood Hazard Area are affected. Buildings in B, C, or X Zones are not rated based on the elevation of their lowest floors.
- It does not affect those V-Zone properties that have approved breakaway walls surrounding unfinished enclosures used only for building access, storage, and parking, but that were rated based on the enclosed area's being the lowest floor.

Table 1.1 CRS Ratings

Credit points earned, classification awarded and premium reductions for communities in the NFIP CRS rating system

Credit Points	Class	SFHA	Non-SFHA
4500+	1	45%	10%
4,000 - 4,499	2	40%	10%
3,500 – 3,999	3	35%	10%
3,000 – 3,499	4	30%	10%
2,500 – 2,999	5	25%	10%
2,000 – 2,499	6	20%	10%
1,500 – 1,999	7	15%	5%
1,000 – 1,499	8	10%	5%
500 - 999	9	5%	5%
0 - 499	10	0%	0%

SFHA = Special Flood Hazard Area

1.4 PLAN PURPOSE

This plan provides a framework on which to base comprehensive mitigation of hazards for all Scott County political jurisdictions. Risk management tools were used to prioritize and identify vulnerabilities to hazards. The overall hazard analysis determines which areas of the community are affected by hazards, how likely it is that a disaster may occur, and what impact a disaster might have. By assessing the vulnerability countywide, it can be determined which government and private facilities are at risk and to what degree they may be impacted.

Natural and manmade hazards pose a threat to every citizen and community within Scott County on some level and frequency. Often, the reality of potential hazards to a community are not fully understood or realized until a major disaster occurs. It is then that a community experiences the

extreme hardship of significant human and economic losses. The process of all-hazard mitigation planning is the first step toward protecting a community from losses

The key purposes of this plan are:

- To involve members of the county, cities, townships, public and other agencies to draft and adopt an action plan that serves as the blueprint for future development and preparedness activities across the county;
- To identify the possible risks and hazards that may affect Scott County through a systematic hazard identification and risk assessment process;
- To prioritize loss reduction and emergency preparedness activities for disasters;
- To determine areas within Scott County that may be vulnerable to various hazards;
- To develop strategies and the best practices to avoid and mitigate the impact of hazards.

1.5 PLAN SCOPE

This Hazard Mitigation Plan will be updated and maintained by Scott County Emergency Management to continually address hazards determined to be of high and moderate risk through the detailed risk assessment. Other hazards that pose a low or negligible risk will continue to be evaluated for future updates to the Plan. The geographic scope for the Plan includes all incorporated and unincorporated areas of Scott County

Table 1.2 Participating Jurisdictions	
Scott County	Louisville Township
Belle Plaine	Mdewakanton Sioux Tribal Area
Belle Plaine Township	New Market Township
Blakeley Township	New Prague
Cedar Lake Township	Prior lake
Credit River Township	St. Lawrence Township
Elko-New Market	Sand Creek Township
Helena Township	Savage
Jackson Township	Shakopee
Jordan	Spring Lake Township

1.6 PLAN AUTHORITY

This Plan was developed in accordance with Federal, state and local rules and regulations governing local hazard mitigation plans. The Plan authority will be routinely monitored and revised to maintain compliance with the following provisions, rules, and legislation:

Table 1.3 Plan Authority		
Authority	**Authority Description**	**Authority Date**
Federal	The U.S Congress established the National Flood Insurance Program (NFIP) with the passage of the National Flood Insurance Act of 1968	1968
Federal	Flood Mitigation Assistance Program (FMA) was created as part of the National Flood Insurance Reform Act (NFIRA) of 1994 (42 U.S.C. 4101)	1994

Federal	Section 322, Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as enacted by Section 104 of the Disaster Mitigation Act of 2000 (P.L. 106-390)	10/30/2000
Federal	Pre-Disaster Mitigation (PDM) Program was authorized by section 203 of the 2000 Stafford Act, 42 USC (Public Law 106-390).	10/30/2000
Federal	FEMA's Interim Final Rule published in the Federal Register on February 26, 2002, at 44 CFR Part 201 and 206	02/26/2002
State	Minnesota Statutes, 2007 Chapter 12. (Delineates Minnesota Homeland Security and Emergency Management [HSEM] responsibilities.)	2007
State	Governor's Executive Order 07-14. (Assigns emergency responsibilities [including hazard mitigation] to state agencies.).	09/07/2007
County	Scott County Resolution	

1.7 PLAN OUTLINE

Section 1: Executive Summary provides an introduction and overview of the plan including the purpose, scope, authorities and section summaries.

Section 2 Scott County Profile describes the jurisdictions in terms of geography, history, population, economy and significant characteristics. This section also provides descriptions of the general makeup of Scott County and its local jurisdictions, including prevalent geographic, demographic, economic characteristics and land use patterns. Scott County recognizes that social, environmental, and economic factors have a role in determining community vulnerability to hazards.

Section 3: The Planning Process describes the process used to develop the Scott County Multi-Jurisdictional All Hazards Mitigation Plan. The description provides a general overview of local hazard mitigation planning and the specific procedures used by Scott County to prepare its Plan. It includes who was involved as members of the planning team, and documents the outcomes of meetings. It also demonstrates the opportunities for the public and other stakeholders to participate in the plan development process. Finally section 3 documents how each section of the previous plan was reviewed and specifics on how each section was updated.

Section 4: Hazard Risk Assessment - Identification is identifying hazards that have and may, in the future impact Scott County and its participating jurisdictions.

Hazard Identification identifies the hazard threats that have historically occurred in and across the county as well as hazards that may impact the communities in the future. Hazard Identification provides background information for these hazards. It is important that all hazards, including hazards identified in the State Plan, be initially considered for relevance in advancing through the hazard mitigation planning process.

Section 5 Hazard Risk Assessment - Hazard Profiling focuses on hazards that are of significant concern to Scott County. The profiles provide specific historical event information and identify the potential for a hazard event to occur in the future. This includes identifying location and spatial extent of the event and best available data regarding the impact on the county and participating jurisdictions.

Section 6: Risk Assessment - Assessing Hazard Vulnerability consists of Hazard Risk and Vulnerability assessments that builds on available historical data from past hazard occurrences, establishes hazard loss profiles

A Loss Estimation Methodology is used in evaluating some known hazard risks by their relative long-term cost in expected damages. The risk assessment also defines any hazard risks that may uniquely or exclusively affect the individual municipal jurisdictions. Communities must determine the most appropriate mitigation actions to pursue and implement as this information enables communities to prioritize and focus their efforts on those hazards of greatest concern and those structures or areas facing the greatest risk.

This section also includes a Land Use and Development Trend Analysis that identifies and describes future land use based on growth and jurisdiction planning.

Section 7: Scott County Mitigation Strategy consists of a capability assessment and a comprehensive mitigation strategy.

The capability assessment provides a comprehensive examination of Scott County and the participating local jurisdictions' capacity to implement meaningful mitigation strategies and identifies existing opportunities to increase and enhance that capability. Capabilities addressed in this section include planning and regulatory capability, technical capability, and fiscal capability. Information was obtained through the use of detailed survey questionnaires for local officials and an inventory and analysis of existing plans, ordinances, and relevant documents. The purpose of this assessment is to identify any existing gaps, weaknesses, or conflicts in programs or activities that may hinder mitigation efforts, and to identify those activities that should be built upon in establishing a successful and sustainable community hazard mitigation program. The community profile, risk assessment, and capability assessment collectively serve as a basis for determining the goals for the Hazard Mitigation Plan, each contributing to the development, adoption, and implementation of a mitigation strategy that is based on accurate background information.

The comprehensive mitigation strategy is a list of strategic goals and objectives and mitigation actions. The strategic goals consists of broad, countywide goal statements for each local jurisdiction participating in the planning process to strive to achieve, as well as a general description of the mitigation tools and techniques available for further consideration. The comprehensive strategy provides the foundation for identifying and prioritizing mitigation actions. Mitigation actions are specific to each local jurisdiction, and link proposed mitigation strategies to locally assigned implementation mechanisms and target implementation dates. This section makes the Plan both strategic, through the identification of long-term goals, and functional, through the identification of short-term and immediate actions that will guide day-to-day decision-making and project implementation.

Section 8: Contains plan monitoring, maintenance and updating strategies that Scott County and its participating jurisdictions will take to ensure the Plan's continuous long-term implementation. The maintenance procedures include the manner in which the Plan will be regularly evaluated and updated to remain a current and meaningful planning document.

Section 9: Contains acknowledgements, Mitigation meetings information and Adoption Resolutions

Annex 1: Supporting Information Annex: Includes detailed hazard historic information and lists of critical, Tier II and Terrorist Target facilities, which is considered sensitive information. Reference Maps are included in this section along with documents supporting the planning and adoption process.

Annex 2: Individual Mitigation Action Plans Annex: This annex contains individual municipal mitigation plans.

Individual jurisdiction profiles, which describe each municipality's geography and history and provides information on its population, demographics, households, earnings and employment.

Individual capability assessment provides a comprehensive examination of the participating local jurisdictions' capacity to implement meaningful mitigation strategies and identifies existing opportunities to increase and enhance that capability. Capabilities addressed in this section include planning and regulatory capability, technical capability, and fiscal capability. Information was obtained through the use of detailed survey questionnaires for local officials and an inventory and analysis of existing plans, ordinances, and relevant documents. The purpose of this assessment is to identify any existing gaps, weaknesses, or conflicts in programs or activities that may hinder mitigation efforts, and to identify those activities that should be built upon in establishing a successful and sustainable community hazard mitigation program.

Individual comprehensive mitigation plans contain a mitigation strategy for each participating jurisdiction. The mitigation strategy consists of specific goals, objectives and action items for each jurisdiction participating in the planning process. The strategy provides the foundation for identifying and prioritizing mitigation actions. Mitigation actions are specific to each local jurisdiction, and link proposed mitigation actions to locally assigned implementation mechanisms and target implementation dates. This section makes the Plan both strategic, through the identification of long-term goals, and functional, through the identification of short-term and immediate actions that will guide day-to-day decision-making and project implementation.

SECTION 2
JURISDICTION PROFILE

2.1 SCOTT COUNTY PROFILE

2.1.1 Geography

Scott County has an area of 375 square miles. The county has a total area of 955 km (369 mi). 924 km (357 mi) of it is land and 31 km (12 mi) of it (3.22%) is water and is located southeast of the central part of Minnesota. The Minnesota River Forms the Northeast and northern border of the county. It is bordered by Sibley County, to the west, Carver County to the Northwest, on the north by Hennepin County, Dakota County to the East, Rice County to the Southeast, and Le Sueur County to the Southwest

Figure 2.1 Scott County Map

Source: Scott County Comprehensive Plan

2.1.2 History

Scott County was established and organized by an Act of the state legislature on March 5, 1853. Scott County was named for General Winfield Scott, officer of the War of 1812 and Commander of the United States Army during the Mexican War.

The communities of the county are: Shakopee, (platted in 1854, incorporated as a city in 1857, reincorporated as a city in 1870); New Prague, (partly in Le Sueur County, founded in 1856, incorporated as a village in 1877, as a city in 1891); Belle Plaine (the only borough in the state) founded in 1854, incorporated as a borough in 1868, incorporated as a city in 1974; and Jordan (platted in 1854, incorporated as a village in 1872, and as a city in 1891); New Market (organized as Jackson township May 1858, renamed New Market October 12, 1858) , merged with Elko January 1, 2007 new city called Elko New Market; Savage, (platted in 1857, incorporated as a City in 1858); Prior Lake (platted in 1875, incorporated as a city in 1891). Other railroad points or neighborhood centers were: Barden, Blakeley, Eidswold, Elko, Lydia, Marystown, Merriam Junction, and St. Patrick. Grainwood was a summer resort, and Mudbaden a health resort.

The areas outside of the cities' boundaries are organized into 11 townships. These townships are primarily rural, although townships in the eastern portion of the County have become more

suburban. The townships 2001 estimated populations are: Credit River (3,993), Spring Lake (3,746), New Market (3,240), Cedar Lake (2,299), Sand Creek (1,583), Helena (1,500), Louisville (1,372), Jackson (1,370), Belle Plaine (836), St. Lawrence (512), and Blakeley (498).

Prior to settlement by the American pioneers, nineteen century. Native American people occupied Scott County for 10,000 years. Physical evidence of these inhabitants in Scott County remains as Burial Mound sites.

Early explorers followed the Minnesota River westward passing along the northwest boundary of what is now Scott County. Traders and missionaries located near the village of Chief Shakopee. An excursion party from Fort Snelling went up the Minnesota River by steamboat to Shakopee's village in 1842, and in 1850 boats carried excursions upstream and "demonstrated the navigability of the Minnesota River". By 1854, the number of steamboat arrivals and departures at St. Paul from the Minnesota River reached one hundred. The greater part of southern Minnesota was opened to settlement by treaties with the Sioux Indians signed at Mendota and at Traverse des Sioux in 1851 and proclaimed by President Fillmore in 1853.

The Indians were moved to a reservation on the upper river, but continued to return to their old hunting grounds during the summer months. About 150 members of Shakopee's band were camped near the village that bears his name in May 1858 when hostile Chippewa attacked them. This was the last of a series of conflicts between the two great Indian tribes of Minnesota.

Early settlers raised food for their families and stock. Wheat was the principal crop. Acreage of corn and potatoes increased and there was a growing interest in dairy cattle, oxen, and swine. Coincident with a diminishing yield per acre of wheat, attention turned to diversified-farming, a trend that increased with the introduction of cooperative creameries in the 1890s.

In the 1900s Scott County remained an agricultural based community. Population growth resulted in 14,116 people in the 1930 US Census. By 1970, the population reached 34,393 as sub urbanization began to spread into the cities of Savage, Shakopee, and Prior Lake. The most significant growth began after the Bloomington Ferry Bridge opened in 1996 connecting Scott County residents with employment opportunities in the Twin Cities metropolitan area.

Today Scott County enjoys a growing mix of commercial, industrial, and housing development, yet maintains a rural flavor. Scott County is the home to several historical, scenic, and entertainment destinations including Canterbury Park, Murphy's Landing, Elko Speedway, Mystic Lake Casino, the Renaissance Festival, and Valley-Fair Amusement Park

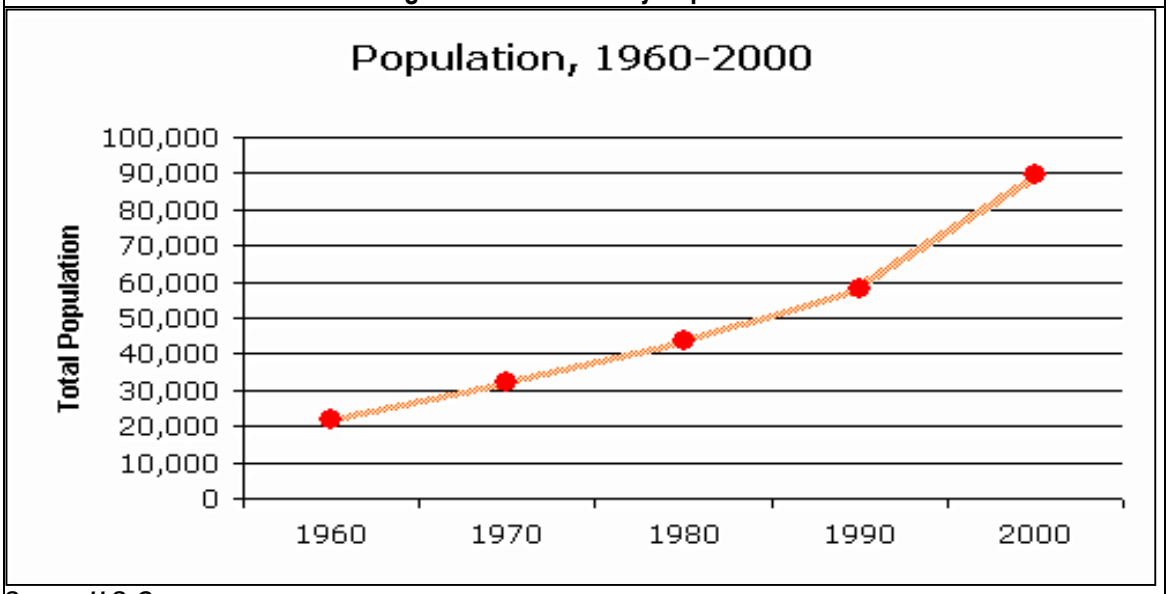
2.1.3 Population Demographics and Households

Scott County was the fastest growing county in Minnesota during the decade of the 1990s. During that period the County's population grew almost 55% from 57,846 persons in 1990 to 89,498 in the 2000 Census.

Table 2.1 Scott County Households

	1960	1970	1980	1990	2000
Total	21909	34393	43784	57846	89498
Change		10514	11361	14062	31652
Percent Change		47.99%	35.04%	32.12%	54.72%

Figure 2.2 Scott County Population



Source; U.S. Census

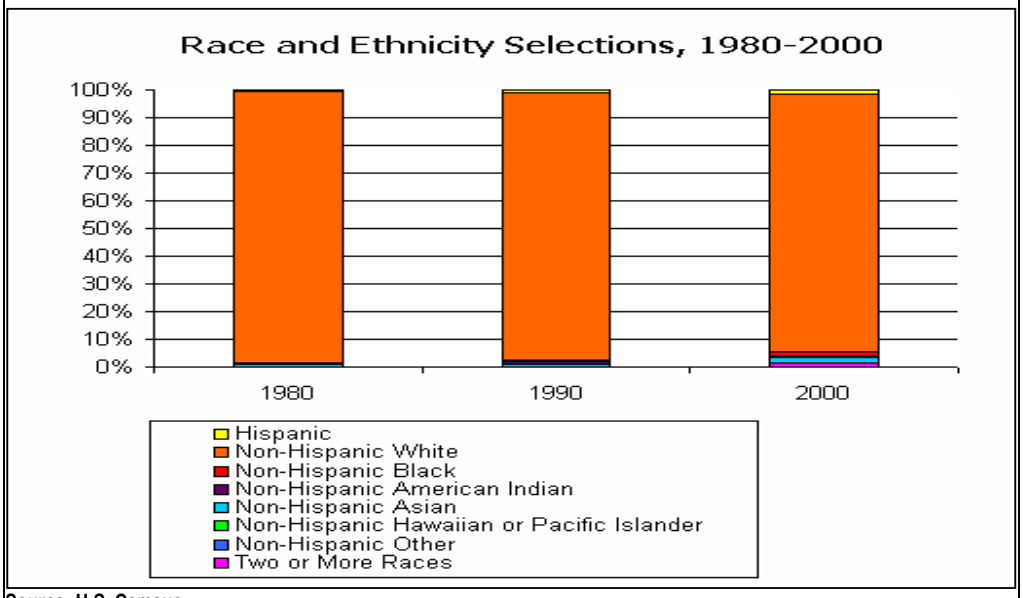
Table 2.2 Scott County Population and Forecasts 1990 to 2030

City/Township	Census 1990	Census 2000	Projected 2010	Projected 2020	Projected 2030	% Change 2000/2030
Belle Plaine	3,149	3,789	7,300	11,800	16,300	330
Elko New Market	450	804	5,700	13,100	20,800	2,487
Jordan	2,909	3,833	7,200	8,300	11,500	200
New Prague (pt)	2,356	3,157	4,700	6,200	7,200	128
Prior Lake	11,482	15,917	26,500	33,300	40,000	151
Savage	9,906	21,115	31,900	39,000	42,700	102
Shakopee	11,739	20,568	39,500	48,500	52,000	153
City total	**41,991**	**69,183**	**122,800**	**160,200**	**190,500**	**175**
Belle Plaine TWP	691	806	770	790	1,300	61
Blakeley TWP	456	496	600	730	800	61
Cedar Lake TWP	1,688	2,197	2,660	3,070	3,700	68
Credit River TWP	2,854	3,895	4,610	4,880	5,200	34
Helena TWP	1,107	1,440	1,600	1,800	2,200	53
Jackson TWP	1,359	1,361	1,420	1,500	1,670	23
Louisville TWP	910	1,359	1,390	1,500	1,700	25
New Market TWP	2,008	3,057	3,970	4,800	5,700	86
St. Lawrence TWP	418	472	600	800	1,400	197
Sand Creek TWP	1,511	1,551	1,650	1,850	2,100	35
Spring Lake TWP	2,853	3,681	4,270	4,880	5,500	42
Township total	**15,855**	**20,315**	**23,540**	**26,600**	**31,270**	**58**
Scott County	**57,846**	**89,498**	**146,340**	**186,800**	**221,770**	**148**

Source: Metropolitan Council Population Forecasts

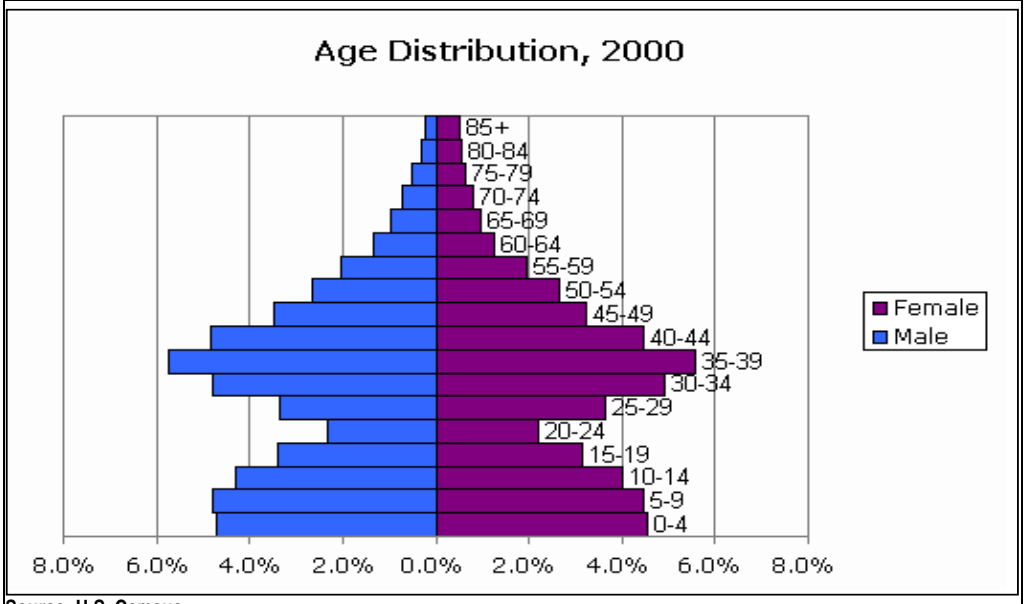
The racial makeup of Scott County in the 2000 Census was 93.65% White, 0.92% Black or African American, 0.77% Native American, 2.17% Asian, 0.03% Pacific Islander, 1.24% from other races, and 1.21% from two or more races.

Figure 2.3 Scott County Race and Ethnicity



Source: U.S. Census

Figure 2.4 Scott County Age Distribution



Source: U.S. Census

When drawn as a "population pyramid," age distribution can hint at patterns of growth. A top-heavy pyramid suggests negative population growth that might be due to any number of factors,

including high death rates, low birth rates, and increased emigration from the area. A bottom heavy pyramid suggests high birthrates or falling or stable death rates.

Table 2.3 Age Distribution by Sex, 2000				
	Male Number	Percent	Female Number	Percent
Total Population	45,176	50.48%	44,322	49.52%
0-4	4,233	4.73%	4,063	4.54%
5-9	4,292	4.80%	3,981	4.45%
10-14	3,844	4.30%	3,594	4.02%
15-19	3,048	3.41%	2,819	3.15%
20-24	2,089	2.33%	1,971	2.20%
25-29	2,986	3.34%	3,271	3.65%
30-34	4,303	4.81%	4,402	4.92%
35-39	5,145	5.75%	4,988	5.57%
40-44	4,311	4.82%	3,993	4.46%
45-49	3,115	3.48%	2,890	3.23%
50-54	2,391	2.67%	2,364	2.64%
55-59	1,806	2.02%	1,741	1.95%
60-64	1,192	1.33%	1,122	1.25%
65-69	852	0.95%	869	0.97%
70-74	628	0.70%	727	0.81%
75-79	477	0.53%	586	0.65%
80-84	278	0.31%	484	0.54%
85+	186	0.21%	457	0.51%
Age Distribution by Sex, 1990				
	Male Number	Percent	Female Number	Percent
Total Population	29,266	50.59%	28,580	49.41%
0-4	2,863	4.95%	2,615	4.52%
5-9	2,757	4.77%	2,628	4.54%
10-14	2,367	4.09%	2,268	3.92%
15-19	2,093	3.62%	1,861	3.22%
20-24	1,822	3.15%	1,733	3.00%
25-29	2,763	4.78%	2,882	4.98%
30-34	3,278	5.67%	3,024	5.23%
35-39	2,646	4.57%	2,530	4.37%
40-44	2,144	3.71%	2,129	3.68%
45-49	1,742	3.01%	1,613	2.79%
50-54	1,271	2.20%	1,167	2.02%
55-59	985	1.70%	874	1.51%
60-64	760	1.31%	790	1.37%
65-69	659	1.14%	651	1.13%
70-74	445	0.77%	580	1.00%
75-79	327	0.57%	493	0.85%
80-84	200	0.35%	344	0.59%
85+	144	0.25%	398	0.69%

In the Scott County 2000 Census there were 31,609 housing units. Over 12,000 additional units were constructed between 2001 and 2006. The cities of Prior Lake, Savage, and Shakopee

accumulated the most new units. The townships experienced a combination of nearly 1,200 permits, with the largest consolidation of new homes occurring in the eastern townships.

Table 2.4 Household Characteristic Comparisons, 2000

	Total Housing Units	Total Households	Average Household Size	% Single- Person Household
Scott County	31,609	30,692	2.89	16.0
Anoka County	108,091	106,428	2.77	19.3
Carver County	24,883	24,356	2.84	18.1
Dakota County	133,750	131,151	2.70	21.7
Hennepin County	468,824	456,129	2.39	31.8
Ramsey County	206,448	201,236	2.45	32.0
Washington County	73,365	71,462	2.77	18.7
Minnesota	2,065,945	1,895,127	2.52	26.9

Source: US Census of Population and Housing, 2000

Table 2.5 Number of Housing Unit Building Permits by Jurisdiction, 2001 to 2006

Jurisdiction	2001	2002	2003	2004	2005	2006	Total
Belle Plaine	224	181	149	150	104	58	866
Elko	35	56	90	73	47	84	385
Jordan	87	87	78	103	90	62	507
New Market	127	76	96	65	18	60	442
New Prague*	114	82	86	40	46	52	420
Prior Lake	455	813	516	300	196	320	2,600
Savage	478	176	233	323	256	149	1,615
Shakopee	789	688	892	746	567	312	3,994
All townships	246	220	202	206	188	133	1,195
Total	2,555	2,379	2,342	2,006	1,512	1,230	12,024

Source: Metropolitan Council Survey of Residential Building Permits, 2001-2006

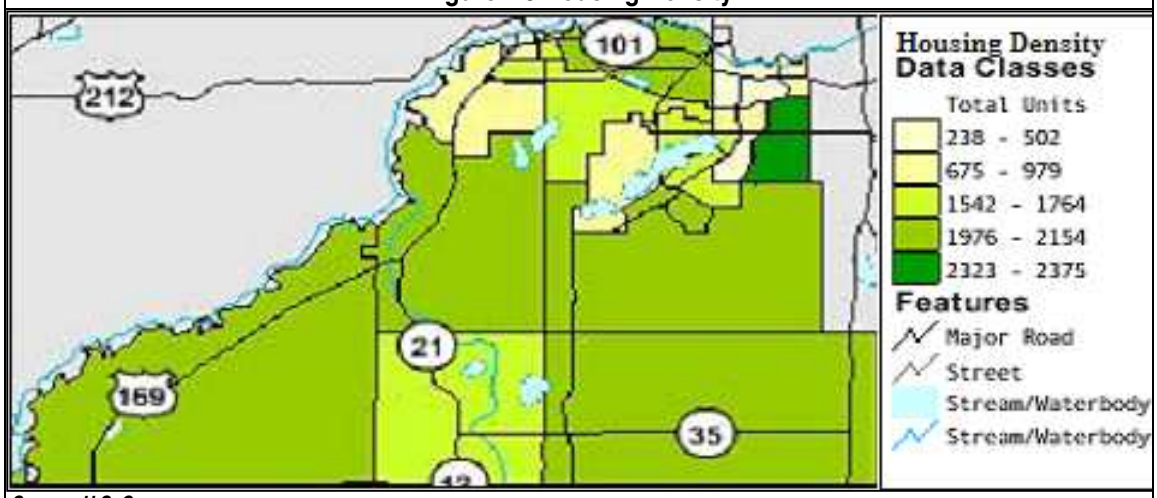
Table 2.6 Household Forecasts, 2000 to 2030

City/Township	Census 1990	Census 2000	2010	2020	2030	% Change 2000/2030
Belle Plaine	1,092	1,396	2,900	4,700	6,500	366
Elko New Market	157	286	2,120	4,850	8,000	2,697
Jordan	1,042	1,349	2,700	3,200	4,600	241
New Prague (pt)	870	1,160	1,800	2,500	3,000	159
Prior Lake	3,901	5,645	10,000	13,000	16,000	183
Savage	3,255	6,807	11,000	14,500	16,000	135
Shakopee	4,163	7,540	15,000	19,500	21,500	185
City total	**14,480**	**24,183**	**45,520**	**62,250**	**75,600**	**213**
Belle Plaine TWP	211	266	280	300	500	88
Blakeley TWP	140	166	220	280	310	87
Cedar Lake TWP	523	719	950	1,150	1,400	95
Credit River TWP	864	1,242	1,610	1,780	1,940	56

Table 2.6 Household Forecasts, 2000 to 2030						
City/Township	Census 1990	Census 2000	2010	2020	2030	% Change 2000/2030
Helena TWP	352	450	550	650	800	78
Jackson TWP	459	461	510	580	650	41
Louisville TWP	278	410	450	520	600	46
New Market TWP	627	956	1,300	1,630	1,950	104
St. Lawrence TWP	122	144	200	280	500	247
Sand Creek TWP	412	478	550	650	750	57
Spring Lake TWP	899	1,217	1,470	1,730	1,990	64
Township total	**4,887**	**6,509**	**8,090**	**9,950**	**11,390**	**75**
Scott County	19,367	30,692	53,610	71,800	86,990	183

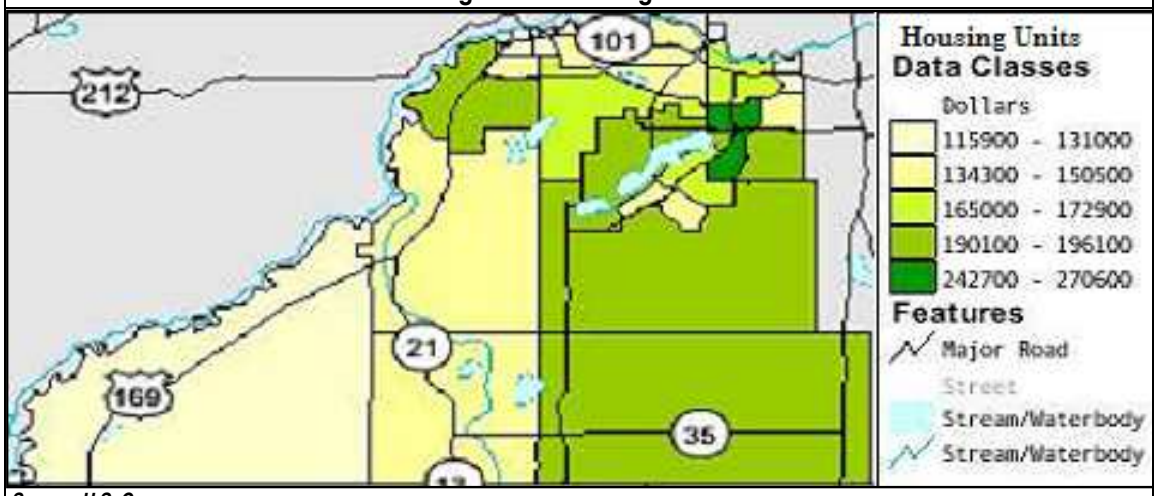
Source: Metropolitan Council Household

Figure 2.5 Housing Density



Source: U.S. Census

Figure 2.6 Housing Units



Source: U.S. Census

2.1.4 Economy Earnings and Employment

Per capita personal income: In 2005 Scott had a per capita personal income (PCPI) of $34,955. This PCPI ranked 7th in the state and was 94 % of the state average, $37,290, and 101 % of the national average, $34,471. The 2005 PCPI reflected an increase of 2.0 % from 2004. The 2004-2005 state change was 3.1 %, the national change was 4.2 %. In 1995 Scott PCPI was $24,096 and ranked 7th in the state. The 1995-2005 average annual growth rate of PCPI was 3.8 %. The average annual State growth rate was 4.5 % and 4.1 % for the nation.

Total personal income: In 2005 Scott had a total personal income (TPI) of $4,194,916*. This TPI ranked 9th in the state and accounted for 2.2 % of the state total. In 1995 the TPI of Scott was $1,710,513* and ranked 9th in the state. The 2005 TPI reflected an increase of 6.5 % from 2004. The 2004-2005 state change was 3.8 % and the national change was 5.2 %. The 1995-2005 average annual growth rate of TPI was 9.4 %. The average state annual growth rate was 5.5 % and 5.2% for the nation.

Components of total personal income: Total personal income is net earnings by place of residence; dividends, interest, and rent; and personal current transfer receipts received by the residents. In 2005 net earnings accounted for 80.7 % of TPI (compared with 77.7% in 1995); dividends, interest, and rent were 12.2 % (compared with 15.3% in 1995); and personal current transfer receipts were 7.0 % (compared with 7.0% in 1995). From 2004 to 2005 net earnings increased 6.6 %; dividends, interest, and rent increased 4.8 %; and personal current transfer receipts increased 9.2 %. From 1995 to 2005 net earnings average increase was 9.8 % each year; dividends, interest, and rent average increase was 6.9 %; and personal current transfer receipts average increase was 9.5 %.

Table 2.7 Median Household Income, 2005	
City/Area	**Value (in dollars)**
Belle Plaine	$55,175
Elko New Market	$67,200
Jordan	$55,025
New Prague	$48,650
Prior Lake	$86,925
Savage	$88,250
Shakopee	$69,300
East Twp's (Cedar Lake, Credit River, New Market, and Spring Lake)	$91,700
West Twp's (Blakeley, Belle Plaine, Helena, Jackson, Louisville, Sand Creek, and St. Lawrence)	$70,100
Scott County	**$77,585**
Source: 2006 Comprehensive Housing Needs Assessment for Scott County, Minnesota	

In 2002, one percent of employees working in Scott County received the minimum wage of $5.15 or less an hour. Roughly one-third of total workers made between $11.05 and $18.44 an hour; 57 percent of workers made between $11.05 and $29.49 an hour.

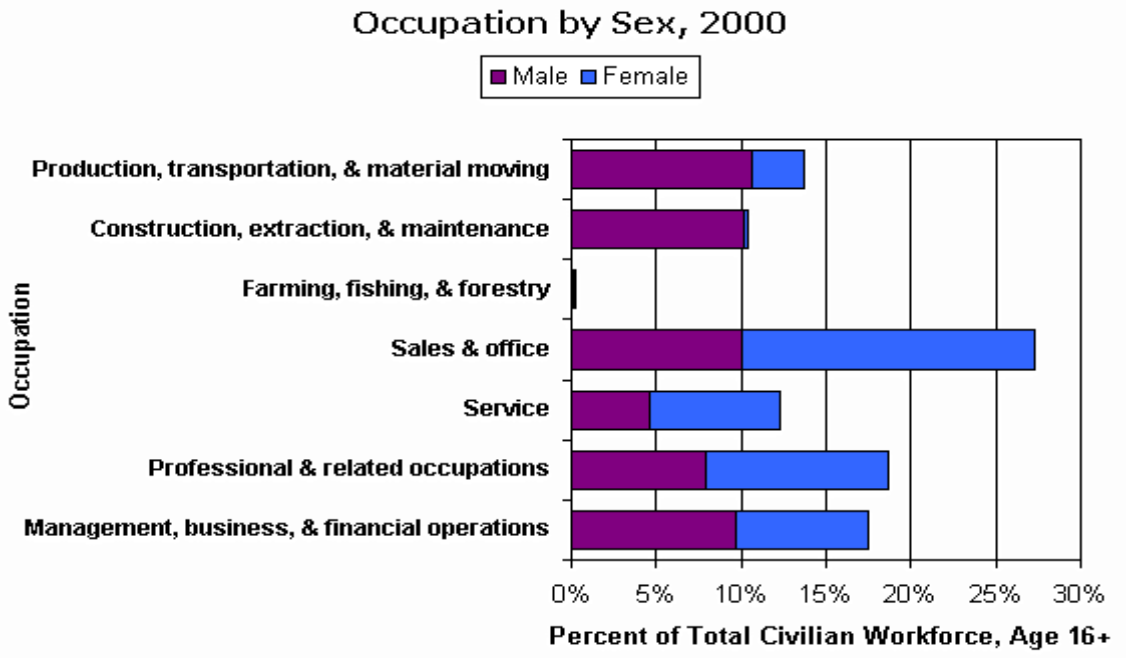
Table 2.8 Wage Information, 2002	
Wage Group	**Jobs**
Jobs paying $5.15 or less/hr	381
Paying $5.16 to $11.04/hr	9,875
Paying $11.05 to $18.44/hr	12,508
Paying $18.45 to $29.49/hr	7,566
Paying $29.50 to $36.87/hr	1,816
Paying over $36.87/hr	3,039
Source: Minnesota Department of Employment and Economic Development	

The county's primary economic activity is in manufacturing and service related employment. According to 2000 Census data, the largest proportion of the 49,491 persons were employed in the manufacturing sector (18.3%), followed by the education, health, and social services sector (14.8%). Jobs related to the tourism industry (arts, entertainment, recreation, accommodation and food services, and retail trade) made up a combined total of 19.2% of the labor force.

Table 2.9 Labor Force Characteristics by Industry, 2000		
Industry	**Employed**	**Percentage**
Manufacturing	9,074	18.3%
Educational, health and social services	7,319	14.8%
Retail trade	5,829	11.8%
Professional, scientific, management, administrative services	5,035	10.2%
Finance, insurance, real estate, and rental and leasing	4,174	8.4%
Construction	3,923	7.9%

Table 2.9 Labor Force Characteristics by Industry, 2000		
Industry	**Employed**	**Percentage**
Arts, entertainment, recreation, accommodation and food Services	3,656	7.4%
Transportation and warehousing, and utilities	3,107	6.3%
Wholesale trade	2,205	4.5%
Other services (except public administration)	2,146	4.3%
Information	1,324	2.7%
Public administration	1,238	2.5%
Agriculture, forestry, fishing and hunting, and mining	461	0.9%
Total	49,491	100%
Source: US Census, 2000		

Figure 2.7 Occupation by Sex



Source: U.S. Census

Most of the intensive, large-scale commercial and industrial development in Scott County has occurred in the cities. The County and townships have guided low-intensive commercial and industrial uses into certain portions of the unincorporated areas–predominately along major transportation corridors and at major highway intersections. The County has also promoted farm-supported businesses in the agricultural areas and limited home-based business opportunities in the rural residential areas.

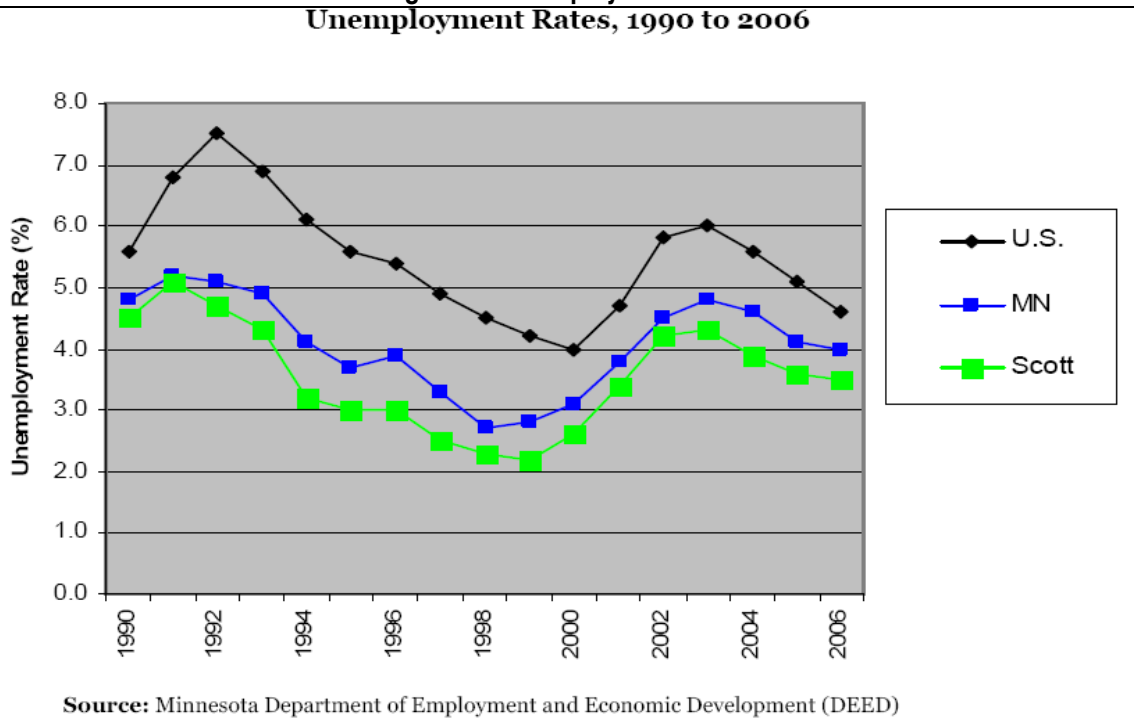
Table 2.10 Major Employers in Each of Scott County's Cities, 2006		
Employer	**Product/Services**	**Employees**
Shakopee		
ADC Telecommunication, Inc	Electrical & Electric Goods Merchant Wholesalers	1,400
Valleyfair Amusement Park	Amusement Park & Arcades	1,200
Seagate Technology	Computer & Peripheral Equipment Manufacturing	1,100
Scott County	Executive, Legislative, & Other Gen. Govt.	495
Super Walmart	Miscellaneous Goods Merchant Wholesalers	300
K Mart Distribution Center	Department Stores	425
St. Francis Regional Medical Ctr.	General Medical & Surgical Hospitals	360
Shakopee School District #720	Elementary & Secondary Schools	390
Shakopee Valley Printing	Newspaper, Periodical, Book, Directory Publisher	415
Certain Teed Corp.	Petroleum & Coal Product Manufacturing	300
Anchor Glass Container Corp.	Glass & Glass Product Manufacturing	285
Toro Co.	Machinery, Equipment Merchant Wholesalers	275
Northstar Auto Auction	Used Merchandise Stores	220
Conklin Co.	Miscellaneous Durable Goods Merchant	105
Fremont Industries Inc.	Soap, Cleaning Compound & Toilet Prep. Mfg.	105
Chemrex	Resin/Synth. Rubber Art/Synth. Fibers/Fil. Mfg.	100
Savage		
Super Target	Miscellaneous Goods Merchant Wholesalers	330
Continental Machines Inc.	Other General Purpose Machinery Manufacturing	250
Fabcon Inc.	Cement & Concrete Product Manufacturing	250
Cub Foods	Grocer & Related Product Wholesalers	150
Silgan Container Corp.	Boiler, Tank & Shipping Container Manufacturer	150
Waste Management Inc.	Waste Collection	150
Cargill Inc.	Miscellaneous Goods Merchant Wholesalers	140
Rainbow Foods	Grocery & Related Product Wholesalers	130
BF Nelson Corp.	Converted Paper Product Manufacturing	100
Continental Hydraulics Div.	Other General Purpose Machinery Manufacturing	100
Master Electric Co. Inc.	Building Equipment Contractors	100
Prior Lake		
Little Six Inc.	Casino	3,600*
Prior Lake Ind School Dist #719	Elementary & Secondary Schools	550
County Market	Grocery Stores	155
City of Prior Lake	Executive/Legislative/Other Gen. Govt. Support	65
Prior Lake State Bank	Depository Credit Intermediation	40
New Prague		
Chart Industries	Machine Shops	300
New Prague Public Schools	Elementary & Secondary Schools	375
Queen of Peace Hospital	General Medical & Surgical Hospitals	285
Mala Strana Health Care Center	Nursing Care Facilities	135
Scott Equipment	Machinery/Equipment Merchant Wholesalers	70
Con Agra	Grain & Oilseed Milling	70
Schumacher's New Prague	Hotels (exc. Casino Hotels) & Motels	60
Belle Plaine		
Belle Plaine Lutheran Home	Nursing Care Facilities	275

Table 2.10 Major Employers in Each of Scott County's Cities, 2006		
Employer	**Product/Services**	**Employees**
Belle Plaine Public Schools	Elementary & Secondary Schools	90
Emma Krumbee's Restaurant	Full-Service Restaurants	85
State Bank of Belle Plaine	Depository Credit Intermediation	20
Genesis Inc	Farm/Convenience Store	20
Ag Power Enterprises	Machinery, Equipment Merchant Wholesalers	20
Jordan		
SM Hentges & Sons Inc.	Highway, Street & Bridge Construction	185
Jordan Public Schools	Elementary & Secondary Schools	175
Valley Plumbing Inc.	Building Equipment Contractors	125
MN Valley Electric Co-op	Electric Power Generation, Transmission & Dist.	105
Wolf Motors Ford	Automobile Dealers	80
Engel Diversified Industries	Machine Shop/Turned Prod/Screw/Nut/Bolt Mfg	50
U.S. Transformer	Electrical Equipment Manufacturing	25
Elko New Market		
Eagle View Elementary School	Elementary School	65
Friedge's Drywall	Drywall Construction	50
Twin Cities Greetings	Greeting Cards	15
Boulder Point Golf Course	Golf Course	10
New Market Bank	Depository	10

The largest Sales and receipts values were seen in the wholesale trade and manufacturing industries. Retail trade had the largest increase between 1997 and 2002. The health care and social assistance industry also experienced an increase in sales during this time period.

Table 2.11 Economic Sales, Receipts, or Shipments (in $1,000s)			
Description	1997	**2002**	**Difference**
Manufacturing	989,491	968,576	-20,915
Wholesale trade	1,917,836	2,043,105	125,269
Retail trade	419,327	736,437	317,110
Real estate and rental and leasing	23,233	46,246	23,013
Professional, scientific, and technical services	40,218	83,617	43,399
Administrative/support/waste management/remediation	56,145	109,081	52,936
Educational services	870	3,330	2,460
Health care and social assistance	53,858	203,186	149,328
Arts, entertainment and recreation	300,082	146,548	-153,534
Accommodation and food services	56,976	237,723	180,747
Other services (except public administration)	89,938	89,938	38,852
Source: US Census, 1997 and 2002 Economic Census			

Figure 2.8 Unemployment Rates



Source: U.S. Census

2.1.5 Infrastructure

Sheriff's Office: The Scott County Sheriff, an elected position, with a four-year term, is responsible for the operation of the Sheriff's Office. The Sheriff's Office is comprised of four separate divisions: Communications, Operations, Jail Services, and Administration/Support. The Sheriff's Office is responsible for managing the 911 Emergency Telephone System and the Emergency Radio Communications System for all of Scott County (including each city). The Sheriff's Office hosts and maintains a countywide records management system that serves the Sheriff's Office, all of the city police departments, and the 911 Center. This system maintains criminal and Jail records. Information is forwarded to the BCA and FBI criminal history files.

The Sheriff's Office also maintains the County's Emergency Management Division, which carries out all weather related warnings and is responsible for the mitigation, planning, response, and recovery for emergencies and catastrophes that may occur in Scott County. By statute, the Sheriff is responsible for requesting emergency assistance from the State.

The Sheriff has the authority to appoint Deputies and establish 24-hour patrol. Deputies respond to accidents, answer calls, provide preventative patrol in the unincorporated areas, and assist municipalities upon request. Another branch of the Sheriff's Office is the Investigative and Crime Scene Unit, which conducts investigations in the township areas and assists city police departments, when requested. The Operations Division also contains the Civil Process Unit, which is responsible for service of civil papers, both from the court and from attorneys, and for the service of restraining orders for all of Scott County. The Warrant and Transport Unit is responsible for the execution of warrants, location of fugitives and the transportation of inmates back to Scott County that was arrested outside the County or State. The Court Department assigns officers to the court system to maintain order and provide bailiff services. The Sheriff's

Office maintains a countywide Water Patrol and Recreation Safety Unit as it has the statutory responsibility to patrol the waters and investigate accidents on water and ice.

In addition, the Sheriff's Department operates and monitors County jail services, which are located in the Law Enforcement Center. The Law Enforcement Center provides adult detention facilities for 264 prisoners, but can be expanded to hold up to 440 prisoners. The Juvenile Facility (which is operated by the Community Corrections Division) accommodates up to 16 offenders in a "group home" environment. The Sheriff's Department maintains custody of all prisoners that are held for pending court appearances or have been sentenced to the jail and provides service for all legal processes received by the court and private attorneys. With the recent completion of the Law Enforcement Center, the Sheriff's Department has the ability to accommodate near- and long-term staffing and prisoner growth needs. The Former Jail Annex is under construction for use as a SCALE Regional Public Safety Training Facility. This would provide an opportunity to enhance and expand the training capacity for deputies and city police departments from Scott County and other units throughout the state.

Police Departments: Each of the seven cities maintains its own police department. These departments are responsible for providing police services within the city under the direction of a police chief. The police departments take on the additional roles, such as providing school resource officers and DARE/drug education for local schools within their service areas. All of the cities' police departments and the Sheriff's Office assist in responding to medical emergencies. Most squad cars are supplied with oxygen and defibrillation units. The cities and County have mutual aid agreements for police services and assist each other at no charge.

Fire Departments: Scott County is served by eight fire departments. Each of the seven cities has a volunteer fire department. The city of Savage has a full-time fire chief and a full-time inspector and the city of Shakopee also has a full-time fire chief and fire inspector. The Shakopee Mdewakanton Sioux Community has a fire department that is a mixture of full-time and part-time staff serving the Dakota Tribal Community. The townships contract with these fire departments for fire protection and response. Four fire departments contract with townships outside of Scott County. All fire departments are part of mutual aid agreements to provide assistance to each other at no cost during emergencies.

Emergency Medical Response: Five emergency medical and transport/ambulance responders serve Scott County. Their primary service areas (Pass) are controlled by a state regulatory board. The northern third of Scott County is assigned to Allina Transportation who responds with at least one paramedic (Advance Life Support/ALS) and an emergency medical technician (EMT). The Dakota Tribal Community Fire Department provides ALS for the tribal lands and a portion of Prior Lake. The southern portion of Scott County is covered by ALS through on-going collaboration with EMS providers. The City of Belle Plaine is serviced by Ridgeview Medical Center and New Prague maintains a volunteer ambulance service that is staffed by EMT's and intermediate EMT responders. Southeastern Scott County is covered by ALS units from Northfield Hospital and with service managed by Allina. Out-of-County medical helicopters are used for transportation on a regular basis for trauma cases. There are two helicopter pads (Lakeville and Flying Cloud Airport in Eden Prairie) that serve Scott County. All EMS agencies participate in mutual aid agreements.

800 MHz Radio System: Historically, public safety two-way radio systems have been built and maintained by Scott County, a law enforcement repeated radio system and a fire and emergency medical service non-repeated radio system. Both systems have limited ranges, with radio

channels and frequencies increasingly becoming congested due to the size and capacity. These frequencies also suffer from radio interference. Scott County public safety agencies have relied on limited "statewide" frequencies for inter-agency communication during incidents involving departments not on Scott County radio systems.

In 2002, a metro-wide radio system was established connecting all public safety, public works, and transit departments to allow "interoperability" as well as meet new federal requirements. The "800 MHz Radio System" is named after the frequency range on which it operates. The Minnesota Department of Public Safety (DPS) and Department of Transportation (Mendota) initiated the system build-out and installed two radio sites on existing towers in Scott County. Metro-wide, cities and counties have been moving onto the 800 MHz system based on communication needs and their ability to fund necessary improvements.

Scott County plans to install additional radio sites to increase the local system's capacity and assure adequate coverage. The Scott County 911 dispatch center, located in the new Law Enforcement Center, was designed to utilize the 800 MHz systems. The countywide 800 MHz radio systems are anticipated to be operational in late 2007 or early 2008.

The 800 MHz communication system is based on a network of radio towers, but will also have a 90-mile loop fiber-optic backbone for increased reliability during power outages and major catastrophes. The fiber optic system will connect all seven city halls, libraries, and school districts together, providing an enormous capacity for communication, a highly reliable Internet connection, and an opportunity to reduce or share communication costs for all public services. This system will improve and increase communication capabilities between public safety departments, greatly enhancing the quality of public safety for residents

County Public Works: The County Highway Department is responsible for planning, designing, constructing, and maintaining all County State Aid Highways (CSAH) and County Roads. The Department also handles road repairs and snow removal along these roadways, monitors the noxious weed inspection program, provides interim maintenance for County-owned parkland, plans and maintains Scott County Transit and park-and-ride facilities, and is home to the Surveying department

Water Supply: In Scott County, water service is provided to city residents by their municipalities. In the eleven townships, water is provided by private wells and community wells in limited cases. The Minnesota Department of Health (MDH) regulates the construction and functions of these private wells. The Scott County Environmental Health Department provides water analysis and inspects contaminated wells.

Solid Waste: In 2005, the County adopted a Solid Waste Management Master Plan as an update to its 1992 management plan. The 2005 management plan recognizes that there has been an emerging level of cooperation and interaction between metropolitan counties in the area of solid waste program implementation. In 1998, Scott County declined to adopt proposed revisions to the six-county Joint Powers Agreement of the Solid Waste Management Coordinating Board (SWMCB), believing that the proposed changes were not consistent with the direction that Scott County has chosen relative to involvement of the private sector in solid waste service provision to Scott County residents. However, this Plan recognizes the benefits of continuing to coordinate programs between counties and identifies strategies to effectively interact with neighboring counties toward achieving complementary program implementation and public education. The overall approach of the 2005 plan is to continue on the course that has been successful in Scott

County in the following eight topical areas: source and toxicity reduction, recycling, waste processing, municipal solid waste (MSW) land-filling, non-MSW management, waste collection, solid waste governance, and cost and finance.

Sewage Treatment Systems: In Scott County, wastewater is disposed of by two broad methods: municipal- or regional-owned and maintained sewer systems or private on-site sewage treatment systems. Most of the county's population is located within an incorporated city and is served by a municipal or regional sewer system. Most homes and businesses in the county's unincorporated townships are served by a private on-site system. An emerging combination of these two types of systems is becoming popular in the un-sewered portions of the county called community sewage treatment systems (CSTS). CSTS combine public ownership but use technology closer to that of private on-site sewage treatment systems. The more traditional, big-pipe public sewer service does not exist in the townships (with the exception of some retrofitted lakeshore properties around Cedar Lake and Spring Lake) primarily due to the low density of homes. In the townships, there is generally sufficient lot area (one acre of non-hydric soil or larger) for an individual sewage treatment system and an average sized house.

Gas And Electric: Gas service is provided by Peoples, Northern Natural Gas and Reliant Energy. Electricity is provided by private utility companies. Minnesota Valley Electric Cooperative, Shakopee Public Utilities, Dakota Electric and Xcel Energy are among the companies that serve Scott County. These companies generate or purchase electricity primarily from coal-based or nuclear plants. Other sources of electricity generation come from wind, natural gas, refuse derived fuel, biomass, and diesel.

Hospitals: Scott County is home to two major hospitals. St. Francis Regional Medical Center in Shakopee and Queen of Peace Hospital in New Prague provide healthcare and emergency services for county residents and the surrounding region.

St. Francis Regional Medical Center has continued to expand since the doors were opened in its current location (1455 St. Francis Ave, Shakopee) in 1996. With over 400 physicians and 70 private hospital rooms, the hospital served over 69,000 outpatients in 2003. An ongoing $40 million hospital expansion will result in the campus doubling in size by the end of construction in 2010 and reach 200 private hospital rooms by 2025. Currently, St. Francis Regional Medical Center specializes in the following services: Birth Center (Family Birth Place); Breast Center; Cancer Center; Diagnostic Service; Emergency Department; Health Services – Chaska; Hospice and Palliative Care; Diabetes and Nutrition Counseling; Pediatric Care; Social Services; Adult & Pediatric Rehab; Sports Medicine; Urgent Care; and Sleep Diagnostics.

Queen of Peace Hospital (301 Second Street NE, New Prague) is a 25-bed facility offering a strong family practice physician network and a comprehensive array of specialty services for residents of southern Scott County. First opened in 1952 as Community Memorial Hospital, Queen of Peace Hospital has maintained the caring values of a small-town hospital. They also provide a clinic in Belle Plaines. Queen of Peace Hospital is currently considering sites for a new building to better serve the New Prague area. Township Facilities and Services

Government: The eleven township governments in Scott County provide and maintain their own facilities, utilities and development-related services. All townships (except Louisville and Sand Creek) own town hall buildings–ranging from an old school house in Blakely to newly constructed buildings in New Market and Spring Lake–where town clerks, consultants, and elected boards conduct official business. In Scott County, the eleven townships serve as the

local planning and maintenance authority for roads and storm water management systems. All eleven townships (except Sand Creek) administer wetland conservation rules. A few townships own and operate local parks (Spring Lake, Credit River, and Jackson). Some of the townships have created Subordinate Service Districts to operate community sewage treatment systems (CSTS) as part of larger open space cluster developments (Helena, Cedar Lake, and Credit River). The following lists township responsibilities as related to facilities, utilities and development-related services:

- Create standards/plan for local roads;
- Approve road designs in subdivisions;
- Maintain roads and manage access;
- Own, manage, and maintain drainage and utility easements;
- Review wetland delineation reports;
- Approve wetland exemptions/replacement plans;
- Prepare and adopt local park plans;
- Collect local park dedication fees; and
- Acquire and manage parks and open space.

Public/Private School Facilities: Nine public school districts retain jurisdiction over portions of Scott County. As discussed in Chapter III, the majority of these districts have experienced considerable growth over the past ten years, contrary to trends in out-state Minnesota. According to the U.S. Census, between 2000 and 2004, K-12 enrollment fell in 71 of 87 counties and in 285 of 422 school districts for a variety of reasons (such as birth trends, dropout rates and school choice). But the greatest gains were all in school districts at the edge of the Twin Cities metropolitan area, including Prior Lake-Savage, Lakeville, Shakopee, and Chaska. As a result, the districts serving Scott County continue to construct and remodel their schools and related facilities. New high schools have recently been constructed in Jordan, Shakopee, Savage, and New Prague, and a number of new elementary schools throughout the districts have also been constructed to serve the growing youth population. Other schools not included in the inventory include the Carver-Scott Education Cooperative in Lydia and the Minnesota Valley Education Cooperative in Jordan. In addition to public schools, a number of private schools are offered for residents

Home schooling is also an option that some families choose. According to the Minnesota Department of Education, there were ten home-schooled children within Scott County public school districts during the 2006-2007 school year.

Table 2.12 Public Schools Districts

Independent School	Enrollment	Number of Existing/ Proposed Schools
Belle Plaine, 716	1,510	1-High School, 1-Junior High, 1 - Elementary
Burnsville, 191	10,399	1 - High School, 3 - Junior High (1 in Savage) 10 - Elementary (3 in Savage)
Jordan, 717	1,546	1-High School, 1-Middle School, 1 - Elementary
Lakeville, 194	11,036	2 - High Schools, 3-Middle Schools 9-Elementary Schools, 1-Area Learning Center

New Prague, 721	3,401	1 - High School, 1 - Middle School 1 – Intermediate, 3 - Elementary
Prior Lake-Savage, 719	6,507	1-High School, 2-Middle School, 6-Elementary
Shakopee, 720	5,824	1-High School, 1-Junior High, 4-Elementary
Source: Minnesota Department of Education, 2007		

Table 2.13 Private Schools

Location/School	Enrollment 2006-2007	Grade
Belle Plaine		
Holy Family Academy	35	K-12
Our Lady of the Prairie	50	K-6
Trinity Lutheran	54	Pre-8
Jordan		
St. John the Baptist	129	Pre-6
Elko New Market		
Lonsdale/New Market/Veseli (LNMV) Area Catholic	152	Pre-8
New Prague		
St. Wenceslaus	348	K-8
Prior Lake		
Holy Cross Lutheran	N/A	Preschool
Prior Lake Christian	88	K-12
St. Michael	508	K-8
St. Paul's Lutheran	52	K-6
Savage		
St. John the Baptist	625	Pre-8
Shakopee		
Living Hope Lutheran School	105	K-4
Shakopee Area Catholic	752	Pre-8
Source: Minnesota Department of Education, 2007		

Table 2.14 Current and Future General Service Needs

Service	Planning Standard	Current Service Level	Current Service Need	2030 Service Need
Library				
Library Facilities	0.6 sq. ft. of public library space/resident	76,487 sq. ft. of library space	71,895 sq. ft. of library space	133,002 sq. ft. of library space
Book Collection	220,000 books	242,278 books	267,930 books	308,668 books
Personnel – Staff Full-time equivalent (FTE)	60 FTE + 0.25 FTE /resident	30.6 FTE staff	89.9 FTE staff	115.4 FTE staff
Law Enforcement				
Personnel – City Police & County Sheriff	1.6 persons/1000 pop	160 officers	191 officers	354 officers
Fire Protection				
Personnel – Volunteer and Paid Fire Fighters	1.65 persons/1000 pop	280 fire fighters	197 fire fighters	365 fire fighters

Emergency Medical				
Personnel – Volunteer and Paid EMS Staff	4.1 persons/30000 pop	9 EMS staff	16 EMS staff	30 EMS staff
School Facilities				
Elementary	1 school/700 students	18 schools	14 schools	20 schools
Junior High	1 school/1,100 students	8 schools	9 schools	13 schools
High School	1 school/2,000 students	5 schools	4 schools	6 schools

Service	Current Level of Service	Service/Capita (2005)	2030 Service Need
Health Services			
Physicians	420	1 physician /285 residents	775 physicians
Hospital Beds	95	1 bed/1,260 residents	175 beds
Clinics	8	1 clinic/14,978 residents	15 clinics

Source: Scott County 2030 Comprehensive Plan

Table 2.15 Scott County Infrastructure

Scott County Location				Area SQ. Miles	Elevation Feet
51 Miles Southwest of Minneapolis MN				375	771-991
June Average Temperature		January Average Temperature		Average Precipitation	
High	Low	High	Low	Rain Inches	Snowfall Inches
56	80	21	11	27.8	49.6
Prevailing Winds			Average annual freeze-free days		
NW			120-220		

Transportation

General Aviation		Commercial Aviation		Roads/Highways	
Location	None	Location	Bloomington	Interstate	I-35
Runway Length		Distance	45 Miles	U.S.	169
Runway surface				State	13, 19, 21, 25, 41, 282
Communications					
Lighting					
Fuel					
Repairs					
Comments		Flights Airlines	1260 Flights, Air Canada, Air Tran, America West, American, Comair, KLM Continental, Delta, Frontier, Sun Country, Mesaba, Icelandair, Midwest, Pinnacle, SkyWest, United, US Airways	Local	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 20, 21, 22, 23, 24, 26, 28, 31, 32, 35, 36, 49, 51, 52, 60, 61, 68, 78, 83, 116, 132

Bus Service	Railroad	Common Carriers
Greyhound	Burlington Northern Santa Fe	ABF Freight Systems
MTC (Metro Transit Company)	Union Pacific	Manning Transfer
Scott County Transit	Soo Line - Canadian Pacific	Old Dominion
Mdewakanton Sioux Community		Dawes Transport
Public School Districts		Murphy Warehouse

		USF Holland	
		Con-Way Central Express	
		Copeland Trucking	
		Midwest Coast Transport	
		Distribution Alternative	
Communications And Utilities			
Telephone	Newspaper	Radio	TV/Cable/Satellite
Qwest	Belle Plaine Herald	WCCO 830 AM	KTCA channel 2
Comcast	Jordan Independent	KSTP 1500AM 94.5 FM	WCOO channel 4
Verizon	Prior Lake American	KTIS 900 AM 98.5 FM	KSTP channel 5
Nextel	Prior Lake This week	KFAN 1130 AM	KMSP channel 9
Sprint	Savage Pacer	KNOW 91.1 FM	KARE channel 11
T-Mobile	Savage This week	WLTE 102.9 FM	KTCI channel 17
Citizens	Shakopee Valley News	KDWB 101.3 FM	KMWB channel 23
Cellular One		KQRS 92.5 FM	WFTC channel 29
AT&T		KQQL 107.9 FM	KSTC channel 45
		KSJN 99.5 FM	Meredith Cable
		WFMP 107.1 FM	Comcast Cable
		KTCZ 97.1 FM	Dish Network
		KJZI 100.3 FM	Quad-City Cable
		WXPT 104.1 FM	US Cable
Electricity	Gas	Water	Sewage/Landfill
Minnesota Valley Electric	Peoples	7 Municipal Systems	Demcon
Shakopee Public Utilities	CenterPoint Energy	Township Wells	Louisville
Dakota Electric	Greater Minnesota Gas	Individual Wells	Municipal Sewage Systems
Xcel Energy	Minnesota Energy		Buckingham Disposal, Inc
New Prague Public Utilities			Waste Management
			Lakeville Sanitary
			Specialized Environmental
			Evergreen Sanitation
			Tidy Disposal
			NRG Processing Solutions

SECTION 3
THE MITIGATION PLANNING PROCESS

3.1 INTRODUCTION

- This section of the Plan describes the mitigation planning process undertaken by Scott County in preparation of the Hazard Mitigation Plan.

3.2 PLANNING PROCESS OVERVIEW

Local hazard mitigation planning is the process of organizing community resources, identifying and assessing hazard risks, and determining how to best minimize or manage those risks. Mitigation planning offers many benefits, including:

- Saving lives and property;
- Saving money;
- Facilitate recovery following disasters;
- Reducing future vulnerability through wise development and post-disaster recovery and reconstruction;
- Expediting the receipt of pre- and post-disaster grant funding; and
- Demonstrating a commitment to improve community health and safety.

Requirement §201.6(c)(5): The local hazard mitigation plan shall include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., County Council, County Commissioner, Tribal Council).
A. Has the local governing body adopted new or plan?
B. Is supporting documentation, such as a resolution, included?
Requirement §201.6(c)(5): For multi-jurisdictional plans, each jurisdiction requesting approval of the plan must document that it has been formally adopted.
A. Does the new or updated plan indicate the specific jurisdictions represented in the plan?
B. For each jurisdiction, has the local governing body adopted the new or plan?
C. Is supporting documentation, such as a resolution, included for each participating jurisdiction?

CRS Step 9: Adopt the Plan: Documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan. The adoption must be either a resolution or ordinance. When a multi-jurisdictional plan is prepared, it must be adopted by the governing body of each community seeking CRS credit.

Mitigation planning has the potential to produce long-term and recurring benefits by breaking the repetitive cycle of disaster loss. A core assumption of hazard mitigation is that pre-disaster investments will significantly reduce the demand for post-disaster assistance. Mitigation practices will enable residents, businesses, and industries to recover in the wake of a disaster to ensure the community economy is re-established quicker and with less interruption. The benefits of mitigation planning go beyond reducing hazard vulnerability. Measures such as the acquisition or regulation of land in known hazard areas can help achieve other community goals such as preserving open space and enhancing recreational opportunities.

3.3 PLAN ADOPTION BY LOCAL GOVERNING BODIES

Adoption by the local governing bodies demonstrates the commitment of Scott County and each jurisdiction to fulfill the mitigation goals and objectives outlined in the Plan. In order for the

multi-jurisdictional plan to be approved, each jurisdiction included in the Plan must have its governing body adopt the Plan. Each participating jurisdiction will proceed with formal adoption proceedings after HSEM and FEMA provides conditional approval of this Plan. Adoption of the plan:

- Lends authority to the plan to serve as a guiding document for all local and state government officials
- Gives legal status to the plan in the event it is challenged in court
- Certifies that the plan has been properly approved by the governing authority and considered by the jurisdictions' citizens
- Helps to ensure the continuity of mitigation programs and policies over time as elected officials, staff, and other decision makers can refer to the Plan when making decisions about the community's future

This Hazard Mitigation Plan has been adopted by Scott County and its municipal jurisdictions in accordance with the authority and powers granted to county, cities and towns as defined by the State of Minnesota. The Scott County School District also adopted the plan. The original plan adoption resolutions are included in the Appendices as scanned documents.

Table3.1 Scott County Adoption Resolutions

Jurisdiction	Resolution Number	Adoption Date
Scott County		
Belle Plaine		
Elko New Market		
Jordan		
Mdewakanton Dakota Tribe		
New Prague		
Prior lake		
Savage		
Shakopee		

Following adoption, each participating jurisdiction will submit a copy of the plan adoption resolution to Scott County EMA. These will then be submitted to HSEM and FEMA. Each jurisdiction understands that FEMA will transmit acknowledgement of verification of formal plan adoption and the official approval of the plan to the mitigation plan coordinator.

3.4 MULTI-JURISDICTIONAL PLANNING PARTICIPATION

The Scott County Hazard Mitigation Plan is multi-jurisdictional and includes the jurisdictions of Scott County. To meet multi-jurisdictional requirements, each of the local jurisdictions, agencies and departments was required to perform the following:

- Designate appropriate officials to serve on the Mitigation Planning Committee;
- Participate in mitigation planning meetings;
- Provide best available data for the risk assessment portion of the Plan;
- Complete the Capability Assessment Survey and provide copies of any mitigation or hazard-related documents for review and incorporation into the Plan;
- Support the development of a countywide mitigation strategy, including the design and adoption of general goal statements for all jurisdictions to pursue;
- Develop a Mitigation Action Plan with specific mitigation actions for its jurisdiction;
- Review and provide timely comments on all draft components of the Plan;
- Adopt the Scott County Multi-Jurisdictional, All Hazards Mitigation Plan, which includes its specific Individual Mitigation Action Plan.

Multi-hazard Requirement §201.6(a)(3): Multi-jurisdictional plans (e.g., watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process. Statewide plans will not be accepted as multi-jurisdictional plans.
A. Does the new or updated plan describe how each jurisdiction participated in the plan's development?
B. Does the plan identify all participating jurisdictions, including new, continuing, and the jurisdictions that no longer participate in the plan?

CRS Step 1: Organize to Prepare the Plan: Multi-jurisdictional plans are encouraged in CRS. Credit is based on each jurisdiction's full participation in the planning process.

Through the completion of these tasks, each municipality, agency and department will have fully participated with Scott County in the development of this Plan. Notable plan participants are identified in the table below.

Table 3.2 Mitigation Plan Participating Jurisdictions, Agencies and Departments

Participating Jurisdictions	
Scott County	Louisville Township
Belle Plaine	Mdewakanton Dakota Tribal Area
Belle Plaine Township	New Market Township
Blakeley Township	New Prague
Cedar Lake Township	Prior lake
Credit River Township	St. Lawrence Township
Elko-New Market	Sand Creek Township
Helena Township	Savage
Jackson Township	Shakopee
Jordan	Spring Lake Township
Participating Agencies/Departments	
Minnesota Cooperative Extension Services	Scott County EMA
Department of Public Health	Scott County Sheriff's Office
Scott County 911	Scott County Tax Commissioner's Office
Scott County Development Services	Scott County Volunteer Fire Departments

3.5 MITIGATION PLANNING PROCESS

In preparing this Plan, Scott County utilized a multi-jurisdictional planning process consistent with the one recommended by FEMA (Publication Series 386). A Local Mitigation Plan Crosswalk, included with this plan provides a summary of FEMA's current minimum standards of acceptability for compliance with the Disaster Mitigation Act of 2000 and notes the location where each requirement is met within this Plan. These standards are based upon FEMA's Interim Final Rule as published in the Federal Register on February 26, 2002, in Part 201 of the Code of Federal Regulations (CFR).

Scott County used guidance from the National Flood Insurance Program (NFIP). The NFIP is a Federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages. If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to construction in floodplains, the Federal Government will make flood insurance available.

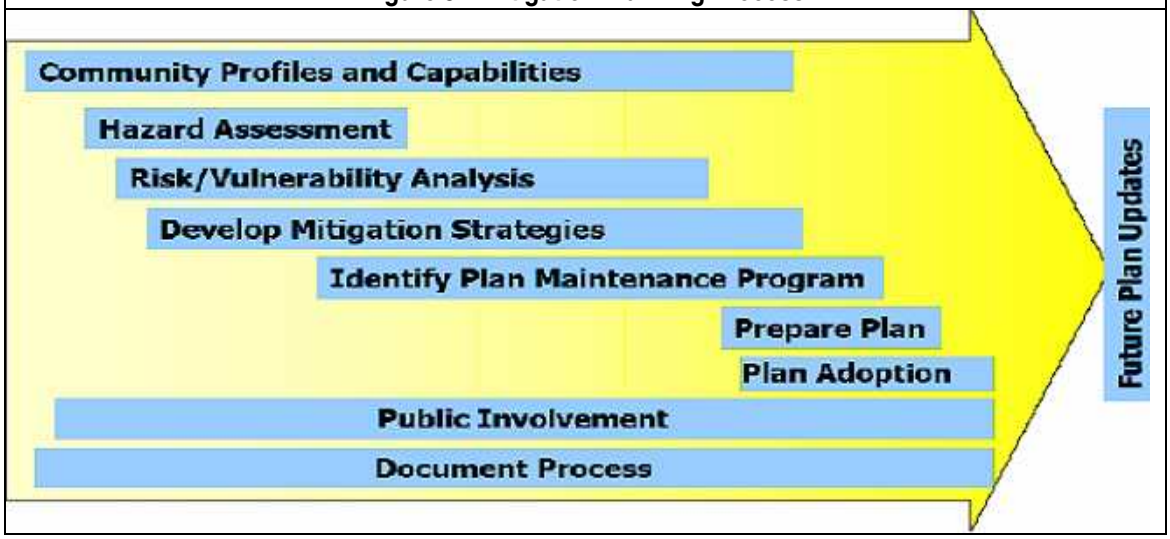
The Scott County mitigation committee also used guidance from the Flood Mitigation Assistance Program (FMA) with the goal of reducing or eliminating claims under the NFIP. Funding for the program is provided through the National Flood Insurance Fund.

Scott County also applied the Community Rating System (CRS) 10-step planning process to Hazard Mitigation Plan development. FEMA encourages jurisdictions to integrate the CRS planning steps into their multi-hazard mitigation plans. This means that an approved multi-hazard mitigation plan that addresses floods will qualify for CRS credit. Scott County performed the additional steps within each phase as outlined in the CRS criteria within each phase (Planning Process, Risk Assessment, Mitigation Strategy, and Plan Maintenance). This allows Scott County and its participating jurisdictions to qualify for more CRS points, thus possibly lowering insurance rates. The planning process included major steps that were completed during plan development. These steps are illustrated in the Figure below.

Multi-hazard Requirement §201.6(b): In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:
(1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
(2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and
(3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.
Multi-hazard Requirement §201.6(c)(1): The plan shall document the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved?
A. Does the plan provide a narrative description of the process followed to prepare the new or plan?

CRS Step 1: Organize to Prepare the Plan, Step 2: Involve the Public and Step 3: Coordinate with other Agencies: Credit is based on how the community organizes to prepare its floodplain management plan. Describe who is involved in the planning process and what their roll is in the development of the plan. The planning process must include an opportunity for the public, neighboring communities and local and regional agencies to comment on the plan during the drafting stage and before plan approval. The term public means residents, businesses, property owners, and tenants in the floodplain and other known hazards areas as well as other stakeholders in the community, such as business leaders, civic groups, academia, non-profit organizations and major employers. The plan must also incorporate and document a review of existing studies, reports, and technical information into the community's needs, goals and plans for the area.

Figure 3.1 Mitigation Planning Process



3.6 THE MITIGATION COMMITTEE

Multi-hazard Requirement §201.6(b): Multi-hazard Requirement §201.6(c)(1):
B. Does the new or updated plan indicate who was involved in the current planning process? (For example, who led the development at the staff level and were there any external contributors such as contractors? Who participated on the plan committee, provided information, reviewed drafts, etc.?)

CRS Step 1: Organize to Prepare the Plan: Describe who is involved in the planning process and what their roll is in the development of the plan.

A community-based planning committee developed this Plan in cooperation with the Minnesota Emergency Management Agency (HSEM) and consulting company Beck Disaster Recovery.

The mitigation Committee assembled to oversee the development of the Plan consisted of representatives from Scott County participating jurisdictions and supporting agencies and departments. The mitigation committee engaged government officials and other stakeholders in local meetings to discuss and complete tasks. In addition to regular meetings, this working group coordinated all aspects of the plan development process. Members routinely communicated and were kept informed through e-mail. Additional participation and input from county residents and other identified stakeholders were solicited through the distribution of public notices and the facilitation of public meetings. The mitigation committee was charged with the following:

- Establish Plan development goals;
- Establish a timeline for completion of the Plan;
- Ensure that the Plan meets the requirements of DMA 2000 and FEMA and HSEM
- Solicit and encourage the participation of regional agencies, a range of stakeholders, and citizens in the Plan development process;
- Assist in gathering information for inclusion in the Plan, including previously developed reports and data;
- Organize and oversee the public involvement process;
- Develop, revise, adopt, and maintain the Plan.

The designated primary and alternate points of contact for Scott County were the Scott County Emergency Management Director and Director of Development Services. These points of contact provided the interface for Beck Disaster Recovery and Mitigation Committee.

Table 3.3 Scott County Point of Contacts		
	Primary	**Alternate**
Name	Chris Weldon	
Title	Emergency Management Director	
Department	Sheriff's Office	
Phone	952.496.8381	
Fax	952.445.4622	
Email	cweldon@co.scott.mn.us	
Street Address	301 Fuller St S	
County, State, Zip	Shakopee, MN 55379	

Table 3.4 Consultant Point of Contacts		
	Primary	Alternate
Name	Les Junge	Tami Mann
Title	Consultant	Regional Managing Director
Department	Emergency Management	Emergency Management
Phone	256.892.0608	260.726.7419
Mobile	256.453.5112	260.729.7589
Fax	256.892.4520	260.726.7419
Email	ljunge@em-associates.org	tmann@beckdr.com
Street Address	174 Mohawk Court	800 North Magnolia Ave. Suite 400
County, State, Zip	Ohatchee, MN. 36271	Orlando, FL 32803

Table 3.5 Scott County Mitigation Committee				
Member Name	**Agency/Department**	**Contact Number**	**E-mail**	**Role/Focus Planning Hazards Risk Mitigation**
Tammy Mann	Beck Disaster Recovery	260.726.7419	tmann@beckdr.com	Beck DR Project Mgr
Les Junge	Beck Disaster Recovery	256.453.5112	ljunge@em-associates.org	Plan Developer
Chris Weldon	Scott County EMA	952.496.8381	cweldon@co.scott.mn.us	Scott County Project Mgr
Gary Shelton	Scott County	952.496.8100	gshelton@co.scott.mn.us	Hazard Mitigation
David Lanning	Belle Plaine	952.873.4307	dlanning@ci.belleplaine.mn.us	Hazard Mitigation
Jean McDermand	Belle Plaine Township	952.873.5661	mcdermands@frontiernet.net	Hazard Mitigation

Table 3.5 Scott County Mitigation Committee				
Member Name	**Agency/Department**	**Contact Number**	**E-mail**	**Role/Focus Planning Hazards Risk Mitigation**
Maureen Busse	Blakeley Township	952.873.6647	maureenbusse@hotmail.com	Hazard Mitigation
Arnita Novotny	Cedar Lake Township	952.758.4943	fanovotny@bevcomm.net	Hazard Mitigation
Jerald Maas	Credit River Township	952.440.3158	clerk@creditriver-mn.gov	Hazard Mitigation
Richard Jensen	Elko-New Market	952.461.2777	rjensen@ci.enm.mn.us	Hazard Mitigation
DeAnn Croatt	Helena Township	952.758.4505	croatt@bevcomm.net	Hazard Mitigation
Roselyn Menke	Jackson Township	952.445.6495	mrmenke1@comcast.net	Hazard Mitigation
Bob Malz	Jordan	952.492.2009	bmalz@ci.jordan.mn.us	Hazard Mitigation
LuAnne Lemke	Louisville Township	952.445.8715	town_clerk@hotmail.com	Hazard Mitigation
Jim Muelken	Mdewakanton Dakota Tribal Area	952.233.1077	mdfire@skypoint.com	Hazard Mitigation
Albert Zweber	New Market Township	952.461.3121	No email – Mailing Address = 23765 Texas Ave, Lakeville Mn 55044	Hazard Mitigation
Mark Vosejpka	New Prague	952.758.2791	mvosejpka@ci.new-prague.mn.us	Hazard Mitigation
Randy Hofstad	Prior Lake	952.440.3555	rhofstad@cityofpriorlake.com	Hazard Mitigation
Ramona Bischof	St. Lawrence Township	952.492.3284	m.bischof@kleinbank.com	Hazard Mitigation
Rita Tauer	Sand Creek Township	952.492.3122	dtauer1@comcast.net	Hazard Mitigation
Joel McColl	Savage	952.882.2689	jmccoll@ci.savaga.mn.us	Hazard Mitigation
Jeff Tate	Shakopee	952.233.9421	jtate@ci.shakopee.mn.us	Hazard Mitigation
Kathy Nielsen	Spring Lake Township	952.492.7030	kathynielsen@springlaketownship.com	Hazard Mitigation
Laura Kieser	Minnesota Extension Services	952.492.5386	lkieser@co.scott.mn.us	Hazard Mitigation
Jennifer Deschaine	Department of Public Health	952.496.8555	jdeschaine@co.scott.mn.us	Hazard Mitigation
Jeff Swedin	Scott County 911	952.496.8413	jswedin@co.scott.mn.us	Hazard Mitigation
Brad Davis	Scott County Development Services	952.496.8654	bdavis@co.scott.mn.us	Mapping Data Source

Table 3.5 Scott County Mitigation Committee				
Member Name	**Agency/Department**	**Contact Number**	**E-mail**	**Role/Focus Planning Hazards Risk Mitigation**
Dean Opatz	Scott County Sheriff's Office	952.496.8719	dopatz@co.scott.mn.us	Hazard Mitigation
Cynthia Geis	Scott County Auditor	952.496.8167	cgeis@co.scott.mn.us	Data Source
Rick Coleman	Scott County Volunteer Fire Departments	612.490.9501	rcoleman@ci.shakopee.mn.us	Hazard Mitigation
Tom Phillips	Sibley County EMA	507.237.5124	tomp@co.sibley.mn.us	Observer
Ken Carlson	Carver County EMA	952.361.1527	kcarlson@co.carver.mn.us	Observer
Judy Rue	Hennepin County EMA	612.596.0253	Judith.A.Rue@co.hennepin.mn.us	Observer
David Gisch	Dakota County EMA	651.438.4703	david.gisch@co.dakota.mn.us	Observer
Jennifer Hauer-Schmitz	Rice County EMA	507.332.6119	jhauer@co.rice.mn.us	Observer
Ann Traxler	LeSueur County EMA	507.357.2251	atraxler@co.le-sueur.mn.us	Observer

3.7 MITIGATION PLANNING COMMUNITY MEETINGS

The preparation of the Plan required a series of meetings for facilitating discussion and data collection efforts with the mitigation committee and local community officials. More importantly, the meetings and workshops prompted continuous input and feedback throughout the drafting stages of the Plan. Additional meetings were held by the participating jurisdictions to accomplish planning tasks specific to their community, such as specific mitigation actions for inclusion in their Individual Mitigation Action Plan. The table below summarizes the major meetings of the committee. Public notices and and/or minutes of mandatory meetings are scanned into this plan and can be found in the Annex.

Table 3.6 Mitigation Plan Committee And Mandatory Public Meetings		
Meeting	**Date**	**Attendees**
Initial Strategy Meeting	**May 15, 2007**	**25**
The Project Strategy Meeting with the consulting firm, Beck Disaster Recovery, was held to discuss potential outreach strategies for engaging outside agencies, and ideas for generating public interest and involvement throughout the mitigation planning process. Notice inviting public comment on a countywide mitigation plan would be publicized in local newspapers, and posted in public municipal buildings. Critical "next steps" were discussed, including the need for ongoing coordination throughout the entire planning process. Specific data collection tools were provided, including the Capability Assessment Survey and hazard and mitigation tools. Specific issues including the need to gather, analyze and incorporate existing information that may be helpful to the planning effort such as mitigation or hazard-related plans, policies, programs, studies, reports and technical documentation were discussed. Agendas for future meetings were outlined and the adoption process and meeting requirements were also discussed. Tami Mann was identified as the Project Manager and the public meetings facilitator. Les Junge was identified as the plan developer and was responsible for interfacing with Scott County to receive mitigation plan data and construct the plan through the final draft.		
Public Meeting	**Date**	**Attendees**
Mitigation Plan Kickoff Meeting	**May 15, 2007**	**25**

Table 3.6 Mitigation Plan Committee And Mandatory Public Meetings		
Consultant, Tami Mann of Beck DR facilitated the Scott County Emergency Management, Municipal Participant and public Kickoff meeting. The mitigation plan project, benefits and requirements were presented to all participating jurisdictions attendees, invited stakeholders and the public. The intent of the first session meeting was to educate participants on the mitigation planning process and to explain DMA2K multi-jurisdictional planning requirements. The meeting began with a detailed presentation of the mitigation planning process. The presentation introduced the concept of hazard mitigation and detailed the mitigation planning process to be followed. Preliminary data collection efforts for the risk and capability assessment tasks associated with the development of the Plan were discussed. Specific data collection needs were explained, including the need for any available local hazard risk data unique to Scott County.		
Meeting	**Date**	**Attendees**
Mitigation Plan Individual Jurisdictions Data Collection Meetings	**Jun2008-Jul 2009**	**34**
Meetings were held between the Scott County EMA Director and all jurisdictions, townships, fire departments, law enforcement agencies and other participating agencies and departments to collect the surveys and review all submitted information. Additional meetings were held to discuss and collect capability information and mitigation goals, objectives and actions.		
Meeting	**Date**	**Attendees**
Mitigation Planning Committee Mitigation Strategy Public Meeting	**October 20, 2009**	**17**
Mitigation Committee and public meeting to review the Draft Plan and submit it for State and FEMA conditional approval Was held after the plan was posted on the county website and copies were made available at various locations in the county. A public media announcement was published in the local newspaper announcing the committee and public meeting and advising the public of the locations were the plan could be accessed. Any and all comments were documented in the minutes of the meeting		
Meeting	**Date**	**Attendees**
Mitigation Plan Scott County Public Adoption Meetings		
PLACEHOLDER The City Councils adopted the plan per the official adoption process and during a regularly scheduled Council meeting. The appropriate Public Notice will be published prior to the meeting. Prior to the meeting the plan was be made available to the public in the appropriate Public locations for public review and comments. The plan was also be available to the public the day of the meeting at the Council chambers. During the adoption process comments on the plan were solicited from the attendees. Any and all comments were documented in the minutes of the meeting and provided to the Mitigation Planning Committee. The Scott County Board of Commissioners adopted the plan per the county's adoption process and during a regularly scheduled County Board meeting. The appropriate Public Notice was published prior to the meeting. Prior to the meeting the plan was made available to the public in the appropriate Public locations for public review and comments. The plan was also available to the public the day of the meeting at the Scott County Government Center. During the adoption process comments on the plan were solicited from the attendees. Any and all comments were documented in the minutes of the meeting and provided to the Mitigation Planning Committee.		

3.8 INVOLVING THE PUBLIC IN MITIGATION PLANNING

3.8.1 Public Participation During Plan Construction

Multi-hazard Requirement §201.6(b): Multi-hazard Requirement §201.6(c)(1):
C. Does the new or updated plan indicate how the public was involved? (Was the public provided an opportunity to comment on the plan during the drafting stage and prior to the plan approval?)

CRS Step 2: Involve The Public: The planning process must include an opportunity for the public, neighboring communities and local and regional agencies to comment on the plan during the drafting stage and before plan approval.

A fundamental component of Scott County's community-based mitigation planning process involves public participation. Citizen involvement provides the Mitigation Committee with a greater understanding of local concerns and ensures a higher degree of mitigation success by developing community "buy-in" from those directly affected by the planning decisions of public officials. As citizens become more involved in decisions that affect their life and safety, they are more likely to gain a greater appreciation of the hazards present in their community and take personal steps to reduce the potential impact. Public awareness is a key component of an overall mitigation strategy aimed at making a home, neighborhood, school, business, or County safer from the potential effects of natural or man made hazards. Public input was sought using three methods: (1) surveys; (2) open public meetings; and (3) publicizing the availability of the draft hazard mitigation plan at government offices and an Internet site.

A Public Participation Survey was designed to capture information from Scott County citizens. Surveys were provided at public meetings and County and municipal officials distributed additional copies of the survey. A County-level public "Kickoff" meeting was held to present the findings of the risk and capability assessments and to garner public input as to unique hazard concerns and mitigation actions that could be included in the Hazard Mitigation Plan. Attendees were provided informational handouts on mitigation planning. Current mitigation process and progress was discussed and the Public Participation Survey was distributed and explained. It was requested that citizens complete and return the surveys for committee review. A second Public meeting was held to review the draft mitigation plan. The draft plan was earlier provided on the county website and copies were distributed via email to the municipal point of contact. A copy of the plan was also provided at the county courthouse and the public library. The public was advised of the meeting through the local media newspaper and notices at the courthouse and library. All comments were discussed and collected. The comments were reviewed by the steering committee and the plan was updated accordingly.

The public meetings were advertised through the posting of a public meeting notice at county and municipal offices. The public meeting notices were also printed in the local newspapers with widespread circulation. This ensured that local officials, residents, businesses, academia, and other interests in Scott County were invited to participate in the mitigation planning process.

3.8.2 Public Participation During Mitigation Plan Final Approval

Following conditional Plan approval by FEMA, municipality councils and county board public meetings are held. The completed plan was available for public review and comments both prior and during the regularly scheduled meetings.

During the meetings when formal adoption of the plan was considered an overview of the Plan, including purpose and content, was presented to the attendees, followed by a question and answer session. Public comments were solicited. All comments were documented in the meeting minutes and provided to the Mitigation Committee.

3.9 INVOLVING STAKEHOLDERS IN MITIGATION PLANNING

Multi-hazard Requirement §201.6(b): Multi-hazard Requirement §201.6(c)(1):
D. Does the new or plan discuss the opportunity for neighboring communities, agencies, businesses, academia, nonprofits, and other interested parties to be involved in the planning process?

CRS Step 3: Coordinate with other Agencies: The planning process must include an opportunity for the public, neighboring communities and local and regional agencies to comment on the plan during the drafting stage and before plan approval.

A range of stakeholders were invited and encouraged to participate in the development of the Hazard Mitigation Plan. Stakeholder involvement was encouraged through notifications and invitations to agencies and individuals to participate. These included representatives from Scott County and each participating jurisdiction, LEPC, private sector businesses, voluntary agencies, citizens and surrounding counties. In addition to the Mitigation Committee meetings, Scott County encouraged open and widespread participation in the mitigation planning process through the publication of newspaper notices promoting open public meetings. These media advertisements and survey instruments provided local officials, residents, businesses, academia, and other private interests in Scott County the opportunity to be involved and offer input throughout the local mitigation planning process.

Scott County encouraged continued stakeholder involvement by reminding all participating jurisdictions to make announcements and notifications consistent with their existing local plan adoption procedures. It will be the responsibility of each participating jurisdiction and its local governing body to determine if and how any additional specific stakeholder groups or individuals should be involved in the planning process.

Many departments, agencies, and individuals became mini-stakeholders when contacted to provide information as the committee gathered data for capability and vulnerability assessments, these “external participants” played a vital role in the completion of this Plan.

3.10 REVIEW AND INCORPORATION OF EXISTING PLANS

Multi-hazard Requirement §201.6(b): Multi-hazard Requirement §201.6(c)(1):
E. Does the planning process describe the review and incorporation, if appropriate, of existing plans, studies, reports, and technical information?

CRS Step 3: Coordinate with other Agencies: The plan must also incorporate and document a review of existing studies, reports, and technical information into the community's needs, goals and plans for the area.

An important aspect of the planning process involved the review of existing federal, state, and local plans, studies, reports, and technical information, as well as the ordinances, regulations, and resolutions of each participating jurisdiction for incorporation into the Scott County Hazard Mitigation Plan. Some served to acquaint committee members with the many roles of emergency management. Planning guides helped to tie together the phases of mitigation planning for committee members from a broad range of backgrounds outside mitigation and emergency management.

In some cases, these documents identified areas for needed mitigation actions; for example, review of the Scott County Emergency Operations Plan made clear the need for updating and expanding this plan, and goals/actions were written to mitigate this weakness. After review of the ordinances, regulations, and resolutions of each jurisdiction, the Legal and Regulatory Capabilities Summary Table was prepared. This summary identified that some jurisdictions lacked ordinances and regulations to control hazards and reduce risk. By incorporating data from existing programs into this mitigation plan, the County was able to identify the relevance of mitigation planning to these existing programs.

3.10.1 Local Data

The Planning Committee reviewed and incorporated existing data and plans to support the mitigation plan. A number of electronic and hard copy documents were made available to support the planning process. These documents are listed below:

Table 3.7 Local Plan Incorporation
Jurisdictional ordinances, regulations, and resolutions
Scott County Emergency Operations Plan
Scott County Mass Clinic Plan
Scott County Emergency Evacuation Plan
Scott County Schools Emergency Response/Crisis Management Plan
Electric Risk Management Plan
Water and Reclamation Risk Management Plan
Hill Water Utility Emergency Plan
SARA Title II facilities reporting documents and site emergency plans
Minnesota One Call System Emergency Responder Handbook for Pipeline Emergencies
The Pipeline Group Emergency Response Manual
Local Community Emergency Action Plan for Hazardous Material Incidents
Scott County Comprehensive Plan
Scott County Flood Insurance Study
Jurisdictions Flood Ordinance Resolutions

3.10.2 Federal and State Data

State and federal response and homeland security documents were referenced to ensure Scott County's goals supported these plans and promoted compliance with requirements. The State of Minnesota Hazard Mitigation Plan formed the basis for identifying and analyzing the natural hazards and man-made hazards that could affect Scott County and participating jurisdictions. The Scott County Emergency Operations Plan provided insight into the jurisdictional response to disasters and was used to develop and validate mitigation goals, objectives, and actions Federal and State data was collected and used throughout the mitigation process including the reports and plans identified in the table below:

Table 3.8 State and Federal Plan Incorporation
State of Minnesota Hazard Mitigation Plan
Governor's Office of Homeland Security "A Strategy for Minnesota"
A NATION PREPARED: FEMA Strategic Plan Fiscal Years 2003-2008
National Incident Management System
U.S. Department of Homeland Security National Response Plan (Base Plan and Appendices)
FEMA National Flood Insurance: Program Description
National Weather Service: Operations Present and Future
FEMA State and Local Mitigation Planning How-to Guides (386-1 to 386-4, and 386-7)
US Census data
FEMA and local disasters reports
Long range transportation plans/growth projections from the Regional Planning Commission
Flood Insurance Studies and Flood Insurance Rate Maps
Dam Inundation Studies
Data from the National Weather Service (NWS)
Data from the National Oceanic and Atmospheric Administration (NOAA)
Department of Natural Resources
Minnesota Data Center demographic and economic reports
Public laws and other programs such as the NFIP were examined to complete this Plan.

These documents, on file at Scott County Emergency Management Agency in electronic or hard copy format, provided valuable guidance in the planning process.

3.11 PLANNING FOR NATURAL HAZARDS

3.11.1 Minnesota State Mitigation Plan

During the 2007 State of Minnesota plan process, it was determined that instead of identifying hurricanes as a single hazard, it would be divided into two separate hazards that are associated with hurricanes: flooding (both by rainfall and by storm surge) and high winds. Tornados and windstorms are also included in the high wind profile section and risk assessment. All information from the hurricane profile section of the 2004 Plan is now included as part of the profiles for flooding and high winds. At the request of both MINNESOTA HSEM and the National Weather Service, tsunamis were added to the list of hazards to be profiled. In addition, it was determined that hazardous materials and manmade hazards would not be considered a part of the scope of this update and they were removed from the plan. This was done with the SHMT and FEMA concurrence in April 2004.

3.11.2 Scott County Mitigation Plan

The Scott County Mitigation Committee decided to follow the State of Minnesota Plan in the identification and profiling of Natural Hazards. The State divided Tropical Storms into two hazard categories of flooding and high winds. Scott County decided to follow this process also with thunderstorms and divided that weather event into flooding and high wind.

3.12 PLANNING FOR MANMADE HAZARDS

The Pre Disaster Mitigation Program (PDM) is subject to the availability of appropriation funding, as well as any directive or restriction made with respect to such funds. The PDM program was authorized by Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act). PDM is designed to assist States and communities to implement a sustained pre-disaster natural hazard mitigation program to reduce overall risk to the population and structures, while also reducing reliance on Federal funding from actual disaster declarations. PDM funds must be used primarily to support mitigation activities that address natural hazards, although hazard mitigation projects and plans may also address hazards caused by manmade events. PDM guidance also identifies as ineligible projects for PDM funding as projects that "solely address a manmade hazard".

It has been interpreted that PDM funds cannot be used to include manmade hazards in a mitigation plan because that may be a violation of the HMA Program Guidance Section 2.1.3.4.2 "Duplication of Funds". As a result, in order avoid any conflict, Scott County has employed the following methodology to include manmade hazards in this Multi-jurisdictional, All Hazards Mitigation Plan.

- Manmade Hazard information has been gathered by the plan participants separate and apart from the Natural Hazard information
- The associated time, materials and equipment time to gather Manmade Hazard information by the participants is not included in the "In Kind Contribution" time associated with Natural Hazard mitigation effort
- Manmade Hazard information was complied by the Scott County Emergency staff for inclusion in the plan and the associated time, materials and equipment time was not included with the "In Kind Contribution" time allocated to the Natural Hazard mitigation effort
- The contracted consultant agreed to include manmade hazards into this plan at no additional charge to the county, state or FEMA

Based on the above methodology Scott County is including a Pandemic event and manmade hazards the Scott County Multi-jurisdictional, All Hazards Mitigation Plan

SECTION 4
RISK ASSESSMENT – HAZARD IDENTIFICATION

4.1 INTRODUCTION

According to the Federal Emergency Management Agency (FEMA) Guidance 386-2, "risk assessment is the process of measuring the potential loss of life, personal injury, economic injury and property damage resulting from natural hazards by assessing the vulnerability of people, buildings and infrastructure to natural and manmade hazards**.**

The risk assessment process used for this Plan is consistent with the process and steps presented in the Federal Emergency Management Agency (FEMA) 386-2, State and Local Mitigation Planning How-to-Guide, Understanding Your Risks – Identifying Hazards and Estimating Losses (FEMA, 2001). This process identifies and profiles the hazards of concern and assesses the vulnerability of assets (population, structures, critical facilities and the economy) at risk in the community. A risk assessment provides a foundation for the community's decision makers to evaluate mitigation measures that can help reduce the impacts of a hazard when one occurs.

The first step of the risk assessment process is to identify the hazards of concern. FEMA's current regulations only require an evaluation of natural hazards. Natural hazards are natural events that threaten lives, property, and many other assets.

The second step of risk assessment is the profiling of hazards that have or may in the future impact Scott County and its jurisdictions. Included in the profile section is:

- Sources of information used or consulted for assembling a history of past occurrences
- Date and Duration of occurrence
- Location of event
- Description and severity (i.e., flood depth, wind speeds, earthquake intensity, etc.)
- Damages that occurred (e.g., costs of recovery, property damage, and lives lost) to the extent available
- The location or geographical areas
- The extent (magnitude/severity
- The probability of the likelihood
- A discussion of past occurrences of hazard events

The third step of risk assessment is vulnerability analysis. Vulnerability analysis identifies the hazards of most concern to Scott County and its jurisdictions, identifies critical facilities, provides and in depth analysis of life, property and economic loss that may occur as a result of a severe hazard event**.**

The risk assessment process encourages the reciprocity of information and support between states and local governments states provide leadership and support to local communities. The primary source for identifying natural hazards was the historic hazard occurrence in Scott County and the State of Minnesota Hazard Mitigation Plan.

4.2 HAZARD IDENTIFICATION METHODOLOGY

Multi-hazard Requirement §201.6(c)(2)(i): The risk assessment shall include a description of the type of all natural hazards that can affect the jurisdiction.
A. Does the new or updated plan include a description of the types of all natural hazards that affect the jurisdiction?

CRS Step 4: Assess the Hazard: CRS requires at the minimum that the flood hazard be identified including addressing the repetitive loss areas. However, additional credit can be earned for including discussion of all other natural hazards.

FEMA's current regulations only require identification, profiling and evaluation of natural hazards that threaten lives, property, and other assets. However, FEMA strongly suggests including manmade hazards in jurisdiction hazard mitigation plans.

Scott County is vulnerable to a wide array of hazards that threaten life and property. The Hazard Identification section provides background information for these hazards. It is important that all natural hazards be initially considered for relevance in advancing through the hazard mitigation planning process. Subsequent sections of the Plan—the Hazard Profiles and the Vulnerability Assessment—address the hazards of specific concern to the County. Scott County Hazard Mitigation Committee considered and evaluated all natural hazards in terms of their potential risk to Scott County and its citizens.

4.3 SCOTT COUNTY HAZARD DISASTER DECLARATIONS

Scott County has been included in federal disaster declarations. All of these events did not necessarily occur within the boundaries of Scott County. When major damage from a natural disaster occurs, FEMA, as a matter of practice, includes a "buffer" area of adjoining counties in the event it later determines the damage was more widespread. These declarations are listed in the table below.

Table 4.1 Scott County Disaster Declarations

Disaster Number	Disaster Type	Date
FEMA-1419-DR-MN		2002
FEMA-1370-DR-MN	Winter Storms, Flooding, Tornadoes	March 23, 2001 to July 3, 2001
FEMA-1225-DR-MN	Flooding	June 23, 1998
FEMA-1187-DR-MN	Tornadoes, Flooding	August 5, 1997
FEMA-1175-DR-MN	Winter Storms, High Winds, flooding, Ice	April 8, 1997
FEMA-1158-DR-MN	Snow	January 16, 1997
FEMA-993-DR-MN	Severe Storms, Tornadoes, Flooding	June 11, 1993

4.4 STATE OF MINNESOTA 2008 MITIGATION PLAN HAZARD DISPOSITION

The hazards table below identifies the Natural hazards and their disposition in the State plan and in the Scott County Plan.

Table 4.2 Natural Hazard Disposition In The State of Minnesota 2008 Plan Update

Hazard	Data Sources	Probability	Mitigation Potential Rating	Disposition in the 2008 State Plan	Disposition in the 2009 Scott County Plan
Floods	NOAA, Minnesota Coastal Hazards Assessment, NWS, NFIP, FIRM	H	H	Identified, General profile, Risk Assessment	Identified, Profiled, Risk Assessment
Tornadoes	NOAA, NWS, SHELDUS, NWS, Minnesota Disaster Center	H	H	Identified, General profile Risk Assessment	Identified, Profiled Risk Assessment under High Winds
Hail	NOAA, NWS, Minnesota Disaster Center	H	M	Identified, General profile	Identified, Profiled
Coastal Erosion	Geological Survey of Minnesota, USGS, Coastal Hazards Assessment	H	M	Identified, General profile	Identified, Profiled
Severe Winter Storms	NOAA, NWS, SHELDUS	H	L	Identified, General profile	Identified, Profiled under Ice/Snow Storms
Blizzards	NOAA, NWS, SHELDUS	H	L		Identified, Profiled under Ice/Snow Storms
Ice and Ice Storms	NOAA, NWS, SHELDUS	H	L		Identified, Profiled under Ice/Snow Storms
Landslide	NOAA, USGS, MN Geological Survey,	M	L	Identified, General profile	Identified, Profiled
Sinkholes & Land Subsidence	Geological Survey of Minnesota, USGS	M	L	Identified, General profile	Identified, Profiled
Earthquake	Geological Survey of Minnesota, USGS, SHELDUS	L	L	Identified, General profile	Identified, Profiled
Drought	Minnesota Forestry Commission, Dept of Agriculture	H	L	Identified, General profile	Identified, Profiled
Wildfire	NOAA, Local Fire Service	H	H	Identified, General profile Risk Assessment	Identified, Profiled
Extreme Temperatures	NOAA, National Weather Service, SHELDUS	H	L	Identified, General profile	Identified, Profiled
Lightning	NOAA, NWS, SHELDUS	H	L	Identified, General profile	Identified, Profiled

Table 4.2 Natural Hazard Disposition In The State of Minnesota 2008 Plan Update					
Hazard	**Data Sources**	**Probability**	**Mitigation Potential Rating**	**Disposition in the 2008 State Plan**	**Disposition in the 2009 Scott County Plan**
Windstorms	NOAA, NWS, SHELDUS	H	H	Identified, General profile Risk Assessment	Identified, Profiled Risk Assessment under High Winds
Tropical Storms	NOAA, NWS, SHELDUS	L	L	Not Identified or Profiled	Not Identified or Profiled
Tsunami	NOAA, NWS, SHELDUS	L	L	Not Identified or Profiled	Not Identified or Profiled
Snow Avalanches	Local Response Departments	L	L	Not Identified or Profiled	Not Identified or Profiled
Expansive Soils	USGS	L	L	Not Identified or Profiled	Not Identified or Profiled
Volcanoes	USGS	L	L	Not Identified or Profiled	Not Identified or Profiled

As described in the planning process section Scott County is also evaluating manmade hazards and a Pandemic event as part of this plan**.**

Manmade Hazards are technological hazards and terrorism. These are distinct from natural hazards primarily in that they originate from human activity. In contrast, while the risks presented by natural hazards may be increased or decreased as a result of human activity, they are not inherently human induced. The term “technological hazards” refers to the origins of incidents that can arise from human activities such as the manufacture, transportation, storage, and use of hazardous materials.

The term “terrorism” refers to intentional, criminal, malicious acts. There is no single, universally accepted definition of terrorism. Officially, terrorism is defined in the Code of Federal Regulations as “the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives.” (28 CFR, Section 0.85). The Federal Bureau of Investigation (FBI) further characterizes terrorism as either domestic or international, depending on the origin, base, and objectives of the terrorist organization; however, the origin of the terrorist or person causing the hazard is far less relevant to mitigation planning than the hazard itself and its consequences. For the purposes of this plan, “terrorism” refers to 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.” The table below identifies the manmade hazards and their disposition in the State Plan and The Scott County Plan.

Table 4.3 Manmade Hazards Disposition in the 2008 State Mitigation Plan Update					
Hazard	**Information Source(s)**	**Probability**	**Mitigation Potential Rating**	**Disposition in the 2008 State Plan**	**Disposition in the 2009 County Plan**
Infrastructure Dam Failure	USACE, Corps of Engineers, Dam Safety	M	M	Identified, General profile	Identified, Profiled under flooding
Hazardous Materials	Environmental Protection Agency (EPA), NRC	M	L	Identified, General profile	Identified, Profiled
Infectious Disease	U.S. Center for Disease Control, Minnesota Dept. of Public Health,	L	L	Identified, General profile	Identified, Profiled
Nuclear Accident	NRC, Nuclear Energy Institute	L	L	Identified, General profile	Identified, Profiled under Hazardous Material
Terrorism Conventional bomb Improvised explosive device Biological agent Chemical agent Nuclear bomb Radiological agent Arson/incendiary attack Armed attack Cyber-terrorism Agri-terrorism Intentional Hazardous material release	DHS, Law Enforcement	NR	NR	Identified, General profile	Identified, Profiled
Transportation Accidents	National Transportation Safety Board, State DOT	L	L	Identified, General profile	Identified, Profiled
Urban Fire	Local Fire Departments, State Fire Marshal	M	L	Identified, General profile	Identified, Profiled
Utility Power Failure	Power Companies			Identified, General profile	Identified, Profiled
Water Contamination	Local Water Districts, Minnesota Dept. of Public Health	M	M	Identified, General profile	Identified, Profiled

The primary source for identifying manmade hazards was local sources, historic occurrences, the Department of Homeland Security (DHS) website and the FEMA guide "Integrating Manmade Hazards into Mitigation Planning".

4.5 NATURAL HAZARDS IDENTIFICATION

The specific hazards that were identified by Scott County Hazard Mitigation Planning Committee are identified below.

4.5.1 Drought Identification

Figure 4.1: Depiction of Drought

Source: NWS

The National Weather Service (NWS) Climate Prediction Center (CPC) defines drought as a deficiency of moisture that results in adverse impact on people, animals, or vegetation over a sizeable area. Drought is a normal, recurrent feature of climate. It occurs almost everywhere, although its features vary from region to region. In general, drought originates from a deficiency of precipitation over an extended period of time, resulting in a water shortage for some activity, group, or environmental sector.

Other climatic factors, such as high temperatures, prolonged high winds and low relative humidity, can aggravate the severity of a drought. These conditions are caused by anomalous weather patterns when shifts in the jet stream block storm systems from reaching an area. As a result, large high-pressure cells may dominate a region for a prolonged period, thus reducing precipitation. According to Institute for Catastrophic Loss Reduction (ICLR), this natural hazard differs from others in several ways. First, there is no universally accepted definition of drought. Second, drought onset and recovery are usually slow. Third, droughts also can cover a much larger area and last many times longer than most other natural hazards. Fourth, they are part of the natural climate variability. Due to these differences many communities have neglected to include this hazard in their disaster management plans (ICLR, 2005). According to the Federal Emergency Management Agency (FEMA), the National Drought Mitigation Center (NDMC) and the NWS, there are four ways that drought can be defined:

Meteorological drought is a measure of departure of precipitation from normal. It is defined solely on the degree of dryness. Due to climatic differences, what might be considered as a drought in one location of the country may not be considered as a drought in another location.

Agricultural drought links various characteristics of meteorological drought to agricultural impacts, focusing on precipitation shortages, differences between actual and potential evapotranspiration, soil water deficits, reduced ground water or reservoir levels, etc. It occurs when there is not enough water available for a particular crop to grow at a particular time. Agricultural drought is defined in terms of soil moisture deficiencies relative to water demands of plant life, primarily crops.

Hydrological drought is associated with the effects of periods of precipitation (including snowfall) shortfalls on surface or subsurface water supply and occurs when these water supplies are below normal. It is related to the effects of precipitation shortfalls on stream flows and reservoir, lake and groundwater levels.

Socioeconomic drought is associated with the supply and demand of some economic good with elements of meteorological, hydrological, and agricultural drought. This differs from the aforementioned types of drought because its occurrence depends on the time and space processes of supply and demand to identify or classify droughts. The supply of many economic goods depends on weather (e.g., water, forage, food grains, fish, and hydroelectric power). Socioeconomic drought occurs when the demand for an economic good exceeds supply as a result of a weather-related shortfall in water supply.

4.5.2 Earthquake Identification

Figure 4.2: Earthquake Example

Source: University of Colorado

An earthquake is sudden motion or trembling caused by an abrupt release of accumulated strain in the tectonic plates that comprise the earth's crust." These rigid plates, known as tectonic plates, are some 50 to 60 miles in thickness and move slowly and continuously over the earth's interior. The plates meet along their edges, where they move away, past or under each other at rates varying from less than a fraction of an inch up to five inches per year. While this sounds small, at a rate of two inches per year, a distance of 30 miles would be covered in approximately one million years. The tectonic plates continually bump, slide, catch, and hold as they move past each other which causes stress to accumulate along faults. When this stress exceeds the elastic limit of the rock, an earthquake occurs, immediately causing sudden ground motion and seismic activity.

The vibration or shaking of the ground during an earthquake is described by ground motion. The severity of ground motion generally increases with the amount of energy released and decreases with distance from the fault or epicenter of the earthquake. Ground motion causes waves in the earth's interior, also known as seismic waves, and along the earth's surface, known as surface waves. The following are the two kinds of seismic waves:

P (primary) waves are longitudinal or compressional waves similar in character to sound waves that cause back-and-forth oscillation along the direction of travel (vertical motion), with particle motion in the same direction as wave travel. They move through the earth at approximately 15,000 mph.

S (secondary) waves, also known as shear waves, are slower than P waves and cause structures to vibrate from side-to-side (horizontal motion) due to particle motion at right angles to the direction of wave travel. Un-reinforced buildings are more easily damaged by S waves.

There are also two kinds of surface waves, Raleigh waves and Love waves. These waves travel more slowly and typically are significantly less damaging than seismic waves.

Secondary hazards may also occur, such as surface faulting, sinkholes, and landslides. While the majority of earthquakes occur near the edges of the tectonic plates, earthquakes may also occur at the interior of plates.

The location of an earthquake is commonly described by its focal depth and the geographic position of its epicenter. The focal depth of an earthquake is the depth from the Earth's surface to

the region where an earthquake's energy originates (the focus or hypocenter). The epicenter of an earthquake is the point on the Earth's surface directly above the hypocenter (Shedlock and Pakiser, 1997). Earthquakes usually occur without warning and their effects can impact areas a great distance from the epicenter (FEMA, 2001).

4.5.3 Extreme Temperatures Identification

Extreme temperatures include both cold and hot events, which can have a significant impact to human health, commercial/agricultural businesses and primary and secondary effects on infrastructure (e.g., burst pipes and power failure). Based on what the population is accustomed to, what constitutes "extreme cold" or "extreme heat" varies across different areas of the country.

4.5.3.1 Extreme Cold Identification

What constitutes extreme cold and its effects can vary across different areas of the country. In regions relatively unaccustomed to winter weather, near freezing temperatures are considered extreme cold. Extreme cold events are when temperatures drop well below normal in an area. Extremely cold temperatures often accompany a winter storm, so individuals may have to cope with power failures and icy roads. Although staying indoors as much as possible can help reduce the risk of car crashes and falls on the ice, individuals may also face indoor hazards. Many homes will be too cold—either due to a power failure or because the heating system is not adequate for the weather. As people use space heaters and fireplaces to stay warm, the risk of household fires and carbon monoxide poisoning increases. Exposure to cold temperatures can lead to serious or life-threatening health problems such as hypothermia, cold stress, frostbite or freezing of the exposed extremities such as fingers, toes, nose and ear lobes.

4.5.3.2 Extreme Heat Identification

The CDC defines temperatures that hover 10 degrees or more above the average high temperature for a region and last for several weeks as extreme heat. A heat wave is a prolonged period of excessively hot weather, which may be accompanied by high humidity. There is no universal definition of a heat wave because the term is relative to the usual weather in the area. Temperatures that people from a hotter climate consider normal can be termed a heat wave in a cooler area if they are outside the normal climate pattern for that area. Also, the term is applied both to routine weather variations and to extraordinary spells of heat, which may occur only once a century.

Figure 4.3: Depiction of Extreme Heat

Source: State of Minnesota Mitigation Plan

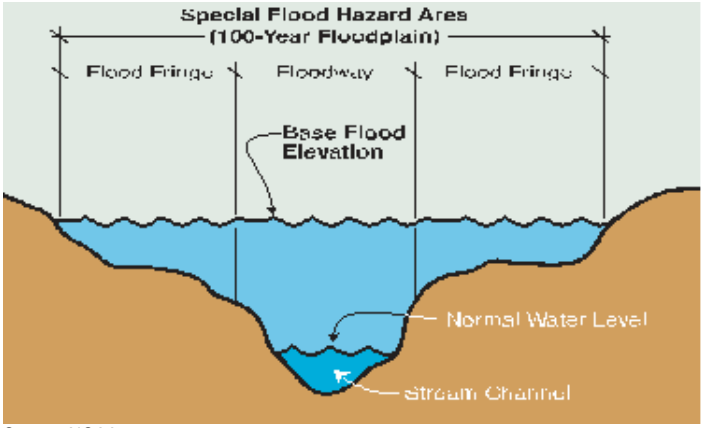
4.5.4 Flooding Identification

Flooding is an overflowing of water onto normally dry land and is one of the most significant and costly of natural disasters. The principle types of floods are dam or levee failure, flash floods, riverine floods and storm surge flooding.

Dam/Levee Failure floods usually result from intense rainfall or snow melt that produces water quantities that breach dams or levees because of faulty design, construction, or operational inadequacies. Levee failures also are a result of storm surge in coastal areas. Dam or levee failures are categorized as manmade hazards in this plan and are further discussed in section 5.

Flash floods resulting from quickly rising streams after heavy rain or rapid snowmelt, ice jams (ice that accumulates at a natural or human-made obstruction and slows the flow of water) or the absence or overflow of storm sewers in a relatively small drainage area and produce localized floods of great volume and short duration. Flash floods usually result from tropical storm/hurricane or thunderstorm weather events.

Figure 4.4: Special Flood Hazard Area



Source: NOAA

Riverine floods result from precipitation, snowmelt or ice jams that cover large areas and occur in river systems and tributaries that may drain large geographic areas. The precipitation usually results from tropical storm/hurricane or thunderstorm weather events.

Slowly rising lake levels cause Lake level floods. This type of flood is caused by a long-term, above-average precipitation trend in landlocked basins with poor water outlets. This flooding can cause significant localized damages. Water rises slowly over months or years, so the flooding is not caused by a single event.

Storm Surge Flooding resulting from tropical storm/ hurricane weather events.

Other flood related Definitions:

Floodplain - Any land area susceptible to inundation by floodwaters from any source.

100/500 -Year Floodplain is defined as the area adjoining a river, stream, or watercourse covered by water in the event of a 100/500-year flood.

"The term "100-year flood" is misleading. It is not a flood that will occur once every 100 years. Rather, it is the flood elevation that has a 1 percent chance of being equaled or exceeded each year. Thus, the 100-year flood could occur more than once in a relatively short period of time. The 100-year flood, which is the standard used by most federal and state agencies, is used by the National Flood Insurance Program (NFIP) as the standard for floodplain management and to determine the need for flood insurance. A structure located within a special flood hazard area shown on a map has a 26 percent chance of suffering flood damage during the term of a 30-year mortgage. One hundred year floodplains have been identified, mapped and used for further analysis using the county's Geographic Information System (GIS).

The 500-year standard (0.2-percent-annual-chance) follows the same logic as the 100- year flood definition."

Floodway - The channel of a river or watercourse and the adjacent areas that must be reserved in order to discharge the 100-year flood without cumulatively increasing the water surface elevation more than one foot.

Flood Fringe - That portion of the floodplain outside the floodway that is inundated by floodwaters in which encroachment is permissible.

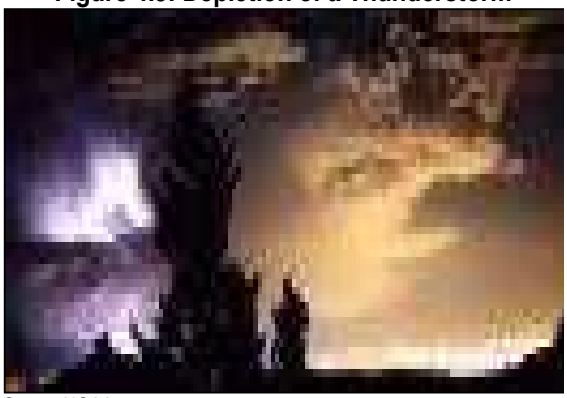
Encroachment - Any man-made obstruction in the floodplain that displaces the natural passage of floodwaters.

Surcharge - An increase in flood elevation due to destruction of the floodplain that reduces conveyance capacity.

Described below are the major causes of natural hazard flooding: tropical storms/hurricanes, thunderstorms and storm surge.

4.5.4.1 Flooding Thunderstorm Identification

Figure 4.5: Depiction of a Thunderstorm



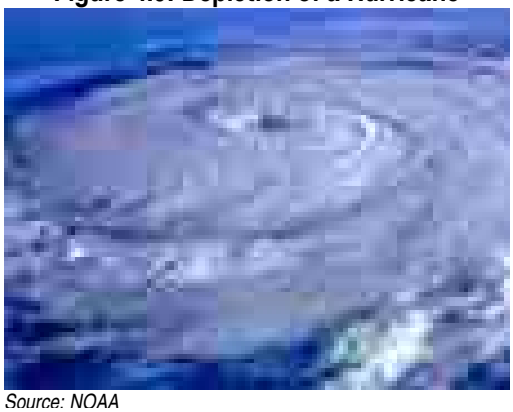
Source NOAA

Thunderstorms are formed from a combination of moisture, rapidly rising warm air, and a force capable of lifting air (such as a sea breeze, a warm and cold front, or a mountain). Thunderstorms may occur singly, in clusters, or in lines. The most severe weather occurs when a single thunderstorm affects one location for an extended time.

Thunderstorms are associated with heavy rains that can lead to riverine, dam/levee failure and flash flooding. Thunderstorms affect relatively small-localized areas. Thunderstorms can strike in all regions of the U.S.; however, they are most common in the central and southern states. The atmospheric conditions in these regions of the country are most ideal for generating these powerful storms (NVRC, 2006). More than 100,000 thunderstorms occur each year in the U.S., however, only about 10% are classified as severe.

4.5.4.2 Flooding Tropical Storm/Hurricane Identification

Figure 4.6: Depiction of a Hurricane



Source: NOAA

As a tropical storm/hurricane nears land, it usually brings torrential rains that can last for days. These torrential rains cause dam/levee failure, riverine and flash flooding.

A Tropical Storm is an organized system of strong thunderstorms with maximum sustained winds between 34 to 63 knots (39 to 73 mph) (FEMA, 2007). In time, the storm becomes more organized and begins to become more circular in shape, resembling a hurricane.

A Hurricane is an intense tropical cyclone with wind speeds reaching a minimum constant speed of 74 mph (FEMA, 2004). It is a category of tropical cyclone characterized by thunderstorms and defined surface wind circulation. They are caused by the atmospheric instability created by the collision of warm air with cooler air. They form in the warm waters of tropical and sub-tropical oceans, seas, or Gulf of Mexico (NWS, 2000). Hurricanes begin when areas of low atmospheric pressure move off the western coast of Africa

and into the Atlantic, where they grow and intensify in the moisture-laden air above the warm tropical ocean. Air moves toward these atmospheric lows from all directions and circulates clock-wise under the influence of the Coriolis effect, thereby initiating rotation in the converging wind fields. When these hot, moist air masses meet, they rise up into the atmosphere above the low-pressure area, potentially establishing a self-reinforcing feedback system.

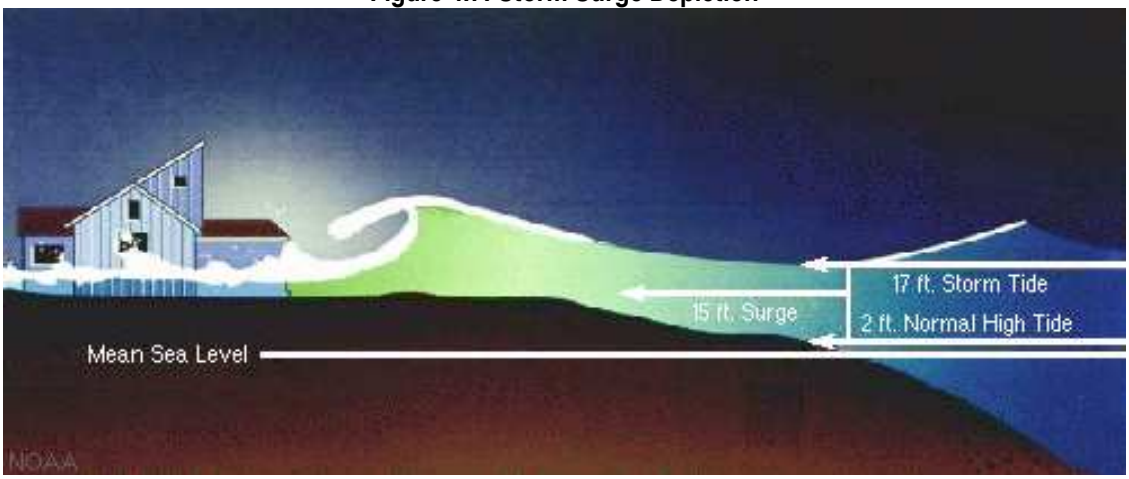
4.5.4.3 Flooding Storm Surge Identification

Storm Surge is water that is pushed toward the shore by the force of the winds swirling around a tropical storm or hurricane. This advancing surge combines with the normal tides to raise the water level. Wind driven waves are superimposed on the storm surge. A rise in water level can cause severe flooding in coastal areas, particularly when the storm tide coincides with the normal high tides. The storm surge creates a large dome of water, often 50 to 100 miles wide that sweeps across the coastline near where the hurricane makes landfall.

The stronger the hurricane and the shallower the offshore water, the higher the storm surge will be (NWS, 2000). Storm surges are particularly damaging when they occur during a high tide, combining the effects of the surge and the tide. As the water slams into shoreline structures, even well built structures quickly can be demolished. As the waters move inland, carrying debris, it can cause further damage.

Because storm surge is produced by the high winds circulating a tropical/storm or hurricane the resulting storm surge can occur from any direction where the hurricane is over the ocean or large bodies of waters such as bays.

Figure 4.7: Storm Surge Depiction



Source: NOAA

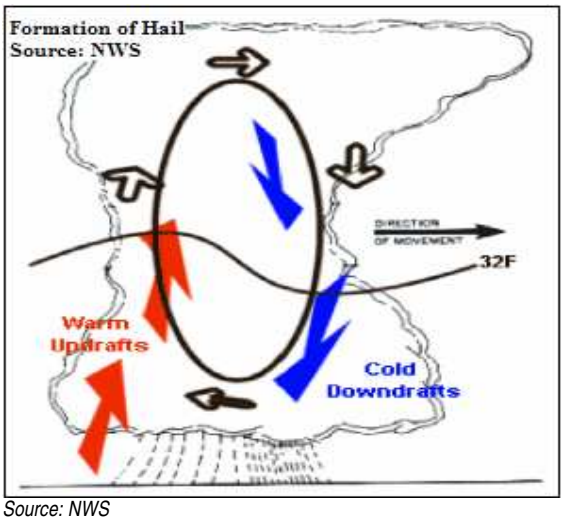
4.5.5 Hail Identification

Hailstones are products of thunderstorms and are developed by downdrafts and updrafts that develop inside cumulonimbus clouds of a thunderstorm, where super cooled water droplets exist. The transformation of droplets to ice requires a temperature below 32 degrees and a catalyst in the form of tiny particles of solid matter, or freezing nuclei. Continued deposits of super cooled water cause the ice crystals to grow into hailstones.

The size of hailstones varies and is related to the severity and size of the thunderstorm that produced it. The higher the temperatures at the Earth's surface, the greater the strength of the updrafts, and the greater the amount of time the hailstones are suspended, giving the hailstones more time to increase in size. Hailstones vary widely in size. Note that penny size or larger hail is considered severe.

Hailstorms occur most frequently during the late spring and early summer, when the jet stream moves northward across the Great Plains. During this period, extreme temperature changes occur from the surface up to the jet stream, resulting in the strong updrafts required for hail formation.

Figure 4.8: Formation of Hail



Source: NWS

4.5.6 Coastal Erosion Identification

Coastal erosion is defined as the wearing away of land and the loss of beach, shoreline, or dune material over a period of time as a result of natural coastal processes or human influences. Characteristics such as supply of sand and processes such, as sea level change, currents, tides, waves, and wind are natural factors that contribute to the rate of erosion.

Human-caused contributors to erosion include dredging tidal entrances, jetty and groin construction, hardening shorelines with seawall, beach nourishment, and construction of harbors and sediment-trapping dams.

As high lake levels increase, bluff recession rates also increase. Increasing assaults by wave action against the base of the bluff cause erosion and beach-building sediments. Navigational improvements and dredge-material disposal practices deplete both tributary and shore land sources of sediment; removing these sediments from the shore system contributes to erosion. Ice ridges that form and break up each winter along the shoreline cause erosion by trapping sand in floating fragments of ice that are carried offshore into deep water. This continual natural process is one of the principal mechanisms by which sand is lost from the near shore system (USGS, 1992).

Coastal erosion is usually a gradual process, and sudden incidents prompting emergency action are rare. Such rare events include strong storms with high winds or heavy wave action that can cause sudden failure of bluffs.

Coastal property owners are acutely aware of hazards during periods of high water levels and especially right after a damaging storm or a bluff failure, but this awareness can fade over time if low lake levels slow the erosion rate.

4.5.7 High Winds Identification

Wind is defined as the motion of air relative to the earth's surface. In the mainland United States the mean annual wind speed is reported to be eight to 12 mph, with frequent speeds of 50 mph and occasional wind speeds greater than 70 mph. High Winds are generally the result of thunderstorms, tornadoes and tropical storms/hurricanes.

4.5.7.1 High Winds Tropical Storm/Hurricane Identification

Tropical Storm/Hurricane Wind Damage is the force of wind that can quickly decimate the tree population, down power lines and utility poles, knock over signs, and damage/destroy homes and buildings. Flying debris can also cause damage to both structures and the general population. When hurricanes first make landfall, it is common for tornadoes to form.

A Tropical Storm is an organized system of strong thunderstorms with maximum sustained winds between 34 to 63 knots (39 to 73 mph) (FEMA, 2007). In time, the storm becomes more organized and begins to become more circular in shape, resembling a hurricane.

A Hurricane is an intense tropical cyclone with wind speeds reaching a minimum constant speed of 74 mph (FEMA, 2004). It is a category of tropical cyclone characterized by thunderstorms and defined surface wind circulation. They are caused by the atmospheric instability created by the collision of warm air with cooler air. They form in the warm waters of tropical and sub-tropical oceans, seas, or Gulf of Mexico (NWS, 2000). Hurricanes begin when areas of low atmospheric pressure move off the western coast of Africa and into the Atlantic, where they grow and intensify in the moisture-laden air above the warm tropical ocean. Air moves toward these atmospheric lows from all directions and circulates clock-wise under the influence of the Coriolis effect, thereby initiating rotation in the converging wind fields. When these hot, moist air masses meet, they rise up into the atmosphere above the low-pressure area, potentially establishing a self-reinforcing feedback system.

4.5.7.2 High Winds Tornado Identification

Tornadoes are violent windstorms characterized by a twisting, funnel-shaped cloud. A tornado is spawned by a thunderstorm or hurricane and produced when cool air overrides a layer of warm air, forcing the warm air to rise rapidly. A funnel does not need to reach to the ground for a tornado to be present. Tornados occur at any time of the year; however, the season is generally March through August.

Figure 4.9 Tornado

Source NOAA

The most violent tornadoes are capable of tremendous destruction with wind speeds of 250 mph or more. Damage paths can be in excess of 1 mile wide and 50 miles long. Even with advances in meteorology, adequate warning time for tornadoes is short or sometimes not possible. A debris cloud beneath a thunderstorm is all that is needed to confirm the presence of a tornado. The damage from a tornado is a result of the high wind velocity and wind-blown debris.

4.5.7.3 High Winds Thunderstorm Identification

High winds can result from thunderstorm inflow and outflow, or downburst winds when the storm cloud collapses, and can result from strong frontal systems, or gradient winds from high or low-pressure systems. Thunderstorms produce downdraft winds, which are defined as a small-scale column of air that rapidly sinks toward the ground, usually accompanied by precipitation as in a shower or thunderstorm. A downburst is the result of a strong downdraft. The downburst can

cause damage equivalent to a tornado. The outflow of cool or colder air can also create damaging winds at or near the surface. As these downburst winds spread out they are often referred to as straight-line winds, which exceed 130 miles per hour.

Thunderstorms are formed from a combination of moisture, rapidly rising warm air, and a force capable of lifting air (such as a sea breeze, a warm and cold front, or a mountain). Thunderstorms usually occur singly and affect relatively small-localized areas; however, they may in clusters, or in lines. The most severe thunderstorm is one affects one location for an extended time.

4.5.8 Ice/Snow Storm Identification

Winter storms produce an array of hazardous weather conditions including heavy snow, blizzards, freezing rain, ice pellets, and extreme cold. Severe winter storms are extra-tropical cyclones (storms that form outside of the warm tropics) fueled by strong temperature gradients and an active upper-level jet stream. The definitions of winter weather include:

Ice and Sleet Storms: A storm that generates sufficient quantities of ice or sleet to result in hazardous conditions and/or property damage. Ice Storm (freezing rain), probably the most serious of the ice storms, occurs during a precipitation event when warm air aloft exceeds 32o while the surface remains below the freezing point. When precipitation originating as rain or drizzle contacts physical structures on the surface, ice forms on all surfaces creating issues for traffic, utility lines and tree limbs. Sleet forms when precipitation originating as rain falls through a large layer of the atmosphere that has below freezing temperatures allowing raindrops to freeze before reaching the ground. Sleet is also referred to as ice pellets. Sleet storms are usually of shorter duration than freezing rain and generally create fewer problems.

Figure 4.10: Formation of Ice and Snow

Source: University of Nebraska

Blizzards: The occurrence of the following conditions lasting for three hours or longer: 1) wind speeds of 35 miles per hour (mph) or more; 2) considerable falling and/or blowing snow (reducing visibility frequently to less than ¼ mile); and 3) generally temperatures of 20 degrees Fahrenheit (F) or lower. A severe blizzard has: 1) wind speeds of 45 mph or more; 2) a great density of falling and/or blowing snow (reducing visibility to near zero); and 3) temperatures of 10 degrees F or lower.

4.5.9 Landslides/Mudslides Identification

Landslides (rockslides, mudslides, etc.) are among the most common natural hazards. Unlike most natural hazards, however, most damage is not caused by extreme events, but by uncounted (and often unreported) minor events.

Slumps usually damage utilities within or below the slide mass, but seldom cause a threat to life.

Flows, around well-built structures causing damage from water and mud.

Lateral spreads are large movements of rock, fine-grained soils (i.e., quick clays), or granular soils, distributed laterally. Liquefaction may occur in loose, granular soils, and can occur spontaneously due to changes in pore-water pressure or due to earthquake vibrations.

Falls and topples are masses of rocks or material that detach from a steep slope or cliff that free-fall, roll, or bounce. Movements typically are rapid to extremely rapid. Earthquakes commonly trigger rock falls. These Translational slides can be the most catastrophic. In addition to presenting a hazard to structures and utilities, they can cause damage and death both far from and slightly below the source.

Figure 4.11 Landslide Depiction

Source: NOAA

The hazards associated with landslides are as diverse as the types of failure. Falls may damage roads or buildings at the base of a steep slope, injure climbers, or remain on a road as a hazard to transportation. In addition to the direct hazards of a landslide moving out from under or onto structures or utilities, there is a major indirect hazard. Large slides generally do not stop moving until they reach the bottom of a valley where they block streams, usually resulting in flooding and damage to the ecology.

4.5.10 Land Subsidence Identification

Subsidence is a phenomenon that combines soil compaction and geological/tectonic forces. Subsidence is the formation of depressions, cracks, and sinkholes in the earth's surface, which normally occurs over many days to a few years usually a result of Karst topography. Karst topography develops when beds of relatively soft limestone and dolomite are present. The diluted organic acids present in water percolates downward and dissolves these formations. In such places, rock is honeycombed with cracks, fissures and potentially large caverns that can collapse. Subsidence results from a number of factors including: compaction/consolidation of shallow strata caused by the weight of river delta deposits, soil oxidation, and aquifer draw-down (shallow component); consolidation of deeper strata (intermediate components); and tectonic effects (deep component). This last element was only recently quantified, and research indicates that it accounts for 50% or more of subsidence.

Figure 4.12: Depiction of Land Subsidence

Source: FEMA

In some areas natural drainage occurs below ground rather than surface streams. These underground passages are commonly connected to the surface by funnel-shaped depressions called sinkholes. The formation of these sinkholes often leads to ground subsidence or collapse. This results from the settlement or collapse of overlying materials into openings beneath the surface, such as caves or enlarged joints. Sinkhole development is usually a slow process;

however, they may occur suddenly. In addition to sinkholes Land Subsidence also occurs when abandoned mines, mine shafts, and tunnels give way.

4.5.11 Lightning Identification

Lightning is generally associated with thunderstorms and is an electrical discharge that results from the buildup of positive and negative charges. When the buildup becomes strong enough, lightning appears as a "bolt." This flash of light usually occurs within the clouds or between the clouds and the ground. A bolt of lightning reaches a temperature approaching 50,000 degrees in a split second.

Figure 4.13: Depiction of Lightning

Source: NWS

Lightning casualties can happen at the beginning of an approaching storm; however, more than half of lightning deaths occur after a thunderstorm has passed. The lightning threat diminishes after the last sound of thunder, but may persist for more than 30 minutes. When thunderstorms are in the area, but not overhead, the lightning threat can exist when skies are clear. Lightning has been known to strike more than 10 miles from the storm in an area with clear sky above.

According to the National Oceanic and Atmospheric Administration (NOAA), an average of 20 million cloud-to-ground flashes has been detected every year in the continental United States. About half of all flashes have more than one ground strike point, so at least 30 million points on the ground are struck on the average each year. In addition, there are roughly 5 to 10 times as many cloud-to-cloud flashes as there are to cloud-to-ground flashes (NOAA, July 7, 2003).

4.5.12 Wildfires Identification

A wildfire is any instance of uncontrolled burning in grasslands, forests, and brush land. A Wildfire is further defined as an uncontrolled fire spreading through vegetative fuels, possibly consuming structures (FEMA, 2001). Wildfires often begin unnoticed and spread quickly. The Federal Emergency Management Agency's (FEMA) Fire Management Assistance Grant Program (FMAGP) indicates that a wildfire is also known as a forest fire, vegetation fire, grass fire, or brush fire, is an uncontrolled fire requiring suppression action.

Figure 4.14: Depiction of a Wildfire

Source: FEMA

Common causes of wildfires include lightning, negligent human behavior and arson. Many sources indicate that arson, defined as an intentional and willful "crime of setting a fire for an unlawful or improper purpose", is one of the leading causes of wild-land fires in most states.

FEMA indicates that there are four categories of wildfires that are experienced throughout the U.S. These categories are defined as follows:

Interface or intermix fires – Urban wild-land interface fires are wildfires in a geographical area where structures and other human development meet or intermingle with wild-land or vegetative fuels. Vegetation and the built-environment provide fuel to Urban/wild-land fires.

Firestorms – events of such extreme intensity that effective suppression is virtually impossible. Firestorms occur during extreme weather and generally burn until conditions change or the available fuel is exhausted.

Prescribed fires and prescribed natural burns – fires that are intentionally set or selected natural fires that are allowed to burn for beneficial purposes (FEMA, 1997).

Wild-land fires are wildfires in an area where development is essentially nonexistent except for roads, railroads, power-lines, and similar facilities. Wild-land fires are fueled almost exclusively by natural vegetation. Wild-land fires can be classified as surface fires, ground fires, and/or crown fires. Surface fires are the most common type and burn along the floor of a forest, moving slowly and killing or damaging trees. A ground fire (muck fire) is usually started by lightning or human carelessness and burns on or below the forest floor. Crown fires are spread rapidly by wind and move quickly by jumping along the tops of trees.

The potential for wildfire depends upon fuel characteristics, climate conditions, meteorological conditions, and fire behavior. Hot, dry summers and dry vegetation increase susceptibility to fire. The potential for wildfire, and its subsequent development and severity, is determined by the area's topography, the presence of fuel, and weather.

Topography can have a powerful influence on wildfire behavior. The movement of air over the terrain tends to direct a fire's course. Gulches and canyons can funnel air and act as a chimney, intensifying fire behavior and inducing faster spread rates. Saddles on ridge tops tend to offer lower resistance to the passage of air and will draw fires. Solar heating of drier, south-facing slopes produces upslope thermal winds that can complicate behavior.

Slope is an important factor. If the uphill slope doubles, the rate at which the wildfire spreads will most likely double. On steep slopes, fuels on the uphill side of the fire are closer physically to the source of heat. Radiation preheats and dries the fuel, thus intensifying fire behavior. Terrain can inhibit wildfires: fire travels down slope much more slowly than it does upslope, and ridge tops often mark the end of wildfire's rapid spread (FEMA, 1997).

Fuels are classified by weight or volume (fuel loading) and by type. Fuel loading can be used to describe the amount of vegetative material available. If this doubles, the energy released can also double. Each fuel type has a burn index, which is an estimate of the amount of potential energy that may be released. Different fuels have different burn qualities. Grass releases relatively little energy but can sustain very high rates of spread (FEMA, 1997). According to the U.S. Forest Service, a forest stand may consist of several layers of live and dead vegetation in the understory (surface fuels), midstory (ladder fuels), and overstory (crown fuels).

Surface fuels consist of grasses, shrubs, litter, and woody material lying on the ground. Surface fires burn low vegetation, woody debris, and litter. Under the right conditions, surface fires reduce the likelihood that future wildfires will grow into crown fires.

Ladder fuels consists of live and dead small trees and shrubs, live and dead lower branches from larger trees, needles, vines, lichens, mosses, and any other combustible biomass located between the top of the surface fuels and the bottom of the overstory tree crowns.

Crown fuels are suspended above the ground in treetops or other vegetation and consist mostly of live and dead fine material. When historically low-density forests become overcrowded, tree

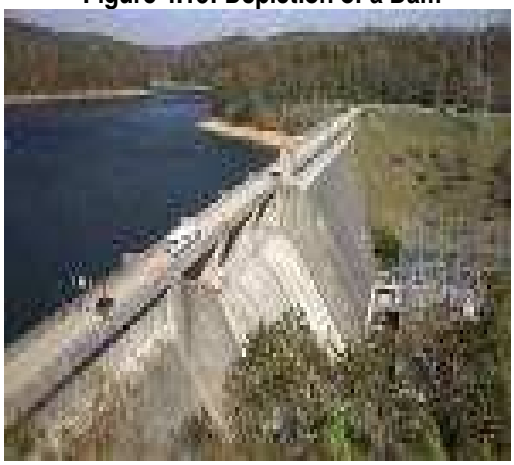
crowns may merge and form a closed canopy. Tree canopies are the primary fuel layer in a forest crown fire (U.S. Forest Service, 2003).

4.6 MANMADE HAZARDS IDENTIFICATION

4.6.1 Flooding Dam/Levee Failure Identification

A dam is a barrier constructed across a watercourse for the purpose of storage, control, or diversion of water. A levee is a barrier constructed along the side of a watercourse or along a coastal or bay shoreline for the purpose of preventing water-flow to extend beyond the watercourse or an ocean or bay. Dams and levees generally fall into the following categories**:**

Figure 4.15: Depiction of a Dam



Source: TVA

Earth Dams/Levees make up the vast majority of dams and levees and are safe if properly constructed and maintained.

Concrete Gravity Dams/Levees are designed to resist sliding and overturning.

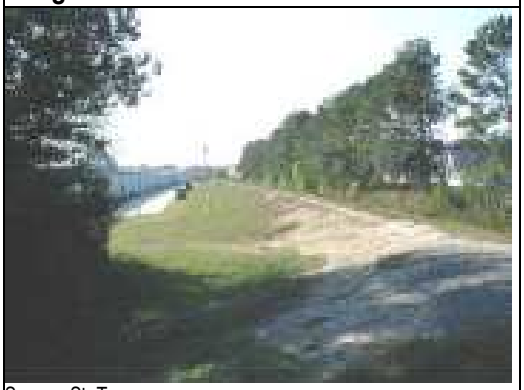
Buttress Concrete Dams/Levees have a strong foundation and are resistant to sliding, overturning and overflowing.

Arch Concrete Dams are used to narrow sites and have strong abutments.

Gravity Arch Concrete Dams are a conservative design of the Arch.

Stone Masonry Dams are constructed of stone or block with masonry joints.

Figure 4.16: Picture of a Slidell LA Levee



Source: St. Tammany

Dam/levee failure floods are usually associated with intense rainfall or rapid snowmelt. Coastal levees also fail as a result of storm surge. Dam/levee failure may be caused by faulty design, construction and operational inadequacies, or a flood event larger than the dam/levee design.

The degree and extent of damage from a dam failure depends on the size of the dam or levee. The greatest threat to people and property is in the area immediately below a dam since the volume of water decreases as the flood wave moves downstream.

The degree and extent of damage from a levee failure depends on the height and length of the levee preventing water from inundating the area protected by the levee and the elevation of the land or structures at risk. The greatest threat to people and property is in the area immediately adjacent to the waterway, ocean or bay. A levee failure resulting from storm surge would have a similar effect as a dam break were-as a levee failure along a watercourse generally affects an area over with a lower volume of water over a longer time.

4.6.2 Hazardous Materials Incident Identification

Varying quantities of hazardous materials are manufactured, used, or stored at an estimated 4.5 million facilities in the United States--from major industrial plants to local dry cleaning establishments and gardening supply stores. Hazardous materials are transported by highway, railway, waterway, and pipeline daily, so any area is vulnerable to event.

Figure 4.17: Hazmat Train Accident

Source: TVA

Hazardous materials incidents typically take three forms: transportation, pipeline incidents and fixed facility chemical and radiological incidents. It is reasonably possible to identify and prepare for a fixed site incident, as laws require those facilities to notify state and local authorities as to what is being used or produced. Transportation and pipeline incidents are much harder to prepare for, as the material involved and the incident location are not known until the accident actually occurs.

Transportation Incident is any hazardous material release during transport that poses a risk to health, safety, and property, as defined by Department of Transportation materials transport regulations. Hazardous materials transportation incidents can occur at any time and place, although the majority occurs on interstate highways, major federal or state highways, or on the major rail lines.

Figure 4.18: Hazmat Pipeline

Source: Petroleum Institute

Pipeline Incident is a release of HAZMAT materials that are transported by a pipeline. The potential risk of pipeline accidents is a significant national and county concern. United States are the principal mode for transporting oil and petroleum products such as gasoline, and virtually all natural gas in the U.S. is moved via pipeline as well. Much of this oil pipeline infrastructure is old, requiring regular safety and environmental reviews to ensure its safety and reliability. Virtually all natural gas in the United States is moved via pipeline. Energy pipelines are also extremely vulnerable to sabotage and disruption, and the resulting spills can generate large-scale environmental damage and require extensive clean-up and remediation. Recently, the U.S. Department of Homeland Security identified the energy sector as one of the 14 primary Critical Infrastructures and pipelines in particular must be evaluated to determine the impact of loss or damage. In 2004, the Hazardous Materials Pipeline Act required all pipeline owners to conduct an analysis of pipeline exposures**.**

Fixed Facility Incident is any occurrence of uncontrolled release of materials from a fixed site that poses a risk to health, safety, and property as determined in the EPA's Resource Conservation and Recovery Act. These materials are classed identically to those specified in the section on transportation accidents.

Radiological Incident is defined as the unintentional exposure to materials that emit ionizing radiation. Nuclear power plants are a significant potential source of ionizing radiation. The health and environment impacts from the Three-Mile Island and Chernobyl, Russia disasters illustrate the potential hazards from nuclear power plants. Other sources of ionizing radiation include medical and diagnostic X-ray machines, certain surveying instruments, some imaging systems used to check pipelines, radioactive sources used to calibrate radiation detection instruments, and even some household fire detectors.

Figure 4.19: HAZMAT Nuclear Facility

Source: TVA

Nuclear power plants are a significant potential source of ionizing radiation. The health and environment impacts from the Three-Mile Island and Chernobyl, Russia disasters illustrate the potential hazards from nuclear power plants.

4.6.3 Illegal Methamphetamine Labs Identification

Typically "meth" is a white powder that easily dissolves in water. Another form of meth is clear, chunky crystals called crystal meth, or ice. Meth can also be in the form of small, brightly colored tablets. The pills are often called by their Thai name, yabba. Street terms for Methamphetamine are meth, poor man's cocaine, crystal meth, ice, glass, and speed.

Figure 4.20 Methamphetamine

Source: DEA

Amphetamine, dextroamphetamine, Methamphetamine, and their various salts are collectively referred to as amphetamines. In fact, their chemical properties and actions are so similar that even experienced users have difficulty knowing which drug they have taken. Methamphetamine is the most commonly abused.

Illegal domestic labs that produce Methamphetamine (meth) are dependent on supplies of the precursor ephedrine or pseudoephadrine. Sometimes it is smuggled in quantity from Canada and Mexico, but may be readily purchased over-the-counter in the form of the decongestant Sudafed and other pseudoephadrine-containing cold tablets. Depending on the method used, meth is "cooked" using the cold medicine and other easily obtained items such as coffee filters, lye, battery acid, matchbook striker plates, iodine, lithium batteries, and Coleman fuel.

The process of cooking meth leaves behind a hazardous coating on walls, floors, and in ventilation systems. State law requires meth-contaminated property be quarantined until clean up operations have been completed and the property tested by a certified contractor as safe for habitation. Cost for cleaning and certifying a 1,200 square foot house is about $9,000. In hotels, rooms adjacent, above, and below must also be certified as safe.

Drug Enforcement Agency officials estimate that for each pound of meth produced, a lab operator winds up with 6 pounds of toxic waste, including leftover chemicals such as anhydrous ammonia, lye and solid meth residue.

Effects of usage include addiction, psychotic behavior, and brain damage. Chronic use can cause violent behavior, anxiety, confusion, insomnia, weight loss, auditory hallucinations, mood disturbances, delusions, and paranoia. Damage to the brain caused by meth usage is similar to Alzheimer's disease, stroke, and epilepsy.

4.6.4 Pandemics/Epidemics/Vectors Identification

Pandemics occur when disease affects large numbers of the population worldwide. Epidemics occur when large numbers are affected in a more localized area such as a city, region, state, or nation. Vector-based threats - bacteria, insects, and animals are threats that pose a direct or indirect hazard to humans, their food supply, or the economy**.**

Pandemics have occurred three times in the last 100 years in the world's human population.

The 1918-1919 Spanish Flu caused the highest number of deaths. India had 16 million deaths. The U.S. had 675,000 deaths. In England 230,000 died. In Germany 225,000 and in France 166,000 perished. World wide, the estimated fatalities were 20 million to 50 million. During the Spanish Flu pandemic, Spain closed its government. New York City closed its port and trains did not run. The British Navy did not sail for three weeks.

The 1957-58 Asian Flu was identified in February 1957 in China. By June, it had crossed the Pacific and entered the U.S. Globally, it caused a million deaths. In the U.S., 70,000 persons died. It was a Type A virus.

The 1968-69 Hong Kong Flu caused four million deaths worldwide and 34,000 deaths in the U.S. It was a Type A virus.

4.6.4.1 Human Pandemic/Epidemic Hazard Identification

Influenza occurs every year and nations attempt to prepare for the "flu season" which brings one to two weeks of symptoms, even pneumonia and death. The cost in the U.S. is $71 to $167 billion annually. Some 36,000 in the U.S. and 250,000 to 500,000 worldwide die annually.

Three types of influenza viruses exist: A, B, and C. Type A viruses are of most concern for humans, pigs, marine mammals and birds. Type B virus has been identified in the seal population and is fatal. Influenza C virus is associated with ticks.

Influenza viruses are constantly evolving. The viruses undergo minor and major modifications through antigentic drift and antigentic shift. Antigentic drift is the mechanism responsible for creating small changes in the genetic composition of the virus. Antigentic drift occurs in Type A and B influenza. Antigentic shift describes significant changes in the genetic structure of the virus. It occurs only in type "A" when two different virus strains are simultaneously present in a host or after transmission of viruses from different hosts. The two viruses swap genetic material creating a "new" virus. The ability to jump species, the constant changes in the generic makeup of the influenza virus, the potential for vaccine loss, and the rapid spread of Flu viruses are some of the reasons influenza is always a threat to the world's population.

Avian flu was first discovered in Canada. It is estimated that 50% of wild ducks in Canada carry forms of the flu. Highly infectious forms are destructive to domestic poultry. Three strains of avian influenza viruses are known to jump the species barrier from birds to non-human animals to humans: A(H9n2), A(H7N7) and A(H5N1). A(H5N1) is the most lethal, causing death in 68% of humans infected. Coughing or sneezing, victims spew infectious droplets at a rate of 150 feet

per second. Shaking hands or contact with contaminated public washrooms and doorknobs can spread the disease very quickly.

Scientists expect that an Avian H5 Flu virus, which has swept through chickens and other poultry in Asia, will transform into a flu that can be transmitted to humans. It has emerged as a highly pathogenic strain of influenza virus that is affecting the entire western component of Asia. The CDC is preparing for a possible pandemic. Humans have no immunity to this new avian flu.

Confirmed cases of human infection from several subtypes of avian influenza infection have been reported since 1997. Most cases of avian influenza infection in humans have resulted from contact with infected poultry (e.g., domesticated chicken, ducks, and turkeys) or surfaces contaminated with secretion/excretions from infected birds. The spread of avian influenza viruses from one ill person to another has been reported very rarely, and has been limited, inefficient and unsustained.

Small Pox (variola major) was last seen in the US in 1949. The last naturally occurring case was in Somalia in 1977. Smallpox vaccination in the US ended in 1972 except for military personnel.

When smallpox was considered eradicated worldwide, only two laboratories were designated to keep the virus. One lab was the CDC in Atlanta, Georgia, and the other lab was in Russia. When the USSR break-up occurred, the location of Russia's smallpox virus became unknown. It was widely thought that at least four other countries received part of the virus.

Variola is classified as a biological weapon, included on the "A" list by the CDC. The virus can be transmitted from person to person, may result in high mortality rate (30%), and cause panic and social disruption. Variola has a moderate to high potential for large-scale dissemination and requires special action for public health preparedness and response.

Hepatitis A Virus results from eating food or drinking water contaminated with human excrement. Outbreaks are associated with consumption of produce. Hepatitis A virus attacks the liver, is highly infectious, and can lead to varying degrees of illness, hospitalization and death.

Emerging Pathogens: Severe Acute Respiratory Syndrome (SARS) started in China in late 2002. The World Health Organization reported 29 countries were affected by the end of July 2003. There were 8,500 cumulative cases and 774 deaths. In the United States, 29 cases were confirmed. SARS is closely associated with influenza and is of major concern to all public health officials.

Emerging Pathogens: Monkey Pox Virus is an orthopoxvirus, which also includes cowpox and smallpox. It is a viral disease occurring in the rain forests of central and West Africa. Monkey pox is milder than smallpox. It was seen in the US June 14, 2003. It was introduced to this country by prairie dogs infected by Gambian rats imported by a distributor of exotic pets. By June 18, 2003, 87 persons in six states were confirmed with the virus.

4.6.4.2 Animal and Vector-Based Agriculture Hazard Identification

An "emerging" series of threats to communities is vector-based threats - bacteria, insects, and animals that pose a direct or indirect hazard to humans, their food supply, or the economy.

Foot and Mouth Disease (FMD) is a highly infectious and difficult to control disease of cloven-hoofed mammals including cattle, swine, wild sheep, goats, deer, and pigs. Although many people don't consider Foot and Mouth Disease to be a "threat," an outbreak of the disease in Europe caused widespread concern over the safety of the meat supply, as well as the possibility of resulting infection of humans. Federal, state and local officials, including the emergency

services community, have plans and procedures for handling incidents involving these threats. Should an outbreak occur anywhere in the United States, routine livestock movements could rapidly spread the disease making early detection, combined with immediate eradication of affected animals, crucial for controlling the disease. Left unchecked, the economic impact of FMD could reach billions of dollars in the first year. Deer and other wildlife would likely become infected and be a source for re-infection of livestock. FMD is not known to cause illness in humans.

Figure 4.21 Foot and Mouth Disease Animals

Source: Dept. of Agriculture

In recent years, FMD has been found in Africa, South America, Asia, and parts of Europe. Currently, North America, Central America, Australia, New Zealand and some countries in Europe are considered free of FMD. The United States has eradicated nine outbreaks of FMD, most recently in 1929.

Avian influenza in birds (AI) is a viral disease characterized by respiratory signs, depression and reduced feed and water intake. In egg laying birds there is a decline in egg production and quality. There are two pathotypes of AI virus: the most common is low pathogenic AI (LPAI) and the other is highly pathogenic AI (HPAI).

The most virulent form (HPAI) was once called fowl plague. At the 1981 International Symposium on Avian Influenza, the term fowl plague was replaced with the term "highly virulent" influenza virus infection. The AI epidemic of 1983-1984 required yet new terms to describe relative pathogenicity of different isolates of the same stereotypes (nonpathogenic, low-pathogenic, highly pathogenic).

Infected birds shed influenza virus in their saliva, nasal secretions, and feces. Susceptible birds become infected when they have contact with contaminated secretions or excretions or with surfaces that are contaminated with secretions or excretions from infected birds. Domesticated birds may become infected with avian influenza virus through direct contact with infected waterfowl or other infected poultry, or through contact with surfaces (such as dirt or cages) or materials (such as water or feed) that have been contaminated with the virus.

Infection with avian influenza viruses in domestic poultry causes two main forms of disease that are distinguished by low and high extremes of virulence. The “low pathogenic” form may go undetected and usually causes only mild symptoms (such as ruffled feathers and a drop in egg production). However, the highly pathogenic form spreads more rapidly through flocks of poultry. This form may cause disease that affects multiple internal organs and has a mortality rate that can reach 90-100% often within 48 hours.

4.6.5 Terrorism Identification

The Federal Bureau of Investigation (FBI) defines terrorism as “the unlawful use of force against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in the furtherance of political or social objectives.” Events typically would be expected in urban areas near public gatherings, government facilities, or highly visible areas. Terrorism is generally categorized as one of two types.

Domestic terrorism involves groups or individuals whose terrorist activities are directed at elements of our government or population without foreign direction.

International terrorism involves groups or individuals whose terrorist activities are foreign-based and/or directed by countries or groups outside the U. S., or whose activities transcend national boundaries.

A terrorist attack can take several forms including involving the use of "Weapons of Mass Destruction" (WMD). The term "Weapons of Mass Destruction" has various definitions. Common to all of them is the assumption that WMD's comprise incendiary, explosive, chemical, biological, radioactive, and/or nuclear agents. 50 U.S.C., § 2302 defines WMD as "any weapon or device that is intended, or has the capability, to cause death or serious bodily injury to a significant number of people through the release, dissemination, or impact of a toxic or poisonous chemicals or their precursors, a disease organism; or radiation or radioactivity."

4.6.5.1 Bombings Identification

Bombings are the most frequently used method terrorist event in the U. S. This includes the 1993 bombing of the World Trade Center in New York, the U. S. Capitol, Mobil Oil's corporate headquarters in New York City, and the bombing of the Alfred P. Murrah federal building in Oklahoma City. More recently, the World Trade Center Buildings and the Pentagon were the targets of a well-planned terrorist attack involving the use of commercial aircraft as flying bombs.

Figure 4.22 9/11 Terrorist Attack

Source: Dept. of Agriculture

4.6.5.2 Chemical/Biological Agents Identification

Chemical/Biological agents have been developed by several nations for use in warfare. Such agents are selected or adapted from bacteria, fungi, viruses, or toxins that cause various diseases in humans, animals, or food crops. Currently, the development of biological agents as weapons has kept pace with our ever-evolving day-to-day technology. Despite the widespread ban, international diplomatic efforts have not been entirely effective in preventing the enhancement and proliferation of offensive biological warfare programs. There are four major categories under which the chemical agents may be classified:

Blister agents are intended to incapacitate, rather than kill. These agents were used extensively during World War I. Their use by a terrorist group largely depends on the group's objectives and moral views. If the intent of an attack were to injure numerous people and overload the area's medical facilities without causing many deaths, then a blister agent would be the best choice.

Choking agents were the agents most used during WW I. With the advent of nerve agents, they have lost much of their usefulness. These substances are intended to cause death and are convenient and readily available to terrorists.

Blood agents are cyanide-based compounds. Unsuited for use on multitudes of people, the primary use would be the assassination of targeted individuals.

Nerve agents are the most recently developed chemical weapons. Originally developed by German scientists 1930's as insecticides, nerve agents were used as chemical weapons by the

Nazi military. Hundreds of times more lethal than blister, choking, or blood agents, nerve agents have been stockpiled as the primary chemical weapon. These chemicals are the most useful to terrorists due to the small quantity needed to inflict a substantial amount of damage.

4.6.5.3 Radiation Device Identification

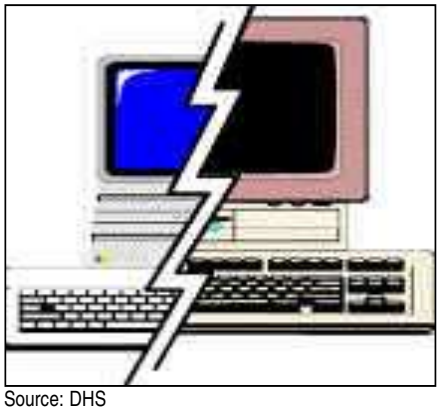
Radiation Devices including a nuclear bomb produce five primary potential effects:

- Overpressure: is when a nuclear weapon explodes in the atmosphere, a blast or shock wave is created that initially moves at speeds higher than the speed of sound.
- INR/EMP: Initial nuclear radiation (INR) is radiation in the first minute after detonation and is hazardous to unprotected people within about 1.5 miles. Electromagnetic radiation pulse (EMP) is the conversion of nuclear energy into electromagnetic frequency and occurs when a nuclear weapon is detonated outside of earth's atmosphere. EMP disrupts electrical and electronic equipment across entire continents. The equipment is unusable until repaired.
- Fire Risk: The combined effects of blast overpressure damage and the thermal pulse or fireball can ignite combustible materials, causing sustained fires. Primary fires are those ignited directly by the thermal pulse. Secondary fires are generated by damage and destruction from blast overpressures and result from the disruption of furnaces and gas and electric lines.
- Fallout risk: A nuclear explosion near the ground makes a big crater. Earth from the crater is changed from solids into hot gas and fine dust. This hot gas and dust, together with vaporized materials, form a giant fireball that rises rapidly and becomes the top part of the nuclear mushroom cloud. The heavier particles of earth become the stem of the mushroom cloud. The earth in the stem and in the mushroom cloud becomes radioactive. The top of the mushroom is a cloud of fine particles. The heavier, larger particles settle close to the point of explosion, the small particles float several hundred miles in the wind. The first 24 hours is the most dangerous period as the initial fallout is highly radioactive. The delayed fallout particles lose much of their radioactivity and reaches earth in rain or snow over periods ranging from days to years. The three kinds of dangerous radiation in fallout are alpha, beta and gamma. Gamma radiation penetrates the body, causing damage to organs, blood and bones. Large doses of gamma radiation can cause sickness or death. Small doses incurred over a long period of time may not have an immediate effect, but may cause various forms of illness later in life. Genetic damage in subsequent generations may also result. Alpha radiation is stopped by the outer skin layers and does not usually present an external hazard. However, if contaminated air, food, or water enters the body in sufficient quantity, considerable internal damage can occur. Beta radiation is more penetrating and may cause burns where fallout particles have deposited on the skin.

The effects of a nuclear/radiation attack have varying effects on populations. Those people located near the explosion would be killed or seriously injured by the blast, heat or initial nuclear radiation. People a few miles away would be subject to blast, heat, and fires. A high percentage of the population residing in the lighter damaged areas would probably survive, but might subsequently be endangered by radioactive fallout.

4.6.5.4 Cyber-Terrorism Identification

Figure 4.23 Cyber Attack



Source: DHS

The U.S. interest in promoting cyber-security extends well beyond its borders. Critical domestic information infrastructures are directly linked with Canada, Mexico, Europe, Asia, and South America. The nation's economy and security depend on far-flung U.S. corporations, military forces and foreign trading partners that require secure and reliable global information networks to function. The vast majority of cyber attacks originates or passes through systems abroad, crosses several borders, and requires international cooperation to stop.

In 1998, the United States received a wake-up call to the national security dimensions of the threat. Eventually dubbed "Solar Sunrise," this incident found U.S. military systems under electronic assault, with computer systems in the United Arab Emirates the apparent source. Unclassified logistics, administrative, and accounting systems essential to the management and deployment of military forces were penetrated at a time that military action was being considered against Iraq. The timing of the attacks raised U.S. suspicion that this was the first wave of a major cyber attack by a hostile nation. It was eventually learned that two California teenagers under the guidance and direction of a sophisticated Israeli hacker orchestrated the attacks.

Another event in February 2000, computer servers hosting several of the largest commercial web sites on the Internet were flooded with connection requests, which clogged systems and consumed server capacity. Ultimately, these denial-of-service attacks paralyzed large parts of the Internet. Close cooperation between U.S. and Canadian law enforcement investigators discovered that a Canadian teenager had been breaking into legions of computers around the world for many months. By retaining control over these compromised servers, he created a "zombie army" which on command would flood the servers of his next corporate victim. The cost of slowdowns and outages that occurred was an estimated billion dollars in economic losses.

On May 4, 2000, the "I love you" virus began infecting computers around the globe. First detected in Asia, this virus quickly swept around the world in a wave of indiscriminate attacks on government and private sector networks. The destructive virus infected nearly 60 million computers and caused billions of dollars in damage. Cooperation among law enforcement authorities around the world led to the identification of the perpetrator, a computer science dropout in the Philippines. He was neither charged nor punished for his deeds because, at the time, the Philippine criminal code did not explicitly outlaw such actions.

The possibilities of a terrorist incident include attacks on critical facilities and soft targets involving explosives, chemical/biological, disease, radiation or cyber agents. It is clear that U.S. domestic efforts alone cannot deter or prevent attacks. Local, state and federal law enforcement officials monitor suspected terrorist groups and try to prevent potential attacks. Additionally, the U. S. Government works with other countries to limit support for terrorism.

4.6.6 Transportation Accident Identification

A transportation accident is an incident related to a mode of transportation (highway, air, rail, waterway, port, harbor) where an emergency response is necessary to protect life and property.

Highways are the primary mode of transportation across the U. S, the State, and local jurisdictions and are directly responsible for the majority of fatalities and property loss

Bridge Failure can be a catastrophic cause of fatalities and property loss. There are several thousand bridges that are rated as structurally deficient across the United States

Figure 4.24 Transportation Accident

Source: FEMA

Train derailments can be a major cause of fatalities and property loss. There are several thousands of miles of railway across the United States whose use is divided between freight, passenger, and light rail commuter services. Plans for commuter trains and light rail are in various phases of implementation.

Commercial Waterways in many of the major rivers and along ocean coasts are critical to agricultural, mining and manufacturing economies. Shipments by barge, large vessel, or salt-water ship can result in significant property loss and water contamination.

Aeronautics Aircraft accidents, when they happen have significant impact on communities due to the loss of life. Aircraft, airports, and support systems such as radar stations and aircraft landing systems are vulnerable to natural hazards. Aircraft sustain damage from high winds if not tied down or in a shelter. Hail damage to an aircraft may render the aircraft not fit for airworthiness unless repaired

Transportation incidents require the routine response of local EMS units from across the county and are a significant cost burden to local fire districts. Incidents involving air or rail passenger travel can result in mass casualties or mass fatalities, and the release, or potential release, of hazardous materials.

4.6.7 Urban Fire Identification

Fire is a rapid, persistent chemical reaction that releases heat and light, especially the exothermic combination of a combustible substance with oxygen. A fire is categorized as both a natural hazard and a manmade hazard. The types of fires include:

Residential: single family dwellings, apartments, mobile homes, hotels, and motels.

Public and Mercantile: stores, restaurants, grocery stores, institutions, churches, public facilities, education.

Figure 4.25: Structure Fire

Source: NFPA

Industrial, Manufacturing: Other Buildings: basic industry, manufacturing, storage, residential garages and vacant buildings.

Vehicle Fires: aircraft, automobiles, trucks, trains, buses, boats.

There are many causes of fire as a technological hazard including careless smoking, cooking, or campfires, arson, improper building wiring, industrial mishaps, and instances such as train derailments or transportation collisions. Lightning is a natural hazard that can cause Urban Fires.

4.6.8 Utility Power Failure Identification

A major electrical power failure is defined as a failure of the electrical distribution system that exceeds twenty-four hours in duration and effect greater than 33% of a given geographical area.

The electric system in the U.S. is an interconnected, multi-modal distribution system that consists of three major parts: generation, transmission and distribution, along with control and communications. Generation assets include fossil fuel plants, hydroelectric dams, and nuclear power plants. Transmission systems link areas of the grid. Distribution systems manage and control the distribution of electricity into homes and businesses. Control and communications systems operate and monitor critical infrastructure components.

The nation's power and utility infrastructure has grown increasingly complex and interdependent; consequently, any disruption could have far-reaching effects. Large-scale power and utility failures may result from a variety of natural causes such as geomagnetic storms, High Winds, Lightning, Ice/Snow Storms and earthquakes. They may also result from a variety of manmade causes such as technological accidents, equipment failures or deliberate interference.

Almost every form of productive activity – whether in businesses, manufacturing plants, schools, hospitals, or homes – requires electricity. Utility Power systems are critical components to the overall health and safety of citizens. Our society uses utilities, including HVAC systems, daily and in some cases at certain times of the year these systems are for survival. A prolonged major electrical system failure during extreme temperatures, can have dramatic effects on a population.

4.6.9 Water Contamination Identification

The water sector consists of two basic and vital components: fresh water supply and wastewater collection and treatment. Water sector infrastructures are diverse, complex and distributed ranging from rural to urban systems. The primary focus of critical infrastructure protection efforts are the public water systems that depend on reservoirs, dams, wells and aquifers, as well as treatment facilities, pumping stations, aqueducts and transmission pipelines.

Drinking water comes from surface water and from ground water. Large-scale water supply systems tend to rely on surface water resources such as rivers, lakes, and reservoirs. Smaller water systems tend to use ground water pumped from wells.

The primary concern with regard to water infrastructure is adequate water supply and the damage or disruption of service that could be caused by natural or manmade hazards that could potentially include the following:

- The introduction of pollutants into public groundwater and/or surface water supplies;
- Chemicals from leaking underground storage tanks, feedlots and waste disposal sites;
- Human wastes and pesticides that may be carried to lakes and streams;

- Damage or destruction of water assets, including intentional releases of toxic chemicals;
- Actual or threatened contamination of the water supply;
- Cyber attack on water management systems or other electronic systems;
- Interruption of services from other infrastructure.

The Safe Drinking Water Act of 1974, sets uniform nationwide minimum standards for drinking water. State public health and environmental agencies have the primary responsibility for ensuring that federal and state drinking water standards are met by each public water supplier. The EPA requires an ongoing water quality-monitoring program to ensure water systems are working properly and require suppliers to inform the public if a supply becomes contaminated.

SECTION 5
RISK ASSESSMENT – HAZARD PROFILES

5.1 HAZARD PROFILES OVERVIEW

The second step of risk assessment is to prepare a profile for each hazard of concern. The Hazard Profile section focuses on hazards that are of particular concern and relevance to Scott County. The Hazard profile selection for mitigation planning is primarily based on the historic occurrence of a disaster in a jurisdiction unless a particular hazard has been eliminated or mitigated. However, as new developments occur and the environment changes, new hazards may become evident and must be considered for inclusion in a mitigation plan. Examples include a new industry that introduces a hazardous material, a political climate i.e. 9/11, (which introduced terrorism) and human, animal and plant diseases/infestations events.

Multi-hazard Requirement §201.6(c)(2)(i): The risk assessment shall include a] description of the location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.
A. Does the risk assessment identify the location (i.e., geographic area affected) of each natural hazard addressed in the plan?
B. Does the risk assessment identify the extent (i.e., magnitude or severity) of each hazard addressed in the plan?
C. Does the plan provide information on previous occurrences of each hazard addressed in the plan?
D. Does the plan include the probability of future events (i.e., chance of occurrence) for each hazard addressed in the plan?

CRS Step 4: Assess the Hazard: Credit is based on what the community includes in its assessment of the hazard. The minimum requirement is for the flood hazard only. However, additional credit can be earned by identifying and including a description of all other natural hazards

The hazard profile identifies the areas of the jurisdiction that are most severely affected by each hazard and describes the analysis or sources used to determine the probability, likelihood, or frequency of occurrence as well as the severity or magnitude of future hazard events. All data limitations are identified, and included in the mitigation strategy are actions for obtaining the data to complete and improve future risk analysis efforts. Each type of hazard has unique characteristics that vary from event to event. That is, the impacts associated with a specific hazard can vary depending on the magnitude and location of each event (a hazard event is a specific, uninterrupted occurrence of a particular type of hazard). Further, the probability of occurrence of a hazard in a given location impacts the priority assigned to that hazard. Finally, each hazard will impact different communities in different ways, based on geography, local development, population distribution, age of buildings, and mitigation measures already implemented

The Individual Hazard Profiles included in this section includes the descriptions of those hazards and summarizes the information from the detailed events found in the Supporting Annex. The supporting annex provides a detailed list of historic hazard events that includes:

- Sources of information used or consulted for assembling a history of past occurrences
- Date and Duration of occurrence
- Location of event

- Description and severity (i.e., flood depth, wind speeds, earthquake intensity, etc.);
- Damages that occurred (e.g., costs of recovery, property damage, and lives lost) to the extent available;

Included in this section are discussions of:

The location or geographical areas in the community that would be affected by the incident.

The extent (magnitude/severity) of a potential hazard is identified using technical measures specific to a hazard. Through the use of scientific scales, such as the Fujita Scale, Richter Scale, Beaufort Wind Scale, Saffir-Simpson Scale, and the Palmer Index or by using quantitative measurements such as: miles per hour, flood depth, inches of rain, fire danger rating, and acres burned, a magnitude or severity that could be experienced is identified for specific hazards.

The probability of the likelihood that the hazard event would occur in an area is identified through the use of an identified scale that is identified and discussed for specific hazards. In some cases the extent and/or probability of hazard events are classified using the terms high, medium, or low or a 1-3 or 1-5 measure where 1 is low.

A discussion of past occurrences of hazard events in or near the community

The profile section also provides a discussion of conditions, such as topography, soil characteristics, meteorological conditions, etc., in the area that may exacerbate or mitigate the potential effects of hazards. Where possible, the hazard profile also identifies on a map the areas affected by each identified hazard.

The hazards profiled include those that have occurred in Scott County in the past and may occur in the future. A variety of sources were used including national, regional and local sources, including Web sites, published documents, newspapers, databases, maps, a review of the citizen survey and a discussion with the Steering Committee.

5.2 STATE OF MINNESOTA 2008 MITIGATION PLAN HAZARD DISPOSITION

The hazards table below identifies the Natural hazards and their disposition in the State plan and in the Scott County Plan.

Table 5.1 Natural Hazard Disposition In The State of Minnesota 2008 Plan Update

Hazard	Data Sources	Probability	Mitigation Potential Rating	Disposition in the 2008 State Plan	Disposition in the 2009 Scott County Plan
Floods	NOAA, Minnesota Coastal Hazards Assessment, NWS, NFIP, FIRM	H	H	Identified, General profile, Risk Assessment	Identified, Profiled, Risk Assessment
Tornadoes	NOAA, NWS, SHELDUS, NWS, Minnesota Disaster Center	H	H	Identified, General profile Risk Assessment	Identified, Profiled Risk Assessment under High Winds
Hail	NOAA, NWS, Minnesota Disaster Center	H	M	Identified, General profile	Identified, Profiled
Coastal Erosion	Geological Survey of Minnesota, USGS, Coastal Hazards Assessment	H	M	Identified, General profile	Identified, Profiled

Table 5.1 Natural Hazard Disposition In The State of Minnesota 2008 Plan Update					
Hazard	**Data Sources**	**Probability**	**Mitigation Potential Rating**	**Disposition in the 2008 State Plan**	**Disposition in the 2009 Scott County Plan**
Severe Winter Storms	NOAA, NWS, SHELDUS	H	L	Identified, General profile	Identified, Profiled under Ice/Snow Storms
Blizzards	NOAA, NWS, SHELDUS	H	L		Identified, Profiled under Ice/Snow Storms
Ice and Ice Storms	NOAA, NWS, SHELDUS	H	L		Identified, Profiled under Ice/Snow Storms
Landslide	NOAA, USGS, MN Geological Survey,	M	L	Identified, General profile	Identified, Profiled
Sinkholes & Land Subsidence	Geological Survey of Minnesota, USGS	M	L	Identified, General profile	Identified, Profiled
Earthquake	Geological Survey of Minnesota, USGS, SHELDUS	L	L	Identified, General profile	Identified, Profiled
Drought	Minnesota Forestry Commission, Dept of Agriculture	H	L	Identified, General profile	Identified, Profiled
Wildfire	NOAA, Local Fire Service	H	H	Identified, General profile Risk Assessment	Identified, Profiled
Extreme Temperatures	NOAA, National Weather Service, SHELDUS	H	L	Identified, General profile	Identified, Profiled
Lightning	NOAA, NWS, SHELDUS	H	L	Identified, General profile	Identified, Profiled
Windstorms	NOAA, NWS, SHELDUS	H	H	Identified, General profile Risk Assessment	Identified, Profiled Risk Assessment under High Winds
Tropical Storms	NOAA, NWS, SHELDUS	L	L	Not Identified or Profiled	Not Identified or Profiled
Tsunami	NOAA, NWS, SHELDUS	L	L	Not Identified or Profiled	Not Identified or Profiled
Snow Avalanches	Local Response Departments	L	L	Not Identified or Profiled	Not Identified or Profiled
Expansive Soils	USGS	L	L	Not Identified or Profiled	Not Identified or Profiled
Volcanoes	USGS	L	L	Not Identified or Profiled	Not Identified or Profiled

The table below identifies the manmade hazards and their disposition in the State Plan and The Scott County Plan.

Table 5.2 Manmade Hazards Disposition in the 2008 State Mitigation Plan Update					
Hazard	**Information Source(s)**	**Probability**	**Mitigation Potential Rating**	**Disposition in the 2008 State Plan**	**Disposition in the 2009 County Plan**
Infrastructure Dam Failure	USACE, Corps of Engineers, Dam Safety	M	M	Identified, General profile	Identified, Profiled under flooding
Hazardous Materials	Environmental Protection Agency (EPA), NRC	M	L	Identified, General profile	Identified, Profiled
Infectious Disease	U.S. Center for Disease Control, Minnesota Dept. of Public Health,	L	L	Identified, General profile	Identified, Profiled
Nuclear Accident	NRC, Nuclear Energy Institute	L	L	Identified, General profile	Identified, Profiled under Hazardous Material
Terrorism Conventional bomb Improvised explosive device Biological agent Chemical agent Nuclear bomb Radiological agent Arson/incendiary attack Armed attack Cyber-terrorism Agri-terrorism Intentional Hazardous material release	DHS, Law Enforcement	NR	NR	Identified, General profile	Identified, Profiled
Transportation Accidents	National Transportation Safety Board, State DOT	L	L	Identified, General profile	Identified, Not Profiled
Urban Fire	Local Fire Departments, State Fire Marshal	M	L	Identified, General profile	Identified, Not Profiled
Utility Power Failure	Power Companies			Identified, General profile	Identified, Not Profiled
Water Contamination	Local Water Districts, Minnesota Dept. of Public Health	M	M	Identified, General profile	Identified, Not Profiled

5.3 NATURAL HAZARDS PROFILED

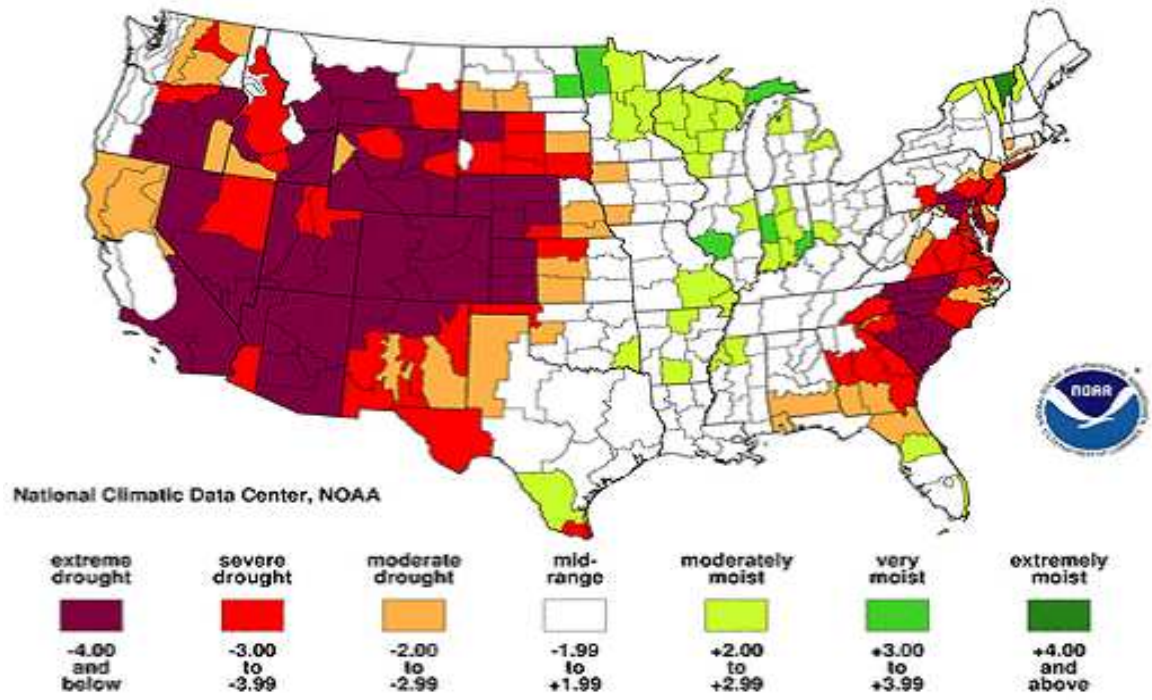
5.3.1 Drought Profile

A drought is an extended dry climate condition when there is not enough water to support urban, agricultural, human, or environmental water needs. It usually refers to a period of below-normal rainfall, but can also be caused by drying bores or lakes, or anything that reduces the amount of liquid water available. Droughts are a cumulative result of numerous meteorological factors. Most droughts in Minnesota begin with decreased precipitation during the winter and spring, when soil moisture is being recharged. Adequate soil moisture is important during early summer because mid- to late summer is the time of least precipitation and greatest evapo-transpiration.

Location

Drought is possible throughout the planning area. The Palmer Hydrological Drought Index indicates that Scott County is in a "moderately moist" area in being susceptible to drought.

Figure 5.1 Palmer Drought Index



Source: NOAA

Extent

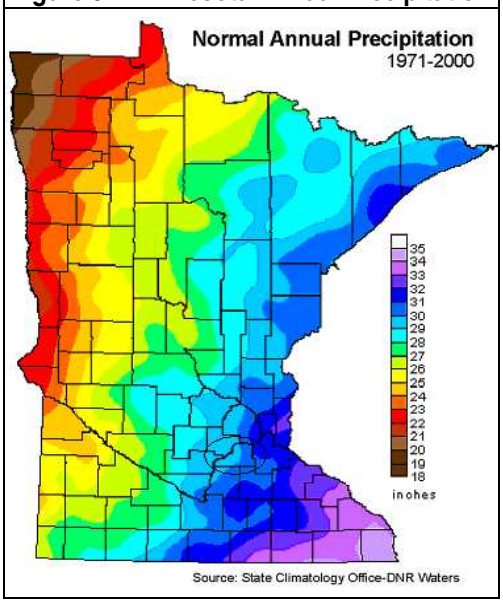
A drought's severity depends on numerous factors, including duration, intensity, and geographic extent as well as regional water demands by humans and vegetation. The severity of drought can be aggravated by other climatic factors, such as prolonged high winds and low relative humidity (FEMA, 1997). Due to its multi-dimensional nature, drought is difficult to define in exact terms

and also poses difficulties in terms of comprehensive risk assessments. Drought can cause extensive damage to the

foundations of commercial and residential structures, and the framing and walls, as well as agricultural crops, roads, bridges, pipelines, utilities and railroads.

There were 3 drought events from 1950 through 2008 impacting Scott County. No deaths, or injuries or damages were reported. However there was extensive crop loss.

Figure 5.2 Minnesota Annual Precipitation



Future Probability

Scott County experiences short to medium length droughts. Historically 3 droughts have occurred in the last 58 years and average of one every 19 years. This frequency is expected to continue and may increase due to global warming. The region is susceptible to extreme drought conditions. The risk of an extreme drought condition is low and the vulnerability is low

Historic Occurrences

The NOAA National Climatic Data Center (NCDC) database identified 3 droughts that impacted Scott County and its jurisdictions since 1950. In two cases the drought lasted two years or longer.

Table 5.3 Jurisdiction Historic Drought Events

Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets, Utilities, Roads, Bridges Damaged, Evacuation, Etc.	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Loss Amount	Type
1987 1989	Statewide	Most crops were lost. Drought affected power production, the forest products industry, public water supplies and fish and wildlife	0	0	0	0	0	
1974 1977	Statewide	Drought caused low water levels in wells and streams. Late summer forest fires occurred	0	0	0	0	0	
2003	Statewide	Crops were affected	0	0	0	0	0	
		TOTALS	0	0	0	0	0	
Data Sources		**USGS, Mn Dept of Geology**						
Loss Type		**A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup**						

Major Historic Occurrences Discussion

1987-1989 Drought established records for “average low precipitation” and “average high temperature”. Most crops were lost. Drought affected power production, the forest products industry, public water supplies and fish and wildlife.

Beginning in 1974 and continuing through 1977 dry conditions caused low water levels in wells and caused 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.

2003: For a three-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 six inches. During this 3-month period, rainfall totals rank among the lowest on record for many areas of south central and southeastern Minnesota, and a small portion of west central Minnesota

5.3.2 . Earthquake Profile

An earthquake is a sudden release of energy from the earth's crust that creates seismic waves. Tectonic plates become stuck, putting a strain on the ground. When the strain becomes so great that rocks give way, fault lines occur. At the Earth's surface, earthquakes may manifest themselves by a shaking or displacement of the ground.

Location

The location of an earthquake is described by its focal depth and the geographic position of its epicenter. The focal depth of an earthquake is the depth from the Earth's surface to where an earthquake's energy originates (the focus or hypocenter). The epicenter of an earthquake is the point on the Earth's surface directly above the hypocenter (Shedlock and Pakiser, 1997). Earthquakes usually occur without warning and can impact areas a great distance from the epicenter. All of Scott County is susceptible to a low intensity earthquake

Extent

The severity of earthquakes is influenced by several factors, including the depth of the quake, the geology in the area, and the soils. The Mercalli scale is the method most commonly used in the United States for measuring earthquake intensity. This twelve tier scale ranks observed effects from I, felt only under especially favorable circumstances, to XII, total destruction. The magnitude of an earthquake is measured through the use of the Richter scale. Earthquake magnitudes describe the subject on an absolute scale. An earthquake of magnitude 8, for example, is ten times stronger than a magnitude 7 earthquake, and 100 times stronger than a magnitude 6 earthquake, etc.

Table 5.4 Mercalli Scale of Earthquake Intensity And The Corresponding Richter Scale

Scale	Mercalli (Intensity)	Description of Effects	Maximum Acceleration	Richter Scale (Magnitude)
I	Instrumental	Detected only on seismographs	<10	
II	Feeble	Some people feel it	<25	<4.2
III	Slight	Felt by people resting	<50	
IV	Moderate	Felt by people walking	<100	
V	Slightly Strong	Sleepers awake; church bells ring	<250	<4.8
VI	Strong	Trees sway/objects fall off shelves	<500	<5.4
VII	Very Strong	Walls crack; plaster falls	<1000	<6.1
VIII	Destructive	Cars uncontrollable; poorly constructed buildings damaged	<2500	
IX	Ruinous	Houses damaged/ground cracks/pipes break	<5000	<6.9
X	Disastrous	Ground cracks profusely; many buildings destroyed; liquefaction and landslides	<7500	<7.3
XI	Very Disastrous	Most buildings collapse; pipes/roads, bridges, railways destroyed; triggers other hazards	<9800	<8.1
XII	Catastrophic	Total destruction; trees fall; ground rises and falls in waves	>9800	>8.1

Damaging effects include surface faulting, ground shaking, landslides, liquefaction, tectonic deformation, tsunamis, and seiches.

Surface faulting: Displacement that reaches the earth's surface during slip along a fault. Commonly occurs with shallow earthquakes, those with an epicenter less than 20 km.

Ground shaking: The movement of the earth's surface from earthquakes or explosions is produced by waves that are generated by sudden slip on a fault or sudden pressure at the explosive source and travel through the earth and along its surface.

Landslide: A movement of material down a slope.

Liquefaction: A process by which water-saturated sediment temporarily loses strength and acts as a fluid.

Tectonic Deformation: A change in the shape of a material due to stress and strain.

Tsunami: A sea wave of local or distant origin resulting from large-scale seafloor displacements associated with earthquakes, major submarine slides, or volcanic action.

Seiche: The waves in a lake or reservoir that are induced due to ground shaking.

Figure 5.3 Earthquake Damage

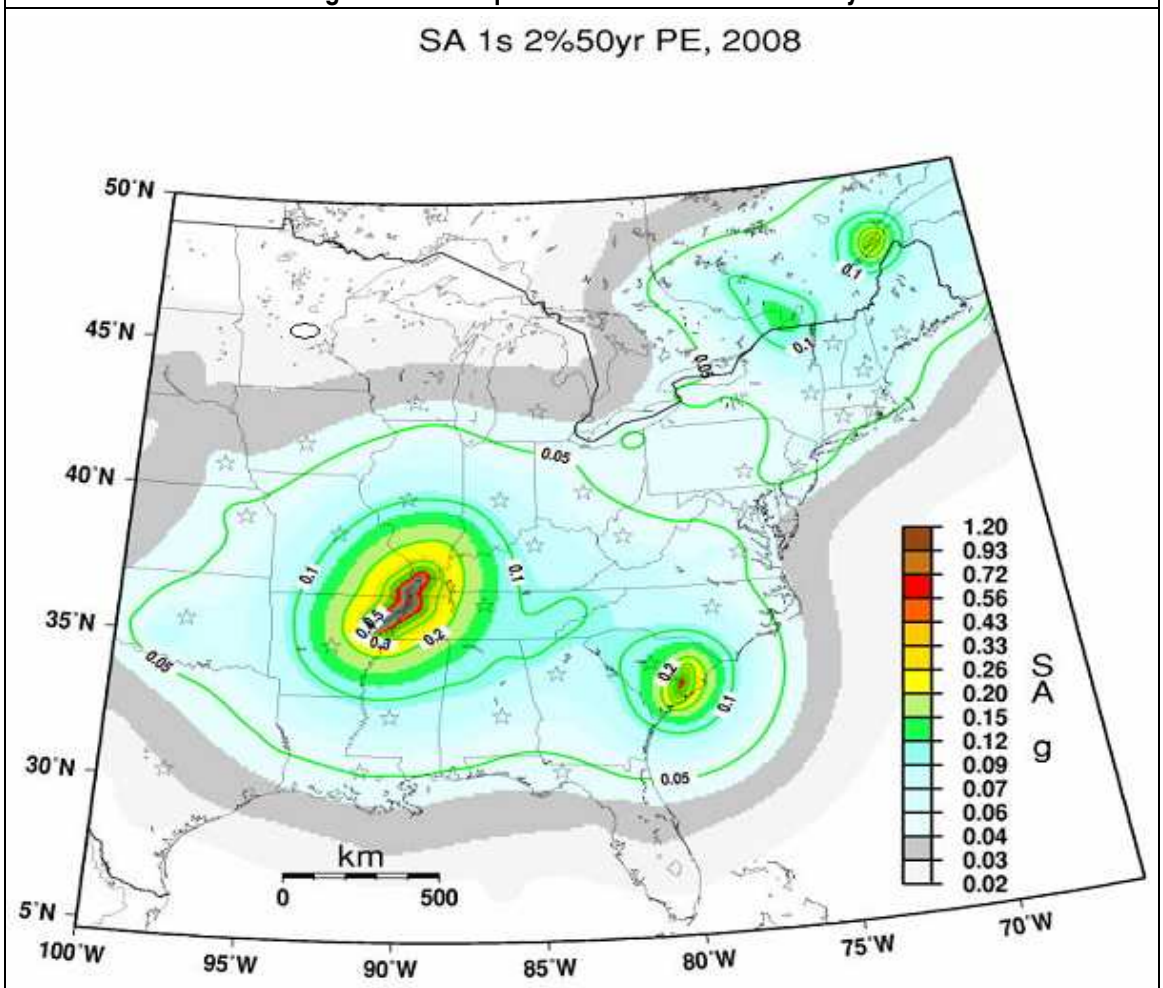
Source: Colorado University Earthquake Center

Most property damage and earthquake-related deaths are caused by the collapse of structures. The level of damage depends upon the amplitude and duration of the ground shaking, which is directly related to the earthquake size, distance from the fault, site, and regional geology. Earthquakes can affect hundreds of thousands of square miles, cause damage to property measured in the tens of billions of dollars, loss of life and injury to hundreds of thousands of persons, and disrupt the social and economic functioning of the affected area. Minnesota including Scott County has one of the lowest occurrence levels of earthquakes in the United States. A total of 19 small to moderate earthquakes have been documented since 1860. Minnesota earthquakes are attributed to minor reactivation of ancient faults in response to modern stresses. The strongest recent earthquake was a 4.7-magnitude quake that occurred near Morris, Minnesota in 1975. Historically a 4.7 earthquake impacted New Prague in 1860.

Future Probability

The U.S. Geological Survey shaking-hazard map for the United States is a based rate at which earthquakes occur in different areas and on how far shaking extends from earthquake sources. Colors on this map show the levels of horizontal shaking that have a 1-in-50 chance of being exceeded in a 50-year period. Shaking is expressed as a percentage of g (g is the acceleration of a falling object due to gravity). The map below indicates that Scott County is in a very low susceptible area.

Figure 5.4 Earthquake Potential for Scott County



Source: USGS

Scott County is susceptible to a New Madrid earthquake. Most of the risk in this area would be to non-structural items (light fixtures and bookshelves falling, etc.), but structural damages to weaker buildings and utilities (pipelines) could also occur. The future probability of an earthquake of sufficient intensity occurring in Scott County is low. The risk of significant damage caused by an earthquake is the county is also low however, should a 6.0 earthquake event or greater occur the vulnerability would be rated as high. Average recurrence rates for earthquakes that could affect Minnesota and Scott County have been estimated by MGS (Mooney, 1979) as follows:

- Magnitude 4.0 - 10 years
- Magnitude 4.5 - 30 years
- Magnitude 5.0 - 89 years
- Magnitude 5.5 - 266 years

Historic Occurrences

Historically, 19 small to moderate earthquakes have occurred in Minnesota including Scott County since 1860. Three earthquakes were in the relative vicinity of Scott County.

Table 5.5 Jurisdiction Historic Earthquake Events								
Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets, Utilities, Roads, Bridges Damaged, Evacuation, Etc.	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost Loss Amount	Type
1860	New Prague	Western Scott County estimated 4.7 earthquake damaged chimneys	0	0	0	0	0	
1881	New Ulm	60 Miles SE of Scott County 3.0-4.0 shook items of store shelves	0	0	0	0	0	
1981	Cottage Grove	50 miles NE of Scott County 3.6 shook items off shelves	0	0	0	0	0	
		TOTALS	0	0	0	0	0	
Data Sources		USGS, Mn Dept of Geology						
Loss Type		A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup						

Major Historic Occurrences Discussion

On December 16, 1860 an estimated 4.7 earthquake struck New Prague in Scott County reportedly knocked down chimneys

The largest known earthquake in Minnesota happened in Long Prairie in 1861.

5.3.3 Extreme Temperatures Profile

Temperatures that hover ten degrees or more above the average high temperature for the region and last for several weeks are defined as extreme heat. Humid or muggy conditions occur when a dome of high atmospheric pressure traps hazy, damp air near the ground. What constitutes extreme cold and its effects can vary across different areas of the country. In regions relatively unaccustomed to winter weather, near freezing temperatures are considered “extreme cold. Extreme cold events are when temperatures drop well below normal in an area.

Location

According to the National Weather Service (NWS), extreme temperatures in Minnesota and Scott County are characterized by the issuance of Wind Chill Warnings or Advisories in the winter months, and by the issuance of Excessive heat Warnings or Heat Advisories in the summer months.

The NWS issues a Wind Chill Advisory for Minnesota when widespread wind chills of 40 degrees below zero or lower with winds at least 10 miles per hour (mph) are expected. In some parts of southern Minnesota, the threshold may be 35 degrees below zero. A Wind Chill Warning is issued when widespread wind chills of 60 degrees below zero or lower with winds greater than 10 mph are expected. In some parts of southern Minnesota, the threshold may be 50 degrees below zero.

The NWS issues a Heat Advisory for Minnesota when, during a 24-hour period, the Heat Index ranges from 105 to 114 degrees during the day, and remains at or above 80 degrees at night. An Excessive Heat Warning is issued when, during a 24-hour period, the Heat Index reaches 115 degrees or more during the day, and remains at or above 80 degrees at night. An Excessive Heat Watch may precede a Warning. All of Scott is affected by Extreme Temperatures equally.

Extent

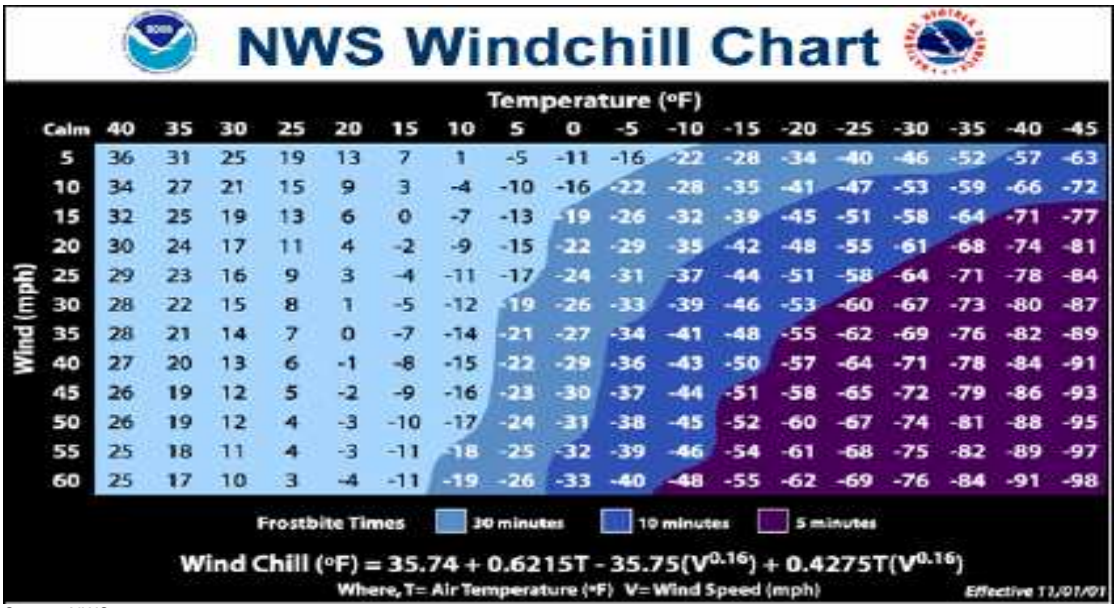
Exposure to cold temperatures can lead to serious or life-threatening health problems such as hypothermia, cold stress, frostbite or freezing of the exposed extremities.

Hypothermia If persons exposed to excessive cold are unable to generate enough heat to maintain a normal core body temperature of 98.6ºF (37ºC), their organs can malfunction. When brain function deteriorates, persons with hypothermia are less likely to perceive the need to seek shelter. Signs and symptoms of hypothermia (e.g., lethargy, weakness, loss of coordination, confusion, or uncontrollable shivering) can increase in severity as the body's core temperature drops. Infants and elderly are most susceptible to such conditions.

Extreme cold also can cause emergencies in susceptible populations, such as those without shelter or who are stranded, or those who live in a home that is poorly insulated or without heat. Infants and the elderly are particularly at risk, but anyone can be affected.

Extremely cold temperatures often accompany a winter storm, so individuals may have to cope with power failures and icy roads. Although staying indoors as much as possible can help reduce the risk of car crashes and falls on the ice, individuals may also face indoor hazards. Many homes will be too cold—either due to a power failure or because the heating system is not adequate for the weather. As people use space heaters and fireplaces to stay warm, the risk of household fires and carbon monoxide poisoning increases.

Figure 5.5 National Weather Service Wind-chill Chart



NWS Windchill Chart

Temperature (°F)

Wind (mph)	Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5		36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10		34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15		32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20		30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25		29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30		28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35		28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40		27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45		26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50		26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55		25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60		25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes, 10 minutes, 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01

Source: NWS

The combination of high temperatures and humid conditions increase the level of discomfort and the potential for danger to humans.

Figure 5.6 Heat Index Chart

Relative Humidity (%)	Temperature (°F)															
	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Heat Index	Notes
80-90	Caution - fatigue is possible with prolonged exposure and activity
90-105	Extreme caution - sunstroke, heat cramps, and heat exhaustion are possible
105-130	Danger - sunstroke, heat cramps, and heat exhaustion are likely; heat stroke is possible
over 130	Extreme danger - heat stroke or sunstroke are likely with continued exposure

S
ource NWS

The human risks associated with extreme heat include:

Heatstroke is considered a medical emergency and is often fatal. It exists when rectal temperature rises above 105F as a result of environmental temperatures. Patients may be delirious, stuporous, or comatose. The death to-care ratio in reported cases averages about 15%.

Heat Exhaustion is much less severe than heatstroke. The body temperature may be normal or slightly elevated. A person suffering from heat exhaustion may complain of dizziness, weakness or fatigue. The primary cause of heat exhaustion is fluid and electrolyte imbalance.

Heat Syncope is typically associated with exercise by people who are not acclimated to exercise. The symptom is a sudden loss of consciousness. Consciousness returns promptly when the person lies down. The cause is primarily associated with circulatory instability. The condition typically causes little or no harm to the individual.

Heat Cramps are similar to heat exhaustion; it is thought to be the result of a mild imbalance of fluids and electrolytes.

Extreme temperature events (both heat and cold) have caused 19 deaths and $2.5 million in damages in Minnesota from 1995-2007. Extreme heat caused the most deaths (15) and property damage in Minnesota. In 1995, approximately $2 million in property damage and 2 deaths were reported from high temperatures. In Scott County and adjacent counties Extreme Temperatures caused 4 fatalities, 1 injury and $1,000,000 in agricultural damages

Future Probability

There have been 16 occurrences of extreme temperature events since 1994. This equates to and event approximately every year. The annual probability of extreme temperatures occurring is

high. However, because the impacts are so localized and relatively moderate when compared to other hazards, the site- specific vulnerability of extreme temperatures is considered to be low.

Historic Occurrences

According to the NCDC/Sheldus hazard databases there have been 14 extreme temperature events in Scott County since 1980.

Table 5.6 Jurisdiction Historic Extreme Temperature (Hot/Cold) Events

Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets Damaged, Evacuation, Etc	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
01/15/ 1994	Countywide	Extreme Cold from 01/15 to 01/20 temperature of – 20 to -40 below zero across the county Wind chill were -60 -80 below zero. Schools and businesses closed and ice caused many accidents with 1 fatality	1	0	0	0	0	A
07/10 1995	Countywide	Extreme Heat from 07/10 to 07/14 produced heat indices up to 120 degrees. Two fatalities and 275,000 turkeys also perished.	2	0	0	0	1,000,000	A
12/08/ 1995	Countywide	Extreme Cold Wind chill readings dropped to 50 to 75 below through the morning of the 9th	0	0	0	0	0	
01/18/ 1996	Countywide	Extreme Cold from 01/18 to 01/19 produced wind chills of 50 below. Schools closed	0	0	0	0	0	A
01/31/ 1996	Countywide	Extreme Cold temperatures of 32 degrees below zero forced school closings	0	0	0	0	0	A
02/01/ 1996	Countywide	Extreme Cold from 02/01 to 02/04 temperature of –32 degrees forced school closings	0	0	0	0	0	A
12/24/ 1996	Countywide	Extreme Cold temperatures from 12/24 to 12/26 of 35 below zero set new records	0	0	0	0	0	A
01/15/ 1997	Countywide	Extreme Cold from 01/15 to 01/16 cause wind chills of 60 below zero forcing school closings	0	0	0	0	0	A
07/23/ 1999	Countywide	Extreme Heat from 07/23 to 07/25 produced heat indices of 110 degrees causing 1 fatality	0	0	0	0	0	A
07/29/ 1999	Countywide	Extreme Heat from 07/29 to 07/30 produced heat indices of 144 degrees	0	0	0	0	0	A
07/30/ 2001	Countywide	Extreme Heat from 07/30 to 07/31 produced heat indices of 122 degrees causing an injury.	0	1		0	0	A
08/01/ 2001	Countywide	Extreme Heat resulted in heat indices above 100 degrees	1	0	0	0	0	A
08/04/ 2001	Countywide	Extreme Heat from 08/04 to 08/08 produced heat indices of over 100 degrees and caused 5 fatalities in adjacent Hennepin County	0	0	0	0	0	A
07/30/ 2006	Countywide	Excessive Heat from 07/30 to 07/31 produced heat indices of 110 degrees	0	0	0	0	0	A
02/10/ 2008	Countywide	Extreme Cold temperatures produced wind chills of –48 degrees below zero	0	0	0	0	0	A

Table 5.6 Jurisdiction Historic Extreme Temperature (Hot/Cold) Events								
Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets Damaged, Evacuation, Etc	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
02/19/ 2008	Countywide	Extreme Cold from 02/19 to 02/20 produced wind chills of –45 degrees below zero	0	0	0	0	0	A
01/14/ 2009	Countywide	Extreme Cold temperatures produced wind chills of 60 degrees below zero	0	0	0	0	0	A
		TOTALS	4	1		0	1,000,000	
Data Sources		NOAA/NWS, Sheldus, Local Sources						
Loss Type		A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup						

Major Historic Occurrences Discussion

On January 15 1994 an arctic air mass dropped into the north-central states from western Canada causing an extended period of near record cold across Minnesota and Scott County. Low temperatures ranged from 20 below to 40 below zero with daytime high temperatures remaining below the zero mark. A biting north wind accompanied the cold causing wind chill readings in the 60 below to 80 below zero range. The Governor of Minnesota closed all public schools in the state on the 18th. The University of Minnesota at both the Twin Cities and Duluth campuses were also closed on the 18th because of the cold. Many businesses were closed or closed early throughout the cold wave. The city water system in nearby Kittson County froze, leaving most of the surrounding area without water. Accidents were common as car exhaust froze on contact with the cold pavement causing extremely icy roadways. A 69-year-old woman died of exposure (hypothermia) after she collapsed outdoors.

On July 30 2001 a heat wave began on the 30th and persisted until August 1. Temperatures on July 30 soared into the upper 80s and lower 90s while dew points climbed into the middle 70s to lower 80s, resulting in triple digit heat indexes. Minneapolis-St. Paul adjacent to Scott County set a record with 31 consecutive hours during which the dew point was equal to or greater than 74 Heat index values reached triple digits Korey Stringer, a professional football player for the Minnesota Vikings of the NFL, practiced during the late morning of the 31st in Mankato (Blue Earth County). He collapsed shortly after practice and was taken to the hospital.

On August 4 and through August 8 2001 an extensive heat wave persisted for five days and resulted in five fatalities in adjacent Hennepin County. Hot weather and tropical-like humidity pervaded the region, as virtually all stations registered highs in the 90s all five days. Most locales noted highs in the middle and upper 90s, but there were two places which topped out in triple digits: Heat indexes exceeded 100 most every day at most every location.

On January 14 and through January 16 low temperatures and brisk winds caused wind chill values to fall below -35 for hours. The upper level pattern caused significant arctic air to invade Minnesota and Scott County. A deep snow pack and several minor snowfall events prior to this arctic outbreak allowed for little modification of this air mass as it dived southward. Temperatures dropped below zero and stayed below zero for the majority of the outbreak. In addition to the low temperatures, brisk winds of 10 to 20 mph caused wind chill values to drop into the 40 to 60 below range.

5.3.4 Flooding Profile

Flooding occurs when abnormally high stream flow overtops the natural or artificial banks of a watercourse. The three-principle types of floods, which may affect Scott County, are: dam/levee failure floods flash floods, riverine floods.

5.3.4.1 Flooding Dam/Levee Failure Profile

Dam/levee failure floods are usually associated with intense rainfall or flood conditions. Dam/levee failure may be caused by faulty design, construction and operational inadequacies, or a flood event larger than the dam/levee design.

Location

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 1460 feet above mean sea level.

According to the Corps of Engineers there are 10 dams in Scott County, two have been categorized in the "significant hazard" classification. This classification is assigned to a dam depending upon the urban development directly downstream of the dam.

Table 5.7 Dams in Scott County

Dam Name	River or Stream	Nearest Town	Hazard Rating
Cedar Lake	TR-Sand Creek	Helena	Low
Dvorak Wildlife Pond	Sand Creek, Off stream	Jordan	Low
Henry Pond	TR-Vermillion	Farmington	Low
Hilgenberg Pond	TR-Minnesota Lake	Lakevillle	Significant
Jeffers Fish Pond	TR-Pikes (sic) Lake	Prior Lake	Low
Jeffers Wildlife Pond	TR-Pikes (sic) Lake	Prior Lake	Low
Maxa Pond	TR-Vermillion	Farmington	Low
Pettit Wildlife Pond	TR-Vermillion, Off stream	Farmington	Low
Ruehlings Pond	TR-Minnesota River	Belle Plaine	Low
Sand Creek	Sand Creek	Jordan	Significant

The cities of Savage, Shakopee and Belle Plaine which are located along the Minnesota River are susceptible to flooding from levee failure as is the town of Jordan should the levee along Sand Creek fail. The townships of Jackson, Louisville, Sand Creek, St Lawrence and Blakeley are also susceptible to flooding from natural and/or manmade levee failure along the Minnesota River.

Extent

The areas impacted by a dam failure are analyzed on the basis of "sunny day" failures and failures under flood condition. Typically, the dam-break floodplain is more extensive than the floodplain used for land use development purposes, and few communities consider upstream dams when permitting development. The potential severity of a full or partial dam failure is influenced by two factors: the amount of water impounded, and the density, type, and value of development and infrastructure downstream.

The greatest threat to people and property is in the area immediately below the dam since flood discharges decrease as the flood wave moves downstream. A small dam retaining water in a stock pond may result in little damage, but could result in the loss of irrigation water, causing financial hardship to farmers. Failure of a larger dam might bring about considerable loss of property, destruction of cropland, roads, and utilities, and loss of life. Far-reaching consequences can include loss of income, disruption of services, and environmental devastation.

Man-made levees can fail in a number of ways. The most frequent (and dangerous) form of levee failure is a breach. A levee breach is when part of the levee actually breaks away, leaving a large opening for water to flood the land protected by the levee. A breach can be a sudden or gradual failure that is caused either by surface erosion or by a subsurface failure of the levee. Levee breaches are often accompanied by levee boils, or sand boils. A sand boil occurs when the upward pressure of water flowing through soil pores under the levee (under seepage) exceeds the downward pressure from the weight of the soil above it. The under seepage resurfaces on the landside, in the form of a volcano-like cone of sand. Boils signal a condition of incipient instability, which may lead to erosion of the levee toe or foundation or result in sinking of the levee into the liquefied foundation below. Complete breach of the levee may quickly follow.

Sometimes levees are said to fail when water overtops the crest of the levee. Levee overtopping can be caused when floodwaters simply exceed the lowest crest of the levee system or if high winds begin to generate significant swells in the ocean or river water to bring waves crashing over the levee. Overtopping can lead to significant landside erosion of the levee or even be the mechanism for complete breach

In 1965 an estimated 2,500 acres of cropland in Scott County was flooded by the Minnesota River. The loss of revenue measured in average yield of crops per acre in this entire area is estimated to approximate $270,000.

The Minnesota River floods of 1993, and 1997 resulted in major flood damage to areas that had not experienced flooding in many decades. The 1997 flooding along the Minnesota River broke most existing flood records. The estimate of public infrastructure damage in Minnesota from the flood was approximately $300 million. Before the water receded, 58 of Minnesota's 87 counties were declared federal disaster areas. The American Red Cross reported that the massive floods affected 23,263 families. Total flood damages and associated economic impacts were estimated to be as high as $2 billion

The State of Minnesota has granted a Presidential Disaster Declaration to Scott County specifically for flooding 3 times in the past 34 years and has received in disaster payments of 406,430 (993), 111,124 (1175) and 85,403 (1370). River flooding has caused $7,898,585 in damages, 4 fatalities and 1 Injury in Scott County

Future Probability

The probability of a dam failure in Scott County is rated low and the vulnerability is rated medium. However failures of the natural and manmade levees are common in Scott County. The failure is usually overflows of the levees. There have been 10 major flood events were Minnesota River floodwaters overflowed the levees in 55 years. This is calculates to a major flood event every 5.5 years. The future probability is high with the vulnerability also rated high.

Historic Occurrences

No reports of dam failure in Scott County were found. However, statewide there have been numerous dam failures. The table below identifies 10 flooding events on the Minnesota River, Credit River and Sand Creek that involved some amount of levee overflow.

Table 5.8 Historic Riverine Flooding Ice/Snow Melt

Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets, Utilities, Roads, Bridges Damaged, Evacuation, Etc,	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
April 1952	Savage Shakopee	Flood-waters reached 714.20 feet in Savage flooding basements, eroding roads and fields and closing Co. Rd. 21 and Hw 282	0	0		270,000	0	
5/20/ 1960	Jordan	Flood waters.	0	0		750,000	3125	A
April 1965	NW County	Flooding from Minnesota River resulted from snowmelt and rainfall Shakopee flooded to a far greater extent than anytime in the town's history. Disaster Declaration (188), significant crop loss The Credit River flooded Elm Street	2	1		257,412	270,000	A
1969	Savage Shakopee Jordan Belle Plain	Flooding on the Minnesota resulted from snowmelt and rainfall. caused a loss of 9 lives, and damages estimated at $150 million Statewide. (Disaster Declaration (255, 268)	0	0		500,000	0	
1993	Savage Shakopee Jordan	Flooding occurred throughout the spring and summer of 1993 that were commonly greater than a 10-year flood event. Disaster Declaration (993)	2	0		4878048	0	
1997	Savage Shakopee Jordan Belle Plain	Flood resulted from rapid melt of deep snow covering much of Minnesota, serious flooding occurred from March to May 1997. Disaster Declaration	0	0		300,000	0	
04/01/ 2001	Savage Shakopee Jordan Belle Plain	Flooding from April 1, to April 17 in Scott County. Eagle Creek backed up and flooded Co. Rd 101. Hiway 41, Co. Rd 69 and 101 was closed. Huber Park and Valley Haven Mobile Home Park flooded	0	0		250,000	0	
04/12/ 2006	Jordan	Flooding was expected to close the County Road 9 river crossing near Jordan	0	0		50,000	0	
04/07/ 2006	Countywide	Scott County closed portions of County Road 101 and Highway 41	0	0		100,000	0	
03/22/ 2007	Shakopee	Flooding river near flood stage at Shakopee. Water eroded some highways and a railroad. % Boxcar fell into the river	0	0		270,000	0	
		TOTALS	4	1	0	7,625,460	273,125	
Data Sources		**NOAA/NWS, Sheldus, Local Sources**						
Loss Type		**A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup**						

Major Historic Occurrences Discussion

In 1965 a combination of heavy winter snows and early spring rains brought flooding to the Minnesota Valley that was the worst in 100 years. By the second weekend in April the waters of the Minnesota River were 21 feet over flood stage in the Savage area. Trains were halted bridges were inundated, and roads closed. The greatest inconvenience was caused by the flooding of the then new 35W freeway. Under two feet of water in some places, it was closed between Bloomington and Highway 13 for almost a week. With the Savage and Cedar Ave. Bridges also under water, northbound traffic was routed over the Mendota Bridge and traffic jams resulted. Savage Village, protected by expensive diking along Highway 13, was spared, but several river front industries in Savage and Burnsville were completely flooded and suffered heavy losses.

The Richards Oil Company, west of Savage, abandoned diking. Its huge tanks, usually filled with oil, were emptied and partially refilled with water to keep them from floating away. Loss the company was estimated $40,000. At the Port Cargill grain terminal only two structures remained dry, a half-million bushel soybean tank and an elevator containing $16,000,000 worth of grain. Emergency help was called to patch the dike protecting this structure. The Embassy Club, now the Corner House, was flooded in spite of extensive diking. All furniture and equipment was evacuated. Further diking and pumping, however, kept the water in the building to one or two feet. The Northern States Power Black Dog plant was completely surrounded by water and employees were taken to work in amphibious ducks. Electric power continued to be supplied to the area. Floodwaters threatened to seep into downtown Savage, the Village was sandbagged. A dike ranging from two and a half feet to four feet high had been built on the north side of Highway 13 from the railroad trestle to the corner of Walnut Street. The Credit River, running through Savage, was also diked.

The 1997 spring flooding along the upper reaches of the Minnesota River and Red River of the North broke most existing flood records in Minnesota. The Federal Emergency Management Agency's (FEMA) estimate of public infrastructure damage in Minnesota from the flood was approximately $300 million. Before the water receded, 58 of Minnesota's 87 counties including Scott County were declared federal disaster areas. The American Red Cross reported that 23,263 families were affected by the massive floods. Total flood damages and associated economic impacts were estimated to be as high as $2 billion

On April 1, 1997 monitoring points along the Minnesota River reached crests that were at 3rd or 4th all time record levels, including Mankato, Henderson, Jordan, Shakopee and Savage. Minnesota River flooding resulted in severe losses to public and private property. An early spring storm brought heavy rain, snow and high winds to the area on 4/5-6/97 at the peak of the flooding, severely aggravating the situation. Roadways closed in Scott county

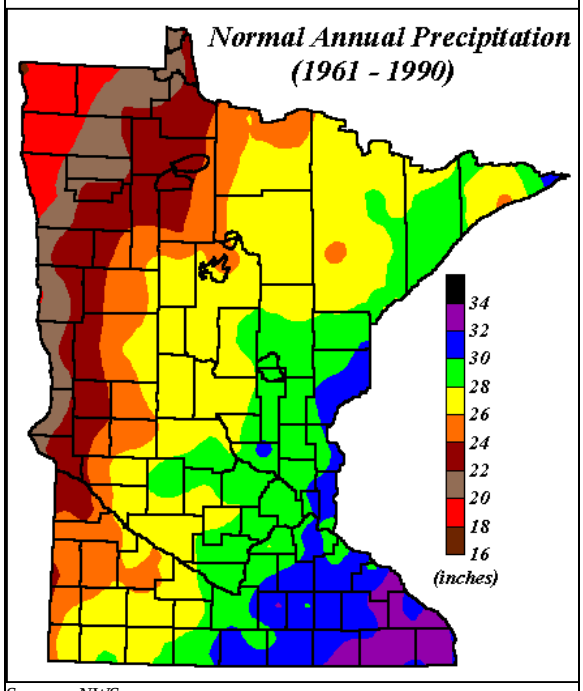
April 1 2001 Heavy snowfall during winter remained on the ground through the end of March and then rapidly melted, resulting in river stages close to record levels. The crest at Montevideo on the Minnesota River was the second highest ever, only 1.3 feet lower than in 1997. The crest at Stillwater on the St. Croix River was the second highest crest ever, only 1.8 feet lower than in 1965. The crest on the Minnesota River at Henderson came within one half foot of its record level that was set in 1965. The Mississippi River at St. Paul, Hastings, and Red Wing crested at its third highest level ever, lower only than during the floods of 1965 and 1969. The other fatality came when two men drove around a barricade on Highway 101 at Shakopee (Scott County) and drove into the Minnesota River

5.3.4.2 Flash and Riverine Flooding Profile

Flash Flooding affects Scott County in residential or business/industrial areas. Riverine flooding affects Scott County along rivers, various small streams and lakes. The major causes of these floods in Scott County are; (1) thunderstorms; and (2) slow-moving or stationary frontal systems. Minnesota receives more annual rainfall than any other state, creating a high potential for riverine and flash flooding.

Thunderstorm and frontal flooding tends to occur in Minnesota during anomalous years of prolonged, regional rainfall (such as an El-Nino year) and excessive snowfall, and is typified by increased humidity and high spring/summer temperatures. Flash flooding is a critical natural hazard caused by too much rain falling and/or snow melt in a short time, often a result of thunderstorms or the remnants of a tropical storm. Several factors contribute to flash flooding: rainfall intensity and duration, topography, soil conditions, and ground cover. Most flash flooding is caused by slow-moving thunderstorms, repeatedly moving over the same area, or by multiple storm cells colliding. Flash flooding can occur within a few minutes of excessive rainfall. Thunderstorms produce flash flooding, often far from the actual storm, and water may rise at night when natural warnings may not be noticed

Figure 5.7 Precipitation in Minnesota



Source: NWS

Location

Flooding caused by rainfall occurs to some extent in almost every part of Scott County. Flood producing storms over the Red River basin are usually of the frontal type. They usually occur in the winter and spring and last from 2 to 4 days. Normally 5 to 6 inches of intense or general rainfall will cause widespread flooding, but on many smaller streams, 3 to 4 inches of rainfall are sufficient to produce significant flooding. Flooding potential from surface storm-water runoff is widespread throughout the county but is most prevalent along:

Table 5.9 Scott County Waterways Prone to Flooding	
Bevens Creek	Nine Mile Creek
Big Possum Creek	Philipps Creek
Bluff Creek	Porter Creek
Carver Creek	Raven Creek
Credit River	Robert Creek
Eagle Creek	Sand Creek
Minnesota River	Vermillion River

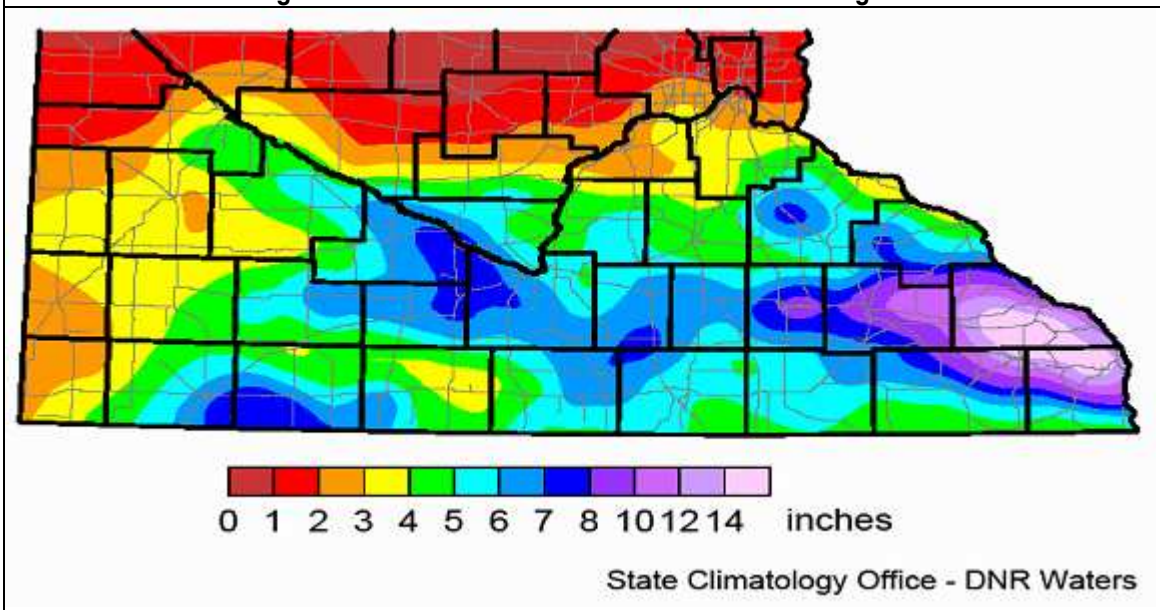
Extent

Flash floods are also of great concern to the Scott County. In a publication entitled, Sixteen Year Study of Minnesota Flash Floods (DNR, State Climatology Office and University of Minnesota Soil Sciences Department, January 1988), it is noted that Minnesota averages five flash floods annually. The earliest flash floods have occurred in May. The monthly distribution of flash floods shows June with the greatest number of events and the flash flood "season" continuing through September.

The heavy rain episode of August 18-20, 2007 was one of the most extraordinary precipitation events in Minnesota's modern history. During the event, a new Minnesota 24-hour rainfall record was broken. The State Climate Extremes Committee has agreed that the 15.10" total recorded at 8:00 AM on Sunday, August 19, 2007 near Hokah in Houston County is the largest 24-hour rainfall total ever measured at an official National Weather Service observing station in Minnesota.

This is the largest 24-hour rainfall total ever recorded by an official National Weather Service reporting location in Minnesota. The deluge produced flooding tied to seven fatalities. Major flood damage occurred in many southeastern Minnesota communities including Scott County. Hundreds of homes and businesses were impacted. Reports of stream flooding, urban flooding, mudslides, and road closures were numerous throughout southern Minnesota

Figure 5.8 Rainfall Totals for Southern Minnesota August 18 – 20-



The State of Minnesota experiences an average annual direct flood loss of at least $60 - 70 million. Average annual direct flood loss figures of this type have historically included:

- Direct loss to the individual homeowner, business, and agricultural interests (e.g., structural and contents damage, damage to motor vehicles, crop loss, etc.)
- Damage to the community infrastructure (storm sewers, roads, bridges, etc.)
- Costs associated with the flood fight and clean up.

Thunderstorm/Frontal flooding in Scott County has resulted in 0 fatalities, 0 injuries, and $1,693,155 in property damage.

Future Probability

There have been 27 flooding events caused by thunderstorms or strong fronts since 1961 a period of 47 years or a major flooding event approximately every 1.74 years. It is expected that the frequency and severity of these events will continue into the future resulting in a risk assessment of high and a vulnerability assessment of high

Historic Occurrences

According to the NCDC data base and local information there have been 13 occurrences of Riverine/Flash Flooding causing significant damage to structures in Scott County.

The NCDC/Sheldus databases and the Birmingham National Weather Services have documented 27 flooding events resulting from thunderstorms or strong weather fronts.

Table 5.10 Historic Riverine/Flash Flooding Thunderstorm/Frontal System

Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets, Utilities, Roads, Bridges Damaged, Evacuation, Etc,	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
06/25/ 1978		Flooding	0	0	0	625,000	6250	
6/30/ 1983	Countywide	Flooding Flash	0	0	0	14285	14287	
07/23/ 1987	Countywide	Flood Flash Heavy rain resulted in major flooding throughout the county.	0	0	0	833,333	0	
09/15/ 1992	Countywide	Flood Flash Thunderstorm dropped 7”ain across Scott county roads closed streams flooded basements	0	0	0	0	0	
07/22/ 1997	Prior Lake	Flood Flash Thunderstorms deposited heavy rainfall caused a small landslide on the shore of Prior Lake.	0	0	0	0	0	
07/25/ 1997	Belle Plaine	Flood Flash street and basement flooding	0	0	0	0	0	
06/28/ 1998	Jordan	Flood Flash, Sand Creek 2 bridges were washed out and emergency personnel erected a sandbag wall, flooding damage was minimized. 6.80 inches of rain fell between the 24th - 27th	0	0	0	0	0	
06/18/ 2001	Jordan Blakeley	June 18, when the County Road 9 bridge in Jordan and the City. Rd. 1 bridge in Blakeley closed due to flooding.	0	0	0	0	0	
08/03/ 2002	Countywide	Flood Flash up to 6” inches of rain fell within three hours. Streets from Belle Plaine to Shakopee flooded with two to three feet of water, and numerous basements were filled with several feet of water. Mudslides in Jordan and Belle Plaine	0	0	0	200,000	0	

Table 5.10 Historic Riverine/Flash Flooding Thunderstorm/Frontal System								
Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets, Utilities, Roads, Bridges Damaged, Evacuation, Etc,	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
09/04/ 2005	Countywide	Flood Flash up to 6 " of rain streets and basements flooded. In Shakopee many cars had water up to the roof	0	0	0	0	0	
10/04 2005	Countywide	Flood Flash 5" of rain throughout Scott County, Credit River overflowed In Shakopee Quentin Ave. was closed. Streets, basements classrooms and homes flooded, retention ponds overflowed washing out sections of gravel alleys and streets.	0	0	0	0	0	
06/16/ 2006	Jordan	Flood Flash Localized flooding	0	0	0	0	0	
09/10/ 2008	Jordan	Flooding-Six inches of rain fell in a few hours in the area. Spring Lake had a vertical rise of 14 inches. The broad east dike of the high-level park lagoon (the Mill Pond) was eroded down from the top by over flowing water	0	0	0	0	0	
13		Totals	0	0	0	1,672,618	20,537	
Data Sources		NOAA/NWS, Sheldus, Local Sources						
Loss Type		A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup						

Major Historic Occurrences Discussion

July 22,1997 A Slow moving thunderstorms deposited heavy rainfall on already well saturated ground. Morning rainfall amounts included 4.85 inches in Eagan, 4.05 inches in Golden Valley, 4.60 inches in Edina, 3.10 inches in Delano, 4.25 inches in Henderson, 3.13 inches in Hastings, 2.75 inches in Glencoe and 3.11 inches in Red Wing. Street flooding was reported in Minneapolis, Glencoe, Henderson, Bloomington and Eagan. The wet soil caused a small landslide on the Shore of Prior Lake.

July 25, 1997 Heavy rains resulted in street and basement flooding. Some rainfall reports included 4.1 inches at Lafayette, 4.03 inches at Stewart, 3.00 inches in Henderson and Cannon Falls. Many roads closed in the southwest part of Goodhue County. Hidden Valley campgrounds evacuated in Welch Township in Goodhue County. Street flooding reported in Lonsdale, LeSueur, New Prague, Montgomery, and Belle Plaine.

June 28, 1998 Repeated heavy rainfall resulted in severe flooding of Sand Creek in the town of Jordan. Described as the worst flooding since 1963. 38,000 sandbags were needed. 2 bridges were washed out. Because of the rapid response of volunteers and emergency personnel in erecting a sandbag wall, flooding damage was minimized. The Jordan NWS cooperative observer reported 6.80 inches of rain between the 24th and the 27th with over 4 inches falling on the 26th.

October 4, 2005 A flash flood Flooding was widespread. In Shakopee, streets and residential basements flooded, along with water retention ponds overflowing their walls. Several gravel alleys and streets were washed out. A classroom had to be relocated at the Sweeney Elementary

School. The classroom sustained water damage from the flooding. Specific road flooding included: Near the junction of 4th Avenue East and Dakota Street and along 10th Avenue East, near Market Street. Portions of First Avenue flooded, making the roadway almost impassable. Sections of Valley View Road closed temporarily when mud washed down the bluff.

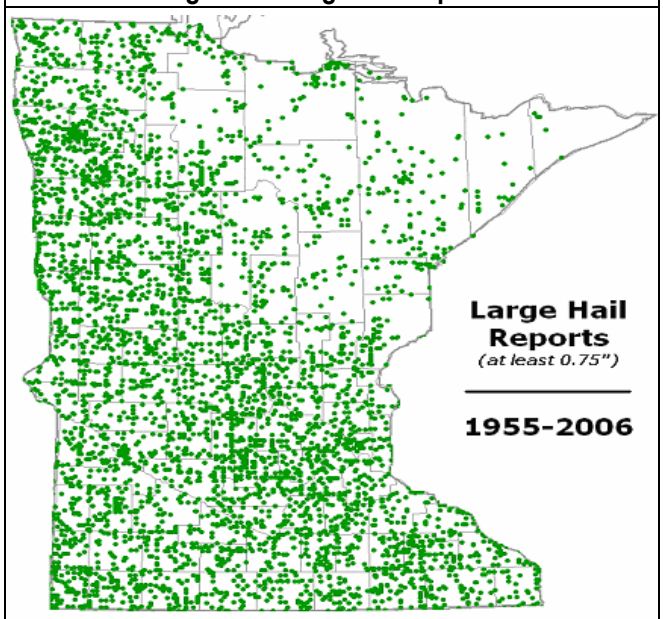
In New Prague, Standing water forced the evacuation of automobiles to higher ground from Palmer Welcome Auto, located on Highways 13 and 21. Standing water was also reported in many New Prague Intersections, low lying areas of the city, in many residential basements and swollen ditches and creeks. Some of the areas most affected by rising water were Second Avenue NW, just North of Wells Fargo Bank and the Strike Force Bowl, and First Avenue NW, just south of Scott County Road 37, near Philipp's Creek.

In Savage, police were dispatched to flooding reported at 14000 block of Hunters Lane. Police received another report about a stalled vehicle in standing water on South Park Drive and Louisiana Ave, and also at West 143rd Street, between O'Connel Road and Salem Avenue. Additional flooding was noted downtown on 126th Street, with water rising most severely at the Natchez and Lynn Avenue intersections. As the evening progressed heavy flooding reported at Yosemite Avenue and 139th Street. Savage Public Works crews were called out to Yosemite Ave. and Connelly Parkway where water levels were rising rapidly from a drainage pond. A series of ponds along Yosemite Avenue South of 137th Street spilled over onto the roadway. The Fire Department shut down Quentin Avenue when the banks of the Credit River flooded over onto the road and spilled onto Highway 13. Flooding in one home was also reported just south of the Quentin Avenue Bridge.

5.3.5 Hail Profile

The size of hailstones varies and is related to the severity and size of the thunderstorm that produced it. The higher the temperatures at the Earth's surface, the greater the strength of the updrafts, and the greater the amount of time the hailstones are suspended, giving the hailstones more time to increase in size.

Figure 5.9 Large Hail Reports



Source: NWS

Location

Since 1988, there have been on average nearly 3,000 individual hail events reported each year. Although they occur in every State on the mainland United States, hailstorms occur most frequently in the Midwestern States, particularly in Texas, Oklahoma, Kansas, and Nebraska. Hailstorms can occur throughout the year; however, most hailstorms occur during the months of April through October. July is the prime month of crop loss produced by hail.

Hailstorms occur throughout Scott County, most frequently during the late spring and early summer, when the jet stream moves northward across the Great Plains. During this period,

extreme temperature changes occur from the surface up to the jet stream, resulting in the strong updrafts required for hail formation.

Extent

Hailstorms occur in some form or fashion on a regular basis in Scott County. The size of hailstones varies and is a direct consequence of the severity and size of the thunderstorm. The higher the temperatures at the Earth's surface, the greater the strength of the updrafts, and the greater the amount of time the hailstones are suspended, the larger the size of the hailstones. Hailstones vary widely in size, as shown in Table 9. Note that hail penny size (0.75 inch in diameter) or larger is considered severe.

Table 5.11 Estimating Hail Size

Size	Diameter Inches	Size	Diameter Inches
Pea	1/4 inch	Golf Ball	1 3/4 inches
Marble/mothball	1/2 inch	Tennis Ball	2 1/2 inches
Dime/Penny	3/4 inch	Baseball	2 3/4 inches
Nickel	7/8 inch	Tea cup	3 inches
Quarter	1 inch	Grapefruit	4 inches
Ping-Pong Ball	1 1/2 inch	Softball	4 1/2 inches

Hail causes $1 billion in damage to crops and property each year. The costliest hailstorm in the United States was in Denver in July 1990 with reported damage of $625 million. The largest hailstone ever recorded fell in Coffeyville, Kansas on September 3, 1970, and measured over 5.6 inches in diameter and weighed almost 2 pounds (NWS, January 10, 2003).

In June 1996, hail destroyed more than 300,000 acres of crops, estimated at more than $9 million, and caused more than $700, 000 in property damages. In July 1997, grapefruit size hail damaged more than 30,000 acres of crops, resulting in more than $5 million in crop damage and $200,000 in property damages. In May 1998, hail caused more than $6 million in property damages to an automobile dealership and other structures. In August 1998, hail caused $50 million property damages. In July 2000, large hail destroyed or damaged more than 30,000 acres of crops, causing $4 million in crop damages, and caused more than $100,000 for property damages. In August of 2006, hail damaged or destroyed over 57,000 acres of crops, causing over $7 million in damage and $116 million in property damages. From 2000 to 2006 hail has caused $227 million in property damages and more than $38 million in crop damages. The figures, however, only reflected damages reported to the NCDC. In Scott County Hail events have resulted in 0 fatalities, 0 injuries and $10,500,000 in property damage.

Future Probability

The annual probability of hail occurring somewhere in the Scott County is clearly quite high. However, the site-specific incidence of hail is considered low because of the localized nature of the hazard. The probability rating for Hail is high, however the vulnerability is medium, primarily due to its effect on agriculture and crops

Historic Occurrences

The NCDC and Sheldus databases have recorded 149 hail events in Scott County. The detailed historic Hail events are in the supporting annex.

Table 5.12 Historic Hail Events								
Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets, Utilities, Roads, Bridges Damaged, Evacuation, Etc,	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
05/15/ 1988	Shakopee	Hail, propelled by strong winds caused widespread roof and house damage. Windows at a public works building were broken. Roof damage to library and schools	0	0	0	0	0	
06/05/ 1999	Shakopee	Hail, 3:29PM Automobiles were damaged	0	0	0	0	0	
06/25/ 1999	Shakopee	Hail, 3:35PM Car windows smashed, car bodies dented	0	0	0	0	0	
06/11/ 2001	Prior Lake	Hail damaged houses and vehicles	0	0	0	500,000	0	
08/24/ 2006	New Prague Countywide	Vehicles, homes and businesses damaged. Damage total includes all storm reports from August 24 in Scott County.	0	0	0	10,000,000	0	
5		TOTALS	0	0	0	10,500,000	0	
Data Sources		NOAA/NWS, Sheldus, Local Sources						
Loss Type		A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup						

Major Historic Occurrences Discussion

On May 15, 1998 large hail propelled by strong winds resulted in widespread roof and house damage. Windows at a public works facility were broken. Roof damage to library and schools.

On June 25 1999 a thunderstorm with Hail and Lightning in Shakopee cause vehicle damaged. Car windows were smashed and car bodies were dented. Lightning caused two house fires.

5.3.6 High Winds Profile

Wind is defined as the motion of air relative to the earth's surface. In the United States the mean annual wind speed is reported to be eight to 12 mph, with frequent speeds of 50 mph and occasional wind speeds greater than 70 mph. High Winds are generally the result of thunderstorms, fronts, tornadoes and tropical storms/hurricanes. Winds in excess of 58 miles per hour, excluding tornadoes, are windstorms. Windstorms are among the nation's most severe natural hazards in terms of both lives lost and property damaged.

5.3.6.1 High Winds/Thunderstorm/Fronts Profile

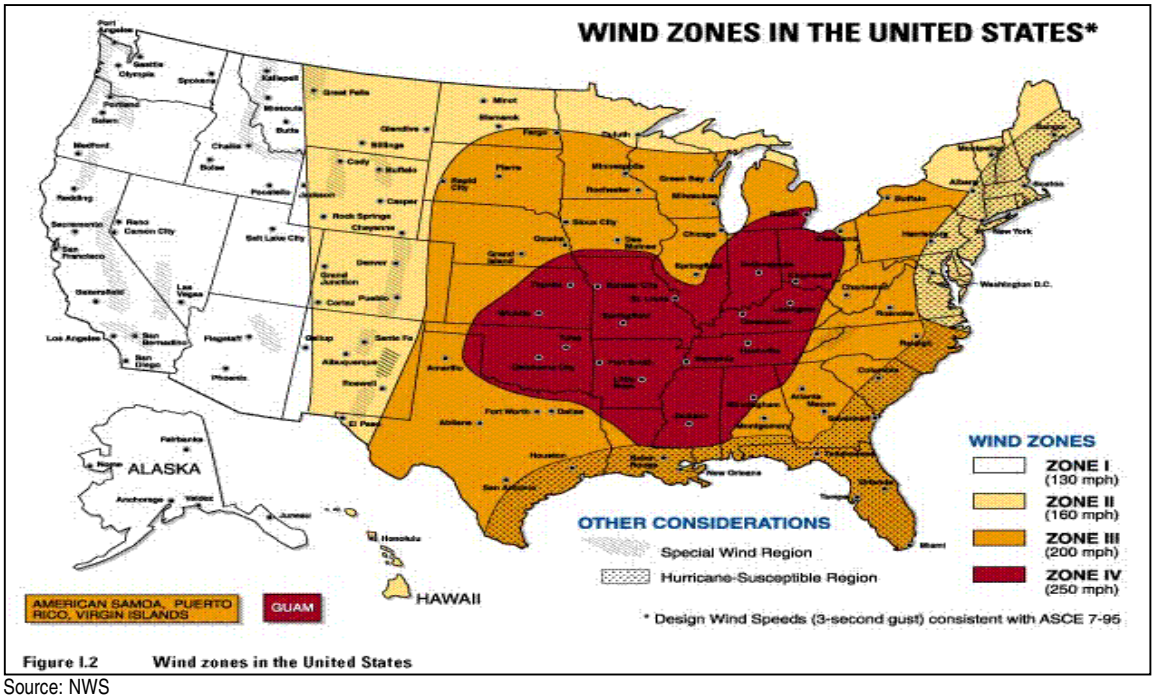
The NWS classifies a thunderstorm as severe if its winds reach or exceed 58 mph. High winds can result from thunderstorm inflow and outflow, or downburst winds when the storm cloud collapses, and can result from strong frontal systems, or gradient winds from high or low pressure systems. Thunderstorms produce downdraft winds, which are defined as a small-scale column of air that rapidly sinks toward the ground, usually accompanied by precipitation as in a shower or thunderstorm. A downburst is the result of a strong downdraft. The downburst can cause damage equivalent to a tornado. The outflow of cool or colder air can also create damaging

winds at or near the surface. As these downburst winds spread out they are often referred to as straight-line winds, which exceed 130 miles per hour.

Location

The most favorable conditions for thunderstorm development occur between June and August, with July being the peak month for thunderstorms in Scott County. All of the jurisdictions of Scott County have experienced occurrences of severe thunderstorms accompanied by high winds. As depicted in the Wind Zone image below Scott County resides in Zone III, which can experience wind speeds up to 200 miles per hour.

Figure 5.10 Wind Zones in The United States



Source: NWS

According to the NWS, a typical thunderstorm is 15 miles in diameter and usually lasts 30 minutes. Thunderstorms affect relatively small-localized areas, rather then large regions much like winter storms and hurricane events (NWS, 2005).

Extent

Severe thunderstorm winds are most likely to occur during the spring and summer months, with reports falling off during the early fall months. During the spring, squall lines often move across the area, producing widespread wind damage. Although widespread convection is less likely during the summer months, summertime pulse thunderstorms will often produce wet microburst, which can cause localized damage paths. The NWS Table notes the following effects of various wind speeds.

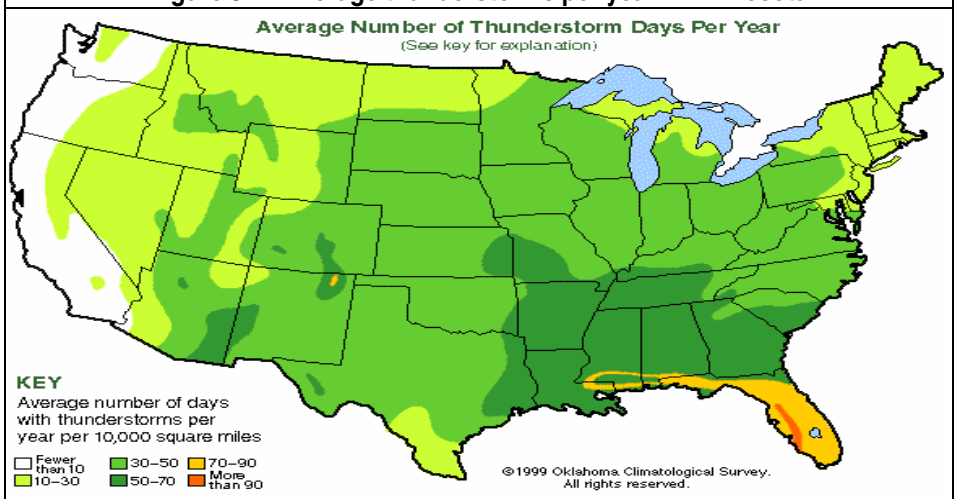
Table 5.13 Effects of Wind Speed

Wind Speed	Effects
25-31 mph	Large branches in motion, whistling in telephone wires

32-38 mph	Whole trees in motion
39-54 mph	Twigs break off of trees, wind impedes walking
55-72 mph	Damage to chimneys and TV antennas, pushes over shallow rooted trees
73-112 mph	Peels surface off roofs, windows broken, trailer houses overturned
113+ mph	Roofs torn off houses, weak buildings and trailer houses destroyed, large trees uprooted

The following map indicates that Scott County averages about 30-50 days with thunderstorms per year, per 10,000 sq. miles.

Figure 5.11 Average thunderstorms per year in Minnesota



Source: NWS

Thunderstorm wind damage occurs most often in the late afternoon and early evening. Although thunderstorm wind reports peak around 5 pm, they do not decline until late in the evening when daytime heating is lost. Severe thunderstorm winds are most likely to occur during the afternoon and evening during the spring and summer months, which correlates to diurnal-type convection. Severe thunderstorm winds during the fall and winter months do not indicate a particular pattern, likely due to the variable nature of frontal passage. Severe thunderstorms will continue to take their toll on lives and property.

Major health hazards from Thunderstorms are from flying debris or being in a collapsed building or mobile home. Although Thunderstorms strike at random, major structural damage is most likely in mobile homes, homes with crawlspaces, and buildings with large spans, such as airplane hangers, gymnasiums and factories. High Winds accompanying thunderstorms can create hazardous driving conditions, lead to bodily injury or death as well as cause substantial property and crop damages.

Damaging thunderstorm wind events remain much more common than tornadoes in Minnesota. In a typical year, Minnesota is likely to experience 10 to 20 times as many wind events as tornado events. Not only can severe thunderstorms produce injury and damage from violent straight-line winds and hail, but also tornadoes can develop very quickly from these storms.

According to the National Climatic Data Center, there have been 3 deaths and more than 75 injuries directly related to windstorms (58+mph winds or 50.4 knots) since 1975 in Minnesota

From 1994 to 2007, property damages averaged $65 million per year. Average annual crop losses are more than $1,179,000 per year (1994-2006). In Scott County High wind thunderstorm and Frontal events resulted in 0 fatalities, 0 injuries and 196,630,624 in property damage.

Future Probability

Windstorms can occur throughout the State of Minnesota, at any time of year. Most occur during the months of April through September. From 1994 to 2007, Minnesota averaged 270 windstorms each year (high wind over 50 knots), with the majority occurring in the western and southern portions of the State. This recurrence is expected to remain relatively stable, although there will be year-to-year fluctuations. Long-term changes in weather patterns may also influence the number of windstorms that occur. 63 thunderstorm/Frontal high wind events that have caused damage have occurred in Scott County since 1994 this results in a frequency of 4.23 per year. The average damage is the frequency of future occurrences of thunderstorms/Frontal events in Scott County will continue and the risk is considered high. The vulnerability rating for windstorms is also high as one historic major occurrence caused an estimated $170,000,000 in damage.

Historic Occurrences

The NCDC and Sheldus databases have recorded 118 High Wind Thunderstorm/Frontal events. Included in the table below are the 65 incidents that resulted in fatalities, injuries or property loss. All detailed historic high wind events can be found in the supporting annex.

Table 5.14 Historic High Wind/Thunderstorms/Front Events

Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets, Utilities, Roads, Bridges Damaged, Evacuation, Etc,	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
10/10/1949	Countywide	Front Wind from 100 kts destroyed buildings, trees, power lines and crops	0	0	0	0	0	C
04/15/1994	Countywide	Tstm Wind from 40 kts. To 60 kts. for several hours. Trees were blown down at many locations	0	0	0	0	0	C
07/05/1994	Belle Plaine	Tstm Wind blew down Several large trees	0	0	0	0	0	C
07/07/1994	Jordan	Tstm Wind damaged several buildings	0	0	0	0	0	
05/19/1996	Belle Plaine	Tstm Wind at 70 kts damage to houses and barns	0	0	0	0	0	
05/19/1996	Prior Lake	Tstm Wind at 70 kts. Trees down. Roof partially torn off casino and at high school. Casino needed to be evacuated. Minor roof damage to homes	0	0	0	0	0	
05/19/1996	New Prague	Tstm Wind 55 kts. Garage and tree damage	0	0	0	0	0	
06/29/1996	Lydia	Tstm Wind 60 kts Sheds damaged. Trees and power poles down	0	0	0	0	0	

Table 5.14 Historic High Wind/Thunderstorms/Front Events								
Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets, Utilities, Roads, Bridges Damaged, Evacuation, Etc,	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
08/06/ 1996	Lydia	Tstm Wind 55 kts Roof torn off pole barn	0	0	0	0	0	
08/06/ 1996	Shakopee	Tstm Wind 50 kts Trees Down	0	0	0	0	0	
10/29/ 1996	Countywide	Tstm Wind 64 kts downed tree limbs and power lines	0	0	0	0	0	
06/28/ 1997	Elko-New Market	Tstm Wind 50 kts Shed damage	0	0	0	0	0	
07/13/ 1997	Belle Plaine Blakeley	Tstm Wind 61 kts Trees Down	0	0	0	0	0	
07/13/ 1997	Shakopee	Tstm Wind 65 kts Large Trees Down	0	0	0	0	0	
08/15/ 1997	Jordan	Tstm Wind 55 kts Mobile home damaged.	0	0	0	0	0	
08/15/ 1997	Prior Lake	Tstm Wind 55 kts Trees Down	0	0	0	0	0	
05/15/ 1998	Savage Countywide	Tstm Wind 61 kts Windows blown out, roof damage, house damage, Trees Down	0	0	0	170,000,000	0	
05/30/ 1998	Belle Plaine Countywide	Tstm Wind 55 kts Large trees blown down. Roof damage in rural areas	0	0	0	0	0	
05/30/ 1998	Shakopee Countywide	Tstm Wind 60 kts Semi trailer blown over. Car trapped under power lines, trees down	0	0	0	0	0	
05/30/ 1998	Prior Lake Countywide	Tstm Wind 85 kts 2500 trees lost. 100 boats, lifts and docks damaged. 28 homes sustained major damage. Countywide damage estimate	0	0	0	17,600,000	0	
05/30/ 1998	Savage Countywide	Tstm Wind 85 kts Many homes damaged. 7 homes destroyed	0	0	0	0	0	
07/14/ 19998	Shakopee Savage	Tstm Wind 50 kts Large branches/Power lines down.	0	0	0	0	0	
08/22/ 1998	Savage	Tstm Wind 52 kts trees blown down	0	0	0	0	0	
03/17/ 1999	Countywide	Frontal Wind 55 kts trees branches blown down	0	0	0	0	0	
06/22/ 1999	Prior Lake	Tstm Wind 55 kts Large trees blown down.	0	0	0	0	0	
07/30/ 1999	Elko	Tstm Wind 55 kts trees/power lines down.	0	0	0	0	0	
04/05/ 2000	Countywide	Frontal Wind 64 kts trees down on homes, shingles torn from roofs, siding stripped away, utility sheds blown away, power down	0	0	0	1,000,000	0	

Table 5.14 Historic High Wind/Thunderstorms/Front Events								
Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets, Utilities, Roads, Bridges Damaged, Evacuation, Etc,	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
04/07/ 2001	Countywide	Frontal Wind 69 kts kt's trees down on homes, shingles torn from roofs, siding stripped away, utility sheds blown away, power down	0	0	0	8,000,000	0	
06/11/ 2001	Belle Plaine	Tstm Wind 55 kts Large trees blown down	0	0	0	0	0	
06/11/ 2001	New Prague	Tstm Wind 52 kts trees uprooted, boats and pontoons were damaged	0	0	0	5,000	0	
06/13/ 2001	New Market	Tstm Wind 50 kts trees branches blown down	0	0	0	0	0	
06/13/ 2001	New Prague	Tstm Wind 61 kts trees branches blown down	0	0	0	0	0	
08/29/ 2001	Blakeley	Tstm Wind 60 kts trees blown down on Highway	0	0	0	0	0	
08/03/ 2002	Lydia	Tstm Wind 50 kts trees/power lines blown down	0	0	0	0	0	
08/03/ 2002	New Prague	Tstm Wind 62 kts Three roofs off houses. Numerous trees down	0	0	0	0	0	
08/16/ 2002	Belle Plaine	Tstm Wind 50 kts trees branches blown down	0	0	0	0	0	
08/16/ 2002	New Prague	Tstm Wind 70 kts trees down on houses roofs blown off	0	0	0	0	0	
06/24/ 2003	Spring Lake	Tstm Wind 55 kts trees down boatlift, house damaged	0	0	0	0	0	
07/04/ 2003	Shakopee	Tstm Wind 52 kts trees blown down on power lines	0	0	0	0	0	
04/18/ 2004	Countywide	Tstm Wind 52 kts trees and power lines down some building damage	0	0	0	0	0	
04/18/ 2004	Prior Lake	Tstm Wind 61 kts trees and radio towers several outbuildings damaged	0	0	0	0	0	
05/09/ 2004	Shakopee	Tstm Wind 50 kts trees branches blown down	0	0	0	0	0	
12/12/ 2004	Countywide	Front Wind 40 kts trees blown down, roof damage	0	0	0	0	0	
05/08/ 2005	Prior Lake	Tstm Wind 50 kts trees branches blown down	0	0	0	0	0	
06/08/ 2005	Belle Plaine	Tstm Wind 52 kts trees/power lines down	0	0	0	0	0	
06/08/ 2005	Savage	Tstm Wind 52 kts trees blown down	0	0	0	0	0	
06/20/ 2005	Shakopee	Tstm Wind 52 kts trees blown down	0	0	0	0	0	C

Table 5.14 Historic High Wind/Thunderstorms/Front Events								
Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets, Utilities, Roads, Bridges Damaged, Evacuation, Etc,	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
06/20/ 2005	Prior Lake	Tstm Wind 52 kts trees branches blown down	0	0	0	0	0	
06/24/ 2005	Belle Plaine	Tstm Wind 52 kts trees blown down	0	0	0	0	0	
06/24/ 2005	New Prague	Tstm Wind 56 kts trees blown down and damaged cars and homes, some building damage	0	0	0	0	0	C
06/24/ 2005	St Patrick	Tstm Wind 55 kts trees/power lines down. Roof and siding damage to homes, boat and structure damage	0	0	0	0	0	C
06/24/ 2005	Prior Lake	Tstm Wind 52 kts trees blown down	0	0	0	0	0	C
09/03/ 2005	New Prague	Tstm Wind 52 kts trees blown down on hwy and railroad	0	0	0	0	0	
09/12/ 2005	Shakopee	Tstm Wind 52 kts trees blown down on cars and homes	0	0	0	0	0	
08/24/ 2006	Elko	Tstm Wind 55 kts trees blown down	0	0	0	0	0	
05/06/ 2007	Countywide	Front Wind 59 kts trees/power lines down, roof and outbuilding damage	0	0	0	0	0	
06/20/ 2007	New Prague	Tstm Wind 54 kts trees branches blown down	0	0	0	0	0	
08/28 2007	Savage	Tstm Wind 50 kts trees blown down	0	0	0	0	0	
09/24 2007	Prior Lake	Tstm Wind 50 kts trees/power lines down	0	0	0	0	0	
07/09/ 2008	Merriam	Tstm Wind 55 kts trees blown down	0	0	0	0	0	
07/10/ 2008	Savage	Tstm Wind 52 kts trees blown down	0	0	0	0	0	
07/10/ 2008	Merriam	Tstm Wind 52 kts trees blown down	0	0	0	0	0	
07/11/ 2008	Shakopee	Tstm Wind 50 kts trees blown down	0	0	0	0	0	
63		Totals	0	0		196,630,624	0	
Data Sources		**NOAA/NWS, Sheldus, Local Sources**						
Loss Type		**A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup**						

Major Historic Occurrences Discussion

On October 10 1949 one of the most devastating wind storms to affect the region moved from the Central Plains northeast into the Upper Mississippi Valley, and western Great Lakes This

front moved north through Iowa and southern Minnesota including Scott County during the morning. Shortly after this front moved through, the south winds increased rapidly. From late morning through the afternoon, winds up to hurricane force were experienced across much of Minnesota and Scott County. At 1:27 pm October 10th, the airport in Rochester, MN recorded sustained south-southwest winds of 65 mph with gusts to 100 mph. In Austin, MN, the sustained winds reached 45 mph with wind gusts to 82 mph. These winds partially or totally destroyed barns, outbuildings, garages, silos, hangars, neon signs, billboards, greenhouses, windmills, water towers, and drive-in-theaters. Shingles were torn off roofs and hundreds of trees were uprooted. Telephone and electric power service was badly disrupted. The winds also blew in numerous plate glass windows injuring several people. Crops across the region were destroyed.

On May 19, 1996 a thunderstorm with high winds blew trees down. A roof was partially torn off casino and high school. The Casino was evacuated. There was also roof damage to homes.

On May 30, 1998, Prior Lake lost 2500 trees, 100 boats lifts and docks were damaged and 28 homes sustained major damage. In Savage many homes damaged. 7 homes were destroyed in Shakopee. A Semi-trailer blown over and cars were trapped under downed power lines.

In April 2001, A strong surface low-pressure system moved out of the southwestern US and into north central Minnesota by the early afternoon on the 7th. This system produced numerous wind gusts in the 50 to 75 mph range across portions of southern Minnesota. The highest measured wind to be reported was 79 mph at Fairmont (Martin County). Property damage was $8 million.

On August 3, 2002 a storm resulted in 6,000 customers in Prior Lake and Credit River and Spring Lake townships lost power due to a problem with the same transmission line. About 2,400 Minnesota Valley Electric Cooperative customers lost power and 3,200 Xcel Energy customers went without power for more than three hours.

On August 16 2002 a thunder storm in New Prague blew a roof off a house. Numerous trees were down, including some on cars and houses.

On June 8 2004 a total of 5.4 inches of rain was recorded at Belle Plaine. 4.7 inches was recorded at New Prague. Water backed up into retaining ponds, fields, numerous basements, roads, waterways and other low-lying areas.

On June 24, 2005 a thunderstorm in Belle Plaine created a 67 MPH wind gust measured by a MNDOT sensor at 5:57 AM CDT. In New Prague law enforcement officers reported a wind gust measured at 65 MPH. Trees up to 2 feet in diameter and power lines were downed. A few downed trees damaged homes and cars, and several large branches littered streets. A dugout at the New Prague High School softball field was lifted up and deposited on a nearby shed. An awning on a building on East Main Street was torn away.

In Cedar Lake Township a 4-mile long path of concentrated wind damage occurred across Cedar Lake Township. The path of damage started near the intersection of Highway 13 and 270th Street East and continued to East Northeast across Cedar Lake and ended near the intersection of highways 85 and 56. Trees and power lines were downed along the path. Homes sustained shingle and siding damage. Many trees were felled around Cedar Lake. On Cedar Lake Drive a pontoon boat was raised off its lift and thrown upside down onto the shoreline. In Prior Lake several trees were downed.

5.3.6.2 High Winds Tornado Profile

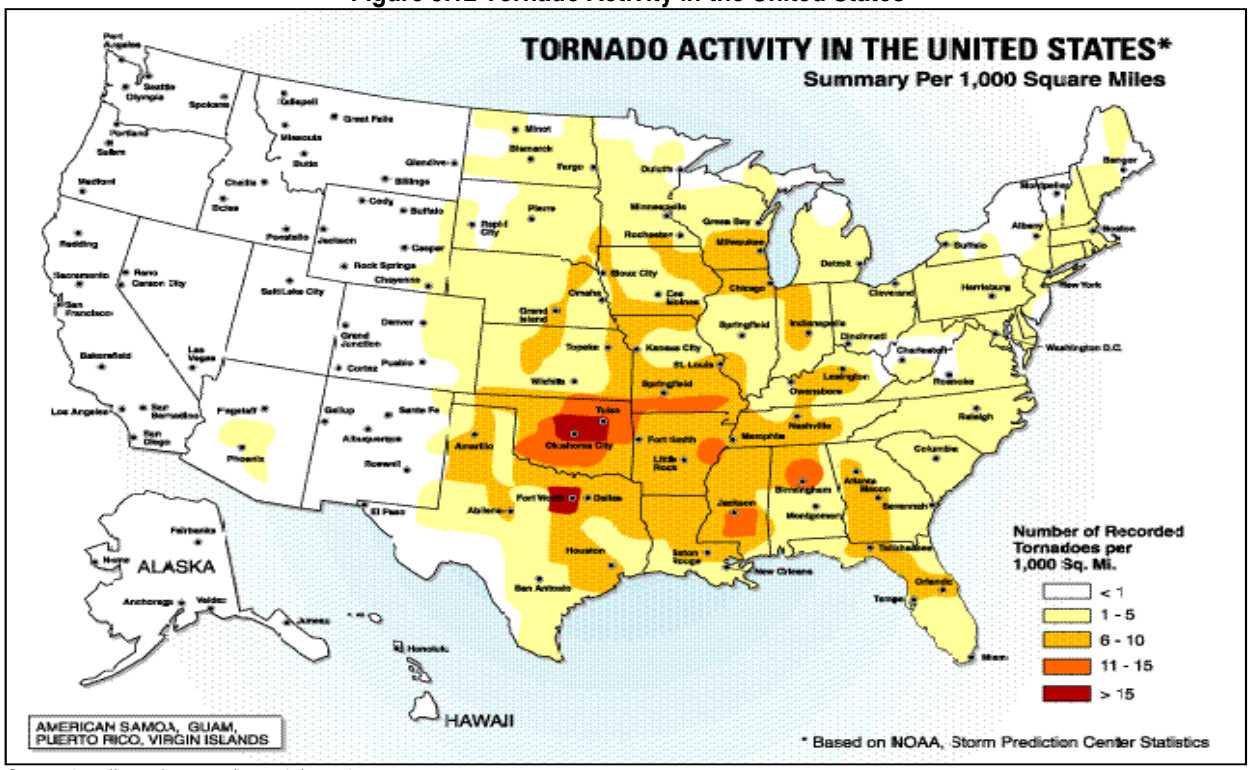
A tornado is a rapidly rotating vortex, or funnel, of air extending to the ground from a cumulonimbus cloud. Tornadoes are related to larger vortex formations, and therefore often form in convective cells such as thunderstorms or in the right forward quadrant of a hurricane, far from the hurricane eye. A tornado watch is issued for a specific location when thunderstorms capable of producing tornadoes are recognized and arrival is expected in hours. A tornado warning is issued when tornadoes are spotted or when Doppler radar identifies a distinctive "hook-shaped" area in a thunderstorm that is likely to form a tornado.

In the United States, approximately 1,000 tornadoes each year are spawned by severe thunderstorms. Although most tornadoes remain aloft, those that touch ground are forces of destruction. Tornadoes are viewed as the most damaging summer storm.

Location

Unlike floods, tornadoes are not confined to any particular local geographic. Among the most unpredictable of weather phenomena, tornadoes can occur at any time of day, in any State, in any season. No community is without risk; any place in the county is considered to have an equal chance of experiencing a tornado or any other of these severe weather elements. The figure below shows tornado activity in the United States. The map indicates that NOAA has recorded 1-5 tornadoes per 1000 square miles in Scott County.

Figure 5.12 Tornado Activity in the United States



Source: http://www.fema.gov/hazards/tornadoes

The entire county is vulnerable to high winds caused by tornados. The most likely time for tornados is during the months of March through May, with a secondary peak of activity in November.

Figure 5.13 Tornadoes in Scott County

Extent

The path length of a tornado can range from a few hundred yards to miles. A tornado typically moves at speeds between 30 and 125 mph and can generate internal winds exceeding 300 mph. The life span of a tornado rarely is longer than 30 minutes. Tornadoes have been known to lift and move objects weighing more than 300 tons a distance of 30 feet, toss homes more than 300 feet from their foundations, and siphon millions of tons of water from water bodies. Tornadoes generate a large amount of debris that becomes airborne shrapnel causing additional damage.

Tornado damage severity is measured by the Enhanced Fujita Tornado Scale that was adopted February 1, 2007. The Scale assigns numerical values based on wind speeds and categorizes tornadoes from zero to five. Tornadoes classified as F0-F1 are considered weak, those classified as F2-F3 are considered strong, while those classified as F4-F5 are considered violent.

The Enhanced F-scale still is a set of wind estimates (not measurements) based on damage. Its uses three-second gusts estimated at the point of damage based on a judgment of

8 levels of damage to the 28 indicators listed below. These estimates vary with height and exposure. Important: The 3-second gust is not the same wind as in standard surface observations. Standard measurements are taken by weather stations in open exposures, using a directly measured, and “one minute mile" speed.

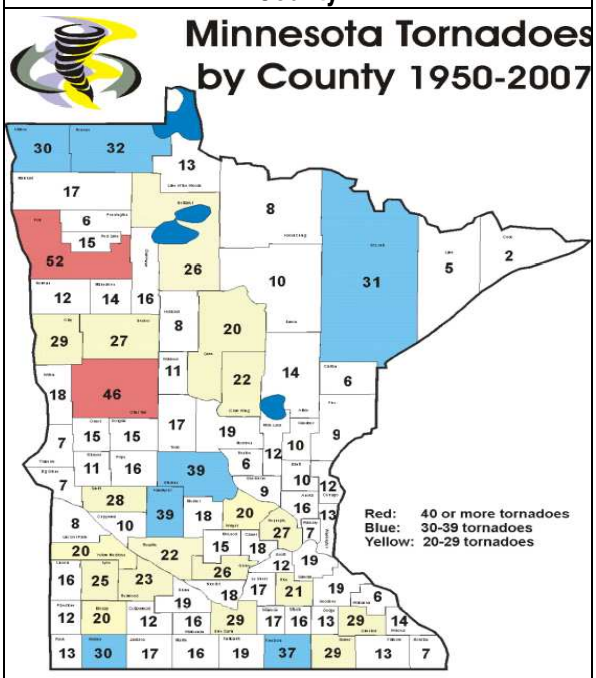
Table 5.15 Enhanced F Scale for Tornado Damage

Fujita Scale			Derived EF Scale		Operational EF Scale	
F Scale	Fastest ¼ mile mph	3 Second Gust mph	EF Scale	3 Second Gust mph	EF Scale	3 Second Gust mph
0	40-72	45-78	0	65-85	0	65-85
1	73-112	79-117	1	86-109	1	86-110
2	113-157	118-161	2	110-137	2	111-135
3	158-207	162-209	3	138-167	3	136-165
4	208-260	210-261	4	168-199	4	166-200
5	261-318	262-317	5	200-234	5	Over 200

Damage due to tornadoes can range from minor to major depending on the strength of the tornado and where it strikes. A tornado that occurs in a rural area could cause crop damage and might damage some farm buildings and injure livestock but the damage would typically be less than in populated areas.

In Minnesota most of the deadly and damaging tornadoes occur in groups of outbreaks that often last from 6 to 12 hours. One of the worst such outbreak in Minnesota occurred on June 28, 1979, when 16 tornadoes slashed across the state, from northwest to southeast, in a six and one half hour period. Two additional tornadoes occurred in eastern North Dakota with this system. Many such outbreaks have occurred, including the April 30, 1967 cluster in south central and southeast Minnesota. Tornadoes in Scott County have caused 0 fatalities, 6 injuries and $300,000 in property damage.

Figure 5.14 Tornadoes in Minnesota and Scott County



Source : State Of Minnesota

Future Probability

14 tornadoes have impacted Scott County since 1952, a period of 57 years. This results in a tornado event every 3 years resulting in a high risk Generally The tornadoes that have impacted Scott County are low in the. Fujita Scale with the strongest being an F2. This results in the medium vulnerability area Higher population and housing densities in the municipalities set the stage for increased impact, the potential for property damage and loss of live is equally high for the unincorporated areas of the county due to the large number of mobile homes.

Historic Occurrences

The NCDC and Sheldus databases have 14 tornadoes reported since 1952.

Table 5.16 Historic High Wind-Tornado Events

Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets, Utilities, Roads, Bridges Damaged, Evacuation, Etc,	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
06/24/ 1952	Scott County	Tornado F2 65.8 mile path length	0	6	0	0	0	
05/21/ 1997	Scott County	Tornado F2, start 44.34N/93.37W, End 44.48N/93.31W, 17 mile path length	0	0	0	250,000	0	
07/25/ 1995	Lydia	Tornado F1, start 44.38N/93.31W, End Unknown, 10 yards wide	0	0	0	0	0	
08/22/ 1998	Savage	Tornado F0, start 44.47N/93.20W, End 44.47N/93.20W, 50 yards wide. Trailer blown over. Garage destroyed	0	0	0	0	0	
06/05/ 1999	Savage	Tornado F0, start 44.47N/93.20W, End 44.47N/93.20W, 25 yards wide	0	0	0	0	0	

Table 5.16 Historic High Wind-Tornado Events								
Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets, Utilities, Roads, Bridges Damaged, Evacuation, Etc,	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
07/30/ 1999	Blakeley	Tornado F0, start 44.37N/93.51W, End 44.37N/93.51W, 35 yards wide. Silo tops taken off, some trees down	0	0	0	0	0	
07/30/ 1999	Belle Plaine	Tornado F1, start 44.38N/93.46W, End 44.38N/93.46W, 35 yards wide. Roofs partially off two downtown businesses. Trees down	0	0	0	0	0	
07/30/ 1999	Lydia	Tornado F0, start 44.39N/93.30W, End 44.39N/93.30W, 30 yards wide. A few trees and power lines were felled.	0	0	0	0	0	
05/09/ 2001	Belle Plaine	Tornado F0, start 44.36N/93.43W, End 44.36N/93.43W, 1 mile length, 35 yards wide. Passed over open fields	0	0	0	0	0	
05/09/ 2001	New Prague	Tornado F0, start 44.36N/93.34W, End 44.36N/93.34W, 25 yards wide. Touched down briefly in open field	0	0	0	0	0	
05/09/ 2001	New Prague	Tornado F0, start 44.34N/93.32W, End 44.34N/93.32W, 25 yards wide. Touched down briefly in open field	0	0	0	0	0	
05/09/ 2001	New Market	Tornado F0, start 44.36N/93.22W, End 44.36N/93.22W, 25 yards wide. Touched down briefly in open field	0	0	0	0	0	
06/11/ 2001	New Market	Tornado F1, start 44.35N/93.23W, End 44.35N/93.23W, 1-mileX50 yards wide. Sheds, outbuildings and a barn were damaged	0	0	0	50,000	0	
08/03/ 2002	Belle Plaine	Tornado F0, start 44.37N/93.44W, End 44.37N/93.44W, 25 yards wide. Touched down in open field	0	0	0	0	0	
14		Totals	0	6	0	300,000	0	
Data Sources		**NOAA/NWS, Sheldus, Local Sources**						
Loss Type		**A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup**						

Major Historic Occurrences Discussion

Belle Plaine-area historical tornado activity is slightly above Minnesota state average. It is 43% greater than the overall U.S. average.

On 5/6/1965, a category 4 (max. wind speeds 207-260 mph) tornado 10.9 miles away from the Belle Plaine city center killed 3 people and injured 175 people and caused between $5,000,000 and $50,000,000 in damages.

On 5/6/1965, a category 4 tornado 22.5 miles away from Belle Plain caused between $5,000,000 and $50,000,000 in damages.

On July 30 1999 a Tornado in Belle Plaine partially took off roofs off two downtown businesses. Trees were down. In Lydia trees and power lines were felled.

5.3.7 Ice/Snow Storm Profile

Ice and Snow Storms vary in size and strength and include heavy snowstorms, blizzards, freezing rain, sleet and blowing and drifting snow conditions. Extremely cold temperatures accompanied by strong winds can result in wind chills that cause bodily injury such as frostbite and death. Severe Ice/Snow storms can cause unusually heavy rain or snowfall, high winds, extreme cold, and ice storms throughout the continental United States.

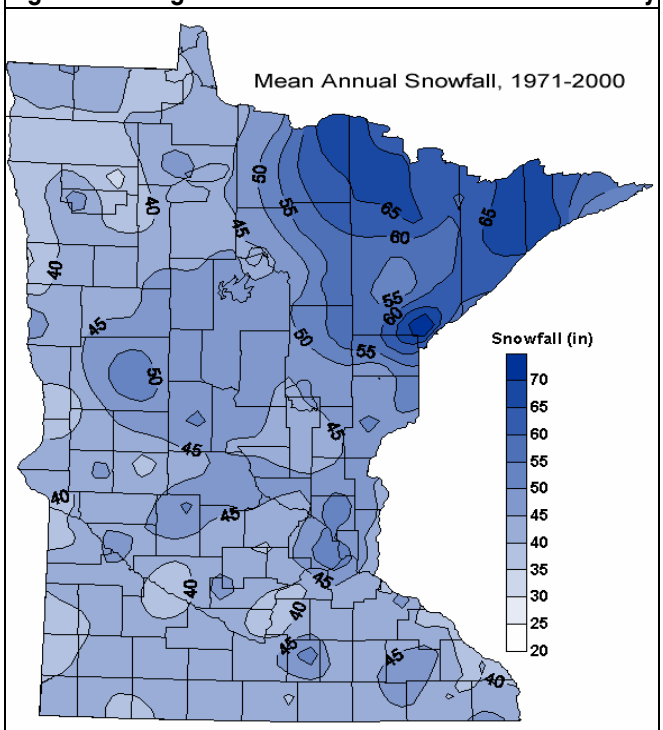
Location

The topography, land-use characteristics and winter climate of southern Minnesota and Scott County cause this area to be particularly vulnerable such that blowing and drifting snow is a common occurrence. The number of days with potential problems ranges from 115 in the south to 155 in the north. The adjacent map indicates that Scott County has an average annual snowfall of 40 to 45 inches. Ice and Snow affect the entire county equally.

Extent

Winter storm occurrences tend to be very disruptive to transportation and commerce. Trees, cars, roads, and other surfaces develop a coating or glaze of ice, making even small accumulations of ice extremely hazardous to motorists and pedestrians. The most prevalent impacts of heavy accumulations of ice are slippery roads and walkways that lead to vehicle and pedestrian accidents; collapsed roofs from fallen trees and limbs and heavy ice and snow loads; and felled trees, telephone poles and lines, electrical wires, and communication towers. As a result of severe ice storms, telecommunications and power can be disrupted for days. Such storms can also cause exceptionally high rainfall that persists for days, resulting in heavy flooding.

Figure 5.15 Avg. Snowfall In Minnesota and Scott County



Source: State of Minnesota

Winter storms present a serious threat to the health and safety of affected citizens and can result in significant damage to property. Heavy snow or accumulated ice can cause the structural collapse of buildings, down power lines or isolate people from assistance or services.

The wind chill temperature is how cold people and animals feel when outside. Wind chill is based on the rate of heat loss from exposed skin caused by wind and cold. As the wind increases, it draws heat from the body, driving down skin temperature and eventually the internal body temperature. Therefore, the wind makes it feel much colder. If the temperature is 00 F and the wind is blowing at 15 mph, the wind chill is -19 F. At this wind chill temperature, exposed skin can freeze in 30 minutes.

Blizzards in Minnesota of note are the "Armistice Day Blizzard" in November 1940 in which there were 49 deaths; "The Storm of the Century" in January 1975 in which there were 14 deaths; the blizzard in February 1984 in which there were 16 deaths; the "Halloween Monster Storm" of 1991 which did not result in any deaths, but set staggering snowfall records; and the unprecedented series of blizzards in November 1996 through January 1997 which resulted in a Presidential Disaster Declaration.

Taxpayers in Minnesota spend approximately $100 million in snow removal costs, with Mn/DOT expending $41 million. In the event of a winter season with anomalously high snowfall and exceedingly strong winds, as was the case for much of the state during the winter of 1996-97, the cost of snow removal can soar to $215 million. There are no recorded damages, fatalities or injuries resulting from Ice/Snow events.

Future Probability

47 ice/snow storm events have occurred in Scott County since 1994 resulting in an average of 3 events a year resulting in high probability of occurrence. The vulnerability should also be rated as high as property losses are significant as are response costs.

Historic Occurrences

The NOAA/Sheldus databases have recorded 47 Ice/Snow events in Scott County since 1994. The Table bellows Identifies 27 events that caused damage or fatalities and/or injuries. In actually all 47 probably caused substantial damage it just was not reported. The supporting annex lists all ice/snow events.

Table 5.17 Historic Ice and Snow Events

Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets, Utilities, Roads, Bridges Damaged, Evacuation, Etc,	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
04/28-29 1994	Countywide	Snow up to 6", Sleet and freezing rain occurred before snow causing numerous car accidents.	0	0	0	0	0	
11/27-28 1994	Countywide	Snow up to 6' with ice and snow in combination with strong winds created blizzard conditions resulting in closed schools numerous accidents and downed power lines,	0	0	0	0	0	
12/08/19 95	Countywide	Snow up to 8" with wind created blowing snow with near whiteout. Public offices and schools were closed, numerous accidents occurred	0	0	0	0	0	
12/13 1995	Countywide	Snow/Ice/Glaze, Snow up to 4", Sleet and freezing rain closed schools and caused accidents	0	0	0	0	0	
01/17-18 1996	Countywide	Ice up to 1' thick from freezing rain and snow. Snow clogged drains resulted in street flooding and numerous accidents	0	0	0	0	0	
03/23-25 1996	Countywide	Snow from thunderstorms up to 10" created blizzard conditions closing schools	0	0	0	0	0	
11/14-15 1996	Countywide	Ice up to ½" thick closed roads and schools and caused accidents	0	0	0	0	0	

Table 5.17 Historic Ice and Snow Events								
Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets, Utilities, Roads, Bridges Damaged, Evacuation, Etc,	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
11/20-21 1996	Countywide	Snow up to 8" caused roof damage	0	0	0	0	0	
12/23-24 1996	Countywide	Snow up to 10" closed roads, damaged roofs and one fatality	1	0	0	0	0	
03/13-14 1997	Countywide	Ice/Snow up to 10" and ice caused numerous car accidents	0	0	0	0	0	
01/04-05 1998	Countywide	Ice up to ½ " caused car accidents and one fatality in an adjacent county	0	0	0	0	0	
01/01-02 1999	Countywide	Snow up to 8" caused a train derailment in an adjacent county	0	0	0			
01/12 2000	Countywide	Snow up to 12" caused numerous car accidents	0	0	0	0	0	
01/19 2000	Countywide	Snow up to 9" closed businesses and schools	0	0	0	0	0	
01/29-30 2001	Countywide	Snow up to 8" and ice 1/2 " thick downed trees and power lines, closed roads	0	0	0	0	0	
02/07 2001	Countywide	Snow up to 6", Sleet and freezing rain occurred before snow causing numerous car accidents	0	0	0	0	0	
02/24-25 2001	Countywide	Snow up to 6"collapsed 2 roofs in Belle Plaine and caused numerous car accidents	0	0	0	0	0	
03/11-12 2001	Countywide	Snow up to 9" collapsed roofs	0	0	0	0	0	
11/26-27 2001	Countywide	Snow up to 20" downed numerous power lines and caused many car accidents	0	0	0	0	0	
11/22-24 2003	Countywide	Snow up to 10" created blizzard conditions businesses and schools closed numerous accidents occurred	0	0	0	0	0	
12/09-10 2003	Countywide	Snow up to 12" closed businesses and schools and caused accidents	0	0	0	0	0	
03/05 2004	Countywide	Snow up to 8" caused downed trees and power lines	0	0	0	0	0	
01/01 2005	Countywide	Snow up to 4" and Ice up to 1" thick caused hazardous travel conditions	0	0	0	0	0	
01/21 2005	Countywide	Snow up to 8", Ice up to ½" thick and high wind created blizzard conditions, ice on roads, downed trees, power lines and accidents	0	0	0	0	0	
03/18-19 2005	Countywide	Snow up to 10" closed roads	0	0	0	0	0	
03/12-13 2006	Countywide	Snow up to 12" closed schools and roads and numerous auto/truck accidents	0	0	0	0	0	
03/01-03 2007	Countywide	Snow up to 20" closed roads and schools	0	0	0	0	0	

Table 5.17 Historic Ice and Snow Events								
Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets, Utilities, Roads, Bridges Damaged, Evacuation, Etc,	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
27		Totals	1	0	0	0	0	
Data Sources		NOAA/NWS, Sheldus, Local Sources						
Loss Type		A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup						

Major Historic Occurrences Discussion

12/13/1995 the intensity of this storm prompted statewide closings of schools and many businesses on the 17th.

03/23/1996 a major winter storm moved from Kansas to southeast Wisconsin during the period. Thunderstorms deposited bursts of heavy snow across the area late 3/23 into the morning of 3/24. Heavy snow redeveloped during the early afternoon of 3/24 across the area along with strong winds. The wind along with falling snow produced blizzard conditions across parts of southwest Minnesota including Scott County with near blizzard conditions for a time across the south during the morning of 3/25. Snowfall of 6 to 10 inches was common. Regional school closings were prompted by this storm.

01/04/1998 Ice Storm - Freezing rain produced ice accumulations ranging from ¼ to ¾ of an inch. Numerous car accidents were reported, one of which resulted in a fatality.

01/29/2001 a powerful Ice/Snow storm system in western Missouri tracked north. A widespread area of sleet, snow, and or freezing rain occurred across all of southern Minnesota including Scott County. Ice accumulations generally ranged between a half an inch, to approximately three quarters of an inch across the county. The county saw 4 to 8 inches of snowfall. Large portions of the county lost power during the morning hours on the 30th. Ice laden trees toppled onto Highways. Power lines and power poles were reported down at Hwy 19 on the west edge of New Prague.

01/01/2005 Freezing rain spread across southeast Minnesota with widespread ice accumulations of1/4 to 1/2 inch. Numerous accidents were reported by law enforcement officials, but there were no serious injuries.

03/01/2007 a deep area of low pressure moved from the Oklahoma panhandle on the evening of the 28th, to Minnesota on March 1st. Heavy snow totals of up to 10” occurred in Scott County. Northerly winds in the 15 to 20 mph sustained range, along with gusts of 25 to 35 mph, caused some blowing and drifting snow. Many roads were closed or impassable, and hundreds of schools closed.

5.3.8 Landslide/Mudslide Profile

Landslides and mudslides often occur together with other major natural disasters, such as floods, which involve precipitation, runoff, and ground saturation that may be the result of severe thunderstorms or tropical storms. Earthquakes may cause landslides ranging from rock falls and topples, to massive slides and flows. Landslides into a reservoir may indirectly compromise dam safety or a landslide may even affect the dam itself.

Location

The topography and geology of Scott County is susceptible to the effects of landslides and especially mudslides, according to the Geological Survey of Minnesota. The northern and western part of the county has a moderate risk of landslides.

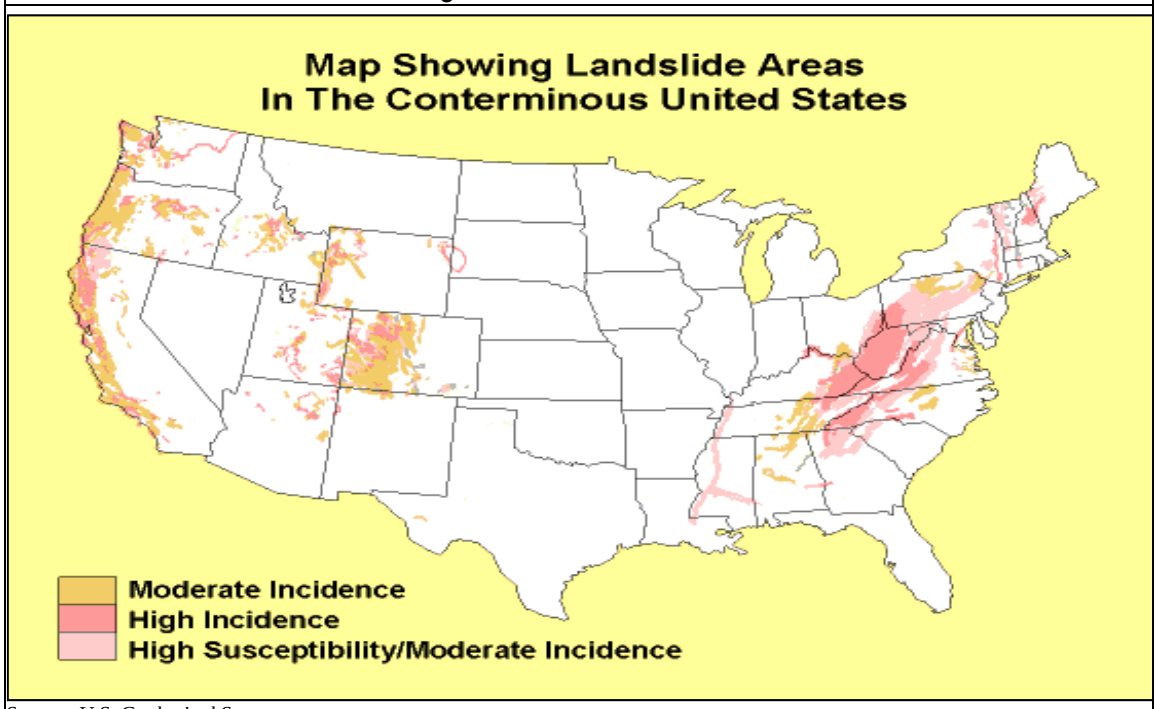
On the adjacent landslide map susceptibility is not indicated where it is same or lower than incidence. Susceptibility to land sliding is defined as the probable degree of response of [the area] rocks and soils to natural or artificial cutting or loading of slopes, or to anomalously high precipitation. High, moderate, and low susceptibility are delimited by the same percentages used in classifying the incidence of land sliding. Some generalization is necessary at this scale, and several small areas of high incidence and susceptibility were slightly exaggerated.

Extent

Mudslides/land slides have not been a significant risk in Scott County. The effects of landslides are often misrepresented as being the result of the landslide trigger event, such as a flood. The impact from a landslide can include loss of life, damage to buildings, lost productivity, disruption in utilities and transportation systems, and reduced property values.

Riverbanks particularly vulnerable to slumping are those that consist of an upper, relatively competent layer of sediment called the Sherack Formation resting on more easily deformable clays of the Huot and Brenna Formations. The map below identifies Minnesota and Scott County as having a low incidence of landslides.

Figure 5.16 Landslide Areas



Source: U.S. Geological Survey

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

Future Probability

The probability of future occurrences of landslides in Scott County is low and the vulnerability is low. The probability of mudslide occurrence in Scott County is medium and vulnerability is low.

Historic Occurrences

There is no history of landslides in Scott County. Minor mudslides especially along the Minnesota River is an occasional occurrence.

Major Historic Occurrences Discussion

As there have been little no occurrences in the county that have any significant impact on population or property there is no historical discussion.

5.3.9 Land Subsidence Profile

Movement of ground water along joints and fractures in these soluble rocks results in solution of the rocks and the development of cavities or openings in the rock. A prerequisite for subsidence is the presence of underground openings in rocks or unconsolidated materials. Cavities may form naturally or they may be manmade. The most significant cavities in terms of subsidence in Minnesota are solution cavities in carbonate rock terrains, although there are known instances of sinkholes forming over abandoned mines. Areas in Minnesota underlain by carbonate rocks and characterized by the presence of subsurface cavities, sinkholes, and underground drainage are called "karst terrains." It is these karst areas that are most susceptible to sinkhole development and subsidence.

Location

In Minnesota, limestone and dolostone underlie the southeastern corner of the state, which includes Scott County. Also In southeastern Minnesota, including Scott County carbonate rocks from the Cedar Valley Group down through the bottom of the Prairie du Chien Group, contain caves and other karst features. Because most of Minnesota is buried beneath a thick cover of glacial sediments, the karst landscape may not be apparent. In parts of southeastern Minnesota, erosion has removed most of this glacial cover and exposed the carbonate bedrock

A change in the local environment affecting the soil mass initiate's sinkhole collapse and land subsidence. This change is called the "triggering mechanism."

Water, either surface or ground water, is generally the most important agent effecting environmental changes that cause subsidence. Triggering mechanisms for subsidence include:

1. Water level decline
2. Changes in ground-water flow
3. Increased loading

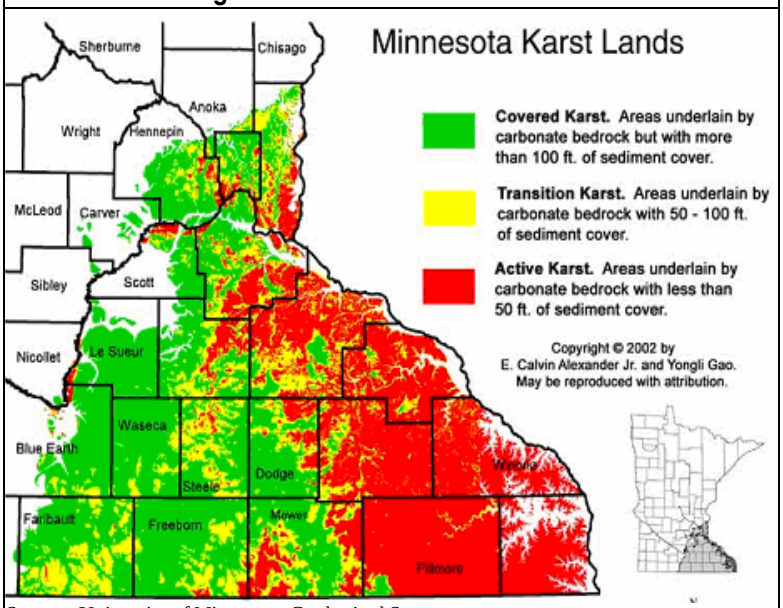
In Minnesota, the primary natural causes of land subsidence are karst landforms. Karst landforms develop on or in limestone, dolomite, or gypsum by dissolution and are characterized by the presence of features such as sinkholes, underground (or internal) drainage through solution-enlarged fractures (joints), and caves. Karst landforms can be hazardous because of the sinkholes that form there and for the ease with which pollutants can infiltrate into the water supply

Extent

As can be seen in the adjacent figure that all of Scott County and its jurisdictions have underlying Karst geology, which makes the entire county subject to sinkhole activity.

Sinkholes in Scott County would impact roads and to a lesser extent structures. Drilling and mining assets have been lost while mining for coal and limestone and drilling for natural gas.

Figure 5.17 Minnesota Karst Lands



Source: University of Minnesota Geological Survey

Future Probability

The Eastern 1/3 of Scott County is susceptible to land subsidence in the form of sinkholes. The future probability of an event is low and the vulnerability is low. As population and structure density increases the vulnerability may increase.

Historic Occurrences

There are no reported instances of Land Subsidence or sinkholes in Scott County

Major Historic Occurrences Discussion

There have been no instances of land subsidence or sinkholes in Scott County that warrant discussion.

5.3.10 Lightning Profile

Lightning, which occurs during all thunderstorms, can strike anywhere. Generated by the buildup of charged ions in a thundercloud, the discharge of a lightning bolt interacts with the best conducting object or surface on the ground. The air in the channel of a lightning strike reaches temperatures higher than 50,000 degrees F. The rapid heating and cooling of the air near the channel causes a shock wave, which produces thunder.

Location

Lightning events can occur anywhere in the planning area. Lightning current can branch off to strike a person from a tree, fence, pole, or other tall object. In addition, electrical current may be conducted through the ground to a person after lightning strikes a nearby tree, antenna, or other tall object. The current also may travel through power lines, telephone lines, or plumbing pipes to a person who is in contact with an electric appliance, telephone, or plumbing fixture.

Extent

The lightning hazard component of thunderstorms is measured as the mean annual ground flash density (flashes per square kilometer). Review of NWS data shows that Minnesota including Scott County averages from 8 to 12 flashes/ km^2.

Lightning is the most dangerous and frequently encountered weather hazard that most people in the United States experience. Lightning is the second most frequent killer in the U.S., behind floods, with nearly 100 deaths and 500 injuries annually. These numbers are likely to underestimate of the actual number of casualties because of the under reporting of suspected lightning deaths and injuries. Cloud-to-ground lightning can kill or injure people by either direct or indirect means. The lightning current can branch off to strike a person from a tree, fence, pole, or other tall object. In addition, electrical current may be conducted through the ground to a person after lightning strikes a nearby tree, antenna, or other tall object. The current also may travel through power lines, telephone lines, or plumbing pipes to a person who is in contact with an electric appliance, telephone, or plumbing fixture.

Lightning also causes fires. The period 2000-2006 showed 12,000 wild land fires started by lightning per year. This amounts to an average loss of 5.2 million acres annually. (Source: National Interagency Fire Center, 2007). 18% of all lumberyard fires and 30% of all church fires are lightning-related. Source: (Ohio Insurance Institute, Columbus OH. During 2002-2004 U.S. fire departments responded annually to about 31,000 fires caused by lightning with $213,000,000 in direct property damages. (Source: NFPA Report, January 2008).

Looking specifically at storage and processing activities, lightning accounts for 61% of the accidents initiated by natural events; in North America, 16 out of 20 accidents involving petroleum products storage tanks were due to lightning strikes. Plant loss in Louisiana was estimated at $10,000,000. Some 30% of all power outages annually are lightning-related, on average, with total costs approaching $1 billion dollars. The lightning Institute database shows 145 lightning events to privately owned nuclear power plants in the period 1985-2000. (Source: U.S. Nuclear Regulatory Commission, Report March 2001).

From 1/1/1990 to 4/30/2007, there were 169 lightning strikes in Minnesota with 7 fatalities and 64 injuries due to these lightning strikes, according to NOAA. Lightning caused over $12.28 million in property damages and $15K in crop damages. There have been 4 reported lightning events in Scott County resulting in 1 fatality, 0 injuries and $904,000 in property damage.

Future Probability

Based on reports 7 occurrences of lightning events that have resulted in population or property damage since 1996 a period of 13 years. This indicates that a severe lightning event occurs in Scott County approximately every 2 years resulting in a risk rating of medium and a vulnerability rating of low.

Historic Occurrences

There are four lightning events reported in the NCDC and Sheldus databases. Others were reported by local sources.

Table 5.18 Jurisdiction Historic Lightning Events

Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets, Utilities, Roads, Bridges Damaged, Evacuation, Etc,	Fatalities	Injuries	Assets Damage	Structure Loss	Other Loss or Cost Amount	
03/24/1996	Prior Lake	Lightning damaged a vehicle and caused on fatality	1	0	1	0	0	
06/05/1999	Shakopee	Lightning caused two house fires	0	0	2	0	0	

Table 5.18 Jurisdiction Historic Lightning Events								
Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets, Utilities, Roads, Bridges Damaged, Evacuation, Etc,	Fatalities	Injuries	Assets Damage	Structure Loss	Other Loss or Cost Amount	
04/22/ 2003	Credit River	Lightning struck a house and tree the tree burned	0	0	0	0	0	
09/04/ 2005	Prior Lake	Lightning struck three homes and were damaged by the resulting fire	0	0	3	604,000	0	
10/04/ 2005	Savage	Lightning damaged computers, garage door openers, and other small appliances and an alarm system at the Comfort Inn	0	0	10	300,000	0	
08/04/ 2009	Spring Lake	Lightning struck and caused a garage fire	0	0	1	12,000	0	
08/12/ 2009	Shakopee	Lightning struck the chimney of a home starting a small smoldering fire in the attic	0	0	0	0	0	
			1	0	17	916,000	0	
Data Sources		NOAA/NWS, Sheldus, Local Sources						
Loss Type		A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup						

Major Historic Occurrences Discussion

On June 25 1999 a thunderstorm with Hail and Lightning, in Shakopee lightning caused two house fires.

On Sept 4, 2005 in Prior Lake a thunderstorm with lightning occurred. A home suffered damage when lightning struck the outside gas meter. An outer wall caught fire and damage was estimated at $4,000. Lightning damaged computers, garage door openers, and other small appliances at other residences and an alarm system at the Comfort Inn on Highway 13 was damaged. In Shakopee trees were downed including one onto a homes and one fell onto a car. A house on was engulfed in flames and had extensive roof and garage damage totaling $500,000. Another home suffered $100,000 in fire damage to interior walls after two bolts struck the building.

Lightning caused a wildfire to breakout two miles south of Seagull Lake on the Gunflint Trail on U.S. Forest Service protected land in the Boundary Water Canoe Area Wilderness (BWCAW). The fire was eventually called the "Cavity Lake Fire" and at the time was the largest fire in the area in one hundred years. The fire spread quickly when 50 mph down drafts from a passing thunderstorm fanned the fire, eventually consumed31,830 acres. Many entry points and portages in the BWCAW were closed while fire suppression efforts were made.

5.3.11 Wildfire Profile

A wildfire is any instance of uncontrolled burning in grasslands, forests, and brush land. Wildfire is further defined as an uncontrolled fire spreading through vegetative fuels, exposing and possibly consuming structures (FEMA, 2001). Wildfires often begin unnoticed and spread quickly. Naturally occurring and non-native species of grasses, brush, and trees fuel wildfires. The Federal Emergency Management Agency's (FEMA) Fire Management Assistance Grant Program (FMAGP) indicates that a wildfire is also known as a forest fire, vegetation fire, grass fire, or brush fire, is an uncontrolled fire requiring suppression action.

Location

Due to the abundance of vegetation throughout the county, wildfires are a moderate threat in all rural areas. Significant events occur during periods of inadequate rainfall. Lesser events occur annually, usually as a result of escaped controlled burning or arson.

Wildfires occur throughout the unincorporated areas of Scott County. Significant events most often occur in the remote areas of the northwestern section. Lesser events can occur at any location throughout the entire county. Fire departments from each of the municipalities frequently respond to grassland, brush or woodland fires within and around their cities.

Figure 5.18 Minnesota Wildfire danger Rating

Source:

Extent

Wildfires pose a great threat to life and property, particularly when they move from forest or rangeland into developed areas. More than 140,000 wildfires occur on average each year in the United States (U.S.), causing millions of dollars in damage. Since 1990, more than 900 homes have been destroyed each year as a result of wildfire and even relatively small fires have caused substantial losses (Institute for Business and Home Safety, 2001).

Each year in addition to affecting people, wildfires may severely impact livestock. Since 2000, wildfires destroyed 6,564 large hay bales, inflicting a severe economic impact on farmers. The forest resources of Minnesota feed one of the main industries of the state. Timber loss to fire creates an economic loss to both the private landowner and the State's economy.

The potential for loss of human life in wildfires is a concern, especially in Wildland urban interface zones. Between 1985 and 2005, 159 people have been injured and 8 people killed in Wildland fires In Minnesota. Wildfires can also have a dramatic and sometimes permanent impact on wildlife in the area of the fire. The Minnesota Department of Natural Resources (DNR) annually responds to an average of 1,710 fires that burn 44,735 acres The County's municipal and volunteer fire departments respond to a combined average of 100 wild-land fires annually. Many of these fires occur in mixed interface areas and pose threats to occupied structures. Several municipalities have extensive areas of greenbelt and parkland, and brush fires in these cities create a significant urban interface danger. Wild fires in Scott County have resulted in 0 fatalities, 2 injuries and $50,000 in property damage.

Figure 5.19 Shakopee Wildfire

Source: Shakopee News

Future Probability

The probability of future wildfire events is high with the vulnerability low however, as population expands the vulnerability could raise to medium.

Historic Occurrences

These are fires that have required assistance by the Forestry Commission to control the blaze.

Table 5.19 Historic Wildland Fire Events

Event Date	Location or Map Reference	Extent Description Severity, Area Impacted, Assets, Utilities, Roads, Bridges Damaged, Evacuation, Etc,	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
2001	Burnsville Shakopee	1,200 acres of Swamp Land burned	0	2	0	0	50,000	A
10/14/03	Savage	Fire burned 11 acres	0	0	0	0	0	
11/19/06	Shakopee	Grass fire 15 acres burned	0	0	0	0	0	
04/11/09	Credit River	a grass fire in burned about 20 acres	0	0	0	0	0	
04/18/09	Shakopee	A brush fire that grew out of control is believed to have led to a massive grass fire that burned over 200 acres around Dean Lake, endangering dozens of homes. It took firefighters about four hours to contain the blaze	0	0	0	0	0	
		TOTALS	0	2	0	0	50,000	
Data Sources	**Department of Forestry, Local Sources**							
Loss Type	**A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup**							

Major Historic Occurrences Discussion

In 2001 1:200 Acres of Minnesota Valley Refuge (wildlife/swamp land) burned. Area known as Rice Lake burned from Shakopee east towards the Savage/Burnsville border. Cause was unknown. Winds of 50 MPH aided the rapid spread of the fire. Injuries were identified as 2 cases of heat exhaustion affecting firefighters. Dollars loss was for personnel and supplies used to fight fire and rehab.

04/18/2009 a brush fire that grew out of control is believed to have led to a massive grass fire that burned over 200 acres around Dean Lake, endangering dozens of homes. It took firefighters about four hours to contain the blaze.

5.4 MANMADE HAZARDS PROFILE

Varying quantities of hazardous materials are manufactured, used, or stored at an estimated 4.5 million facilities in the United States--from major industrial plants to local dry cleaning establishments or gardening supply stores. Hazardous materials are transported by highway, railway, waterway, and pipeline daily, so any area is considered vulnerable to an accident. The Scott County Mitigation Committee has identified a Pandemic and 4 manmade hazards that are of concern to the county and its participating jurisdictions and agencies and are profiled below:

Table 5.20 Manmade Hazards Profiled	
Hazardous Materials Spills/Releases	Terrorism
Illegal Drug Laboratories	Urban Fires

5.4.1 Hazardous Materials Profile

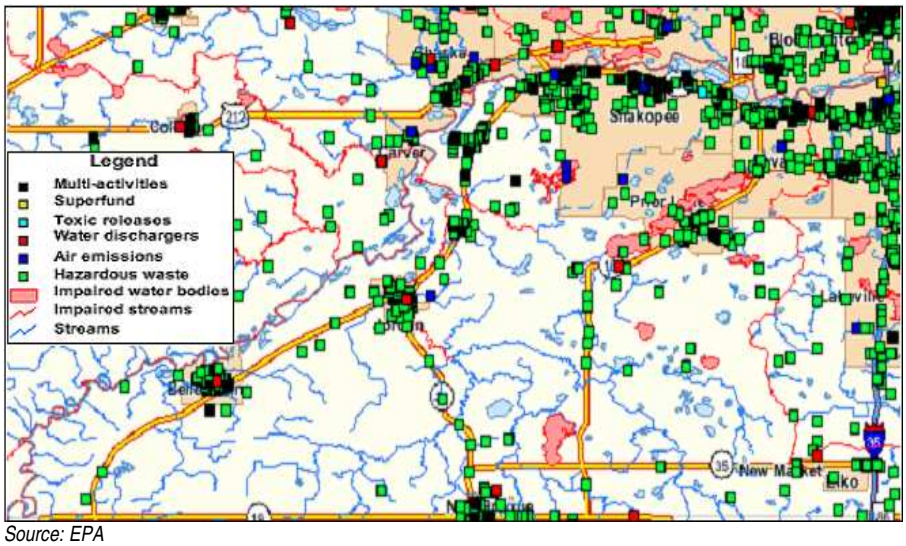
Hazardous materials are chemical substances, when, released, pose a threat to the environment or Public health. Hazardous materials (hazmat) incidents are likely to affect many communities.

Location

Every city has multiple facilities that produce, store, or use some form of hazardous materials.

Every water treatment plant has chlorine on site to rid the water of bacterial contaminants. Almost every county has a farmer's Co-Op, which stores significant quantities of pesticides and fertilizers. In addition, every home has some hazardous materials present in the form of cleaners, batteries, bleach, paint, and gasoline. A variety of hazardous materials exist in fixed facilities throughout Scott County. They range from flammable liquids stored or used to fuel vehicles through exotic biological agents. Some materials are particularly lethal even in small amounts, while others require strong concentrations with prolonged exposure. The facilities within Scott County that manufacture, store, or utilize quantities of hazardous materials in some capacity are indicated in the above map.

Figure 5.20 Hazardous Materials Sites In Scott County



Source: EPA

Extent

Hazardous Materials transportation is a major concern in Scott County, as there is little information regarding what is traveling on the county road system on a daily basis. Hazardous materials transportation incidents can occur at any place, although the majority occurs on interstate highways, major federal or state highways, or on the major rail lines. The Highway system in Scott County provides a network to transport both hazardous materials throughout the county. Hazardous materials are transported down many Scott County roads every day. Propane trucks serve the rural populations, and natural gas, used by both rural and urban citizens, must be treated as a dangerous hazard. According to the most recent findings at the Minnesota Department of Transportation, more than half of all accidents involving hazardous materials have occurred on the state roadways.

Rail transportation risks from hazardous materials affect Scott County. Valve leakage and releases are sources of spills on pressurized and general service tank cars. Other hazardous materials containers such as covered hoppers, inter-modal trailers/containers, or portable tanks are additional sources. These leaks manifest themselves as odors or vaporous clouds from tanker top valves, spraying or splashing from tanker top valves, wetness on the side of the car, or drainage from the bottom outlet valve. Depending on the type of rail car involved a leak or spill could result in hundreds to thousands of gallons/pounds of a substance being released.

There are a significant number of interstate natural gas and petroleum pipelines running through Minnesota. The pipelines are used to provide natural gas to the utilities in Minnesota and transport materials to the northeastern U.S. Significant releases from these pipelines occur, on average, twice a year, affecting up to several dozen people at a time.

Envirofacts information about Scott County, MN

AIR: Facilities that produce and release air pollutants: 64

TOXICS: Facilities that have reported toxic releases: 24

WASTE: Facilities that have reported hazardous waste activities: 828

- Number of Large Quantity Generators: 5
- Number of Small Quantity Generators: 33
- Number of Transporters: 6
- Number of Treatment, Storage, or Disposal Facilities: 1

WATER: Facilities issued permits to discharge to waters of the United States: 30

On October 17, 1986, in response to a growing concern for safety around chemical facilities, Congress enacted the Emergency Planning and Community Right-to-Know Act (EPCRA), also known as Title III of the Superfund Amendments and Reauthorization Act (SARA). The Act has a far-reaching influence on hazardous materials issues. EPCRA contains five sections covering issues associated with the manufacture, use, exposure, transportation, and public education of hazardous materials. Minnesota Homeland Security and Emergency Management is the lead agency responsible for implementing EPCRA and provide administrative functions and support.

Scott County has a strong, pro-active Local Emergency Planning Committee. Working in conjunction with emergency management, this organization actively solicits membership and tracks TIER II reporting requirements. Each facility that stores or uses hazardous materials above a threshold amount must develop and file a Risk Management Plan. Each plan identifies the significant hazards for the facility, the likely release scenario for the hazards, the estimated

properties impacted by the release, and the specific steps to take in the event of a release to protect that property from harm.

For security purposes the detailed Tier II facilities are only documented in the Supporting Annex. A risk and vulnerability assessment on identified Tier II facilities was conducted using the criteria below.

Table 5.21 Scott County Hazardous Materials Assessment

Criteria	0	1	2	3	4	5
Material Visibility	X	Existence not well known	X	Existence known locally	X	Existence well known
Material Volatility	None	Very Low	Low	Medium	High	Very High
Material Access	Secure area 24/7 armed guards & access controlled	Fenced guards access controlled	Access & parking restricted	Access Strictly controlled	Entry controlled	Open access
Material Mobility	X	Moved frequently	X	Moved some	X	Fixed in place
Hazard Materials present	No materials	Limited quantity secured	Moderate quantity strict control	Large quantity some control	Large quantity little control	Large quantity no control
SARA Reporting	X	Always Reports	X	Usually Reports	X	No Reporting
Site Population	0	1-250	251-500	501-1000	1001-5000	>5000

The risk of a major event is most severe in the more populated areas of the county, along state highways, railways, pipelines and adjacent to fixed facilities that store or manufacture hazardous materials. Many municipalities are in close proximity to highways and/or rail lines.. People on or immediately adjacent to transportation corridors are at highest risk.. There have been 0 fatalities, 1 injury and no reported costs.

Future Probability

Based on the EPA and NRC reports there have been 765 spills or releases reported since 1990 a period of 19 years resulting in and average of 40 events per year. The probability of future events is high. There have not been any associated costs reported, however some of the incidents involved Extremely Hazardous Material. A future event could easily be a major event resulting in the significant loss of life and property damage. Vulnerability should be rated high.

Historic Occurrences

The NRC database contains 88 reported spills and/or releases, 40 fixed, 20 mobile, 4 pipeline, 8 railroad and 7 vessel related. Following is a list of facilities with recorded releases of Hazardous Materials submissions to the EPA.

Table 5.22 Facilities With Recorded Hazardous Materials Releases

Name	Submissions
Adc Telecommunication Inc.	3
Adc Telecommunications Inc - Shakopee	28
Aggregate Industries - Shakopee Ready Mix	3
Aggregate Industries Inc - Belle Plaine	2

Table 5.22 Facilities With Recorded Hazardous Materials Releases	
Name	**Submissions**
American Color Graphics Inc	5
Anchor Glass Container Corp - Shakopee	9
Ashland Distribution Co	2
Associated Milk Producers Incorporated New Prague	7
Blue Lake Generating Plant	2
Certainteed Corporation	25
Chaska Chemical Co Inc	49
Conklin Co Inc	108
Continental Machines Inc	28
Cropmate Company Uap Shakopee Mn	2
Fabcon Incorporated	5
Fremont Industries Incorporated	117
Heat-N-Glo	3
Imagine Print Solutions	3
Koch Materials Co - Savage	13
Minnesota Valley Engineering Incorporated	99
Pillsbury, Green Giant Film Converting	19
Rahr Malting Co - Shakopee	22
Silgan Containers Mfg Corp - Savage	121
Tin Inc Dba Temple-Inland	2
Totals	677

Major Historic Occurrences Discussion

03/26/03 Firefighters from Savage were joined by hazardous materials teams from Chanhassen and Shakopee to respond to a call at Continental Machines about a light haze coming from a waste drain in the boiler area. All 125 employees were evacuated from the building and most were sent home. Three firefighters experienced eye irritation after entering the building.

07/17/03 Nearly 70 homes in the vicinity of 150th Street were evacuated after construction workers who were excavating at 150th Street and Lori Road ruptured a high-pressure gas main. Sounding just like the rush of a waterfall, natural gas flowed into the air from the plastic, 4-inch main.

On 03/04/08 Prior Lake firefighters responded to a hazardous-material call at Prior Lake State Bank, 14033 Commerce Ave. at about 10:10 a.m. Tuesday. The chemical leaked from an x-ray machine at Crossroads Medical Center, which is located upstairs from the bank. About 20 people were evacuated from the building while the ammonia-based chemical was being cleaned up due to a rotten-egg smell in the air and the possibility of inhaling the fumes.

5.4.2 Illegal Methamphetamine Labs Profile

The meth threat in Minnesota is a two-pronged problem. First, large quantities of meth produced by Mexican organizations based in California are transported into and distributed throughout the state. Second, meth increasingly is being produced in small laboratories, capable of producing only a few ounces at a time. Mexican groups, who receive their product from the West Coast,

control distribution of the drug. These traffickers typically send meth from California through the U.S. mail, via Federal Express, and by courier.

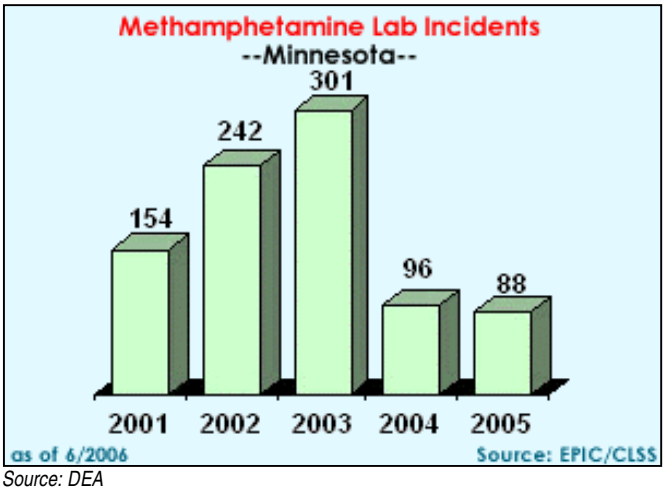
Location

The county and most municipalities have experienced meth lab seizures. The Scott County Sheriff's Office has found meth labs in apartments, motel rooms, vacant buildings in rural areas, vehicles, campsites, and private homes. Ongoing investigations have identified several Mexican restaurants in Minnesota utilized to launder illegal drug proceeds. Although meth lab operators may more easily establish labs in the urban and more remote unincorporated areas, all jurisdictions in the county are at risk from this hazard. Meth is a highly addictive drug. The potential for future hazard is high, and all areas will be equally impacted.

The drug threat in Minnesota is the widespread availability and abuse of illegal drugs arriving from outside the state, along with its homegrown marijuana and the increasing danger of local manufacture of Methamphetamine and designer drugs. Conventional drugs such as cocaine, Methamphetamine, and marijuana comprise the bulk of drugs arriving in and shipped through Minnesota. Colombian, Mexican, and Caribbean Drug Trafficking Organizations (DTOs), regional DTOs, as well as local DTOs and casual or one-time traffickers are responsible for the transportation of these drugs. Additionally, Mexican, Caribbean and regional DTOs have extensive distribution networks within the State of Minnesota. Outlaw Motorcycle Gangs are also supplying Methamphetamine on a very limited basis through their own distribution network within the state. Local production of Methamphetamine is on the rise.

Extent

Figure 5.21 Methamphetamine Activity in Minnesota



Source: DEA

For the second year, Methamphetamine has been identified by law enforcement as the number one drug threat in Minnesota. Methamphetamine production in the state has seen a substantial decrease as a direct result of the restricting of pseudoephadrine sales; however, it remains the most significant threat in Minnesota as Mexican DTOs increased the total quantity available. The number of Methamphetamine labs seized in 2007 was approximately 33% fewer than in 2006. A more pure form of the drug known as "ice" has replaced the Methamphetamine previously produced in the "mom and pop" labs in Minnesota. Virtually all of the Methamphetamine coming into the state is brought in by Mexican DTOs from Mexico and Texas and distribution points in Atlanta, Georgia. There are independent dealers who obtain lesser amounts for personal use with a small amount for distribution.

Money laundering continues to pose a threat in Minnesota, especially in Birmingham and Montgomery. The most obvious businesses utilized are used car lots and Mexican restaurants. These businesses tend to be cash-intensive and lend well to the laundering of illegal proceeds from illicit drug trafficking.

The cooking process itself and the waste that results from the manufacture of meth pose significant public health and safety risks. Methamphetamine recipes rely on the use of volatile organic compounds, explosives, acids, bases, metals, solvents, and salts. These ingredients have the potential for explosions. There have been 0 fatalities, 0 injures and $126,000 cleanup costs for illegal Meth labs in Scott County. In 2007 Scott County prosecuted 136 meth cases and had to place 38 children in foster homes or adoptive care. There was also a significant surge in home burglaries and thefts by people supporting their drug habits. Illegal Meth Labs in Scott County have resulted in 0 fatalities, 12 injuries and $74,500 in cleanup costs.

Future Probability

There have been 20 illegal Methamphetamine laboratories found in Scott County since 2002, a period of 6 years. This result in an approximately 3.25 illegal manufacturing laboratories and their associated hazardous materials located every year. The future probability of these labs is expected to increase and a have high probability rating. The social impact of the labs contributes to the medium vulnerability rating. $126,000 in cleanup costs

Historic Occurrences

There have been 20 reported Illegal Methamphetamine Laboratories found in Scott County.

Table 5.22 Historic Illegal Meth laboratories

Event Date	Location or Map Reference	Extent Description Lab Type, Area Impacted, Assets Damaged Etc	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
1999	4601 MN-13 West	Abandon lab in trunk of vehicle	0	0	1	0	6500	C R
1999	14900 block of Louisiana St.	Cardboard box in ditch	0	0	1	0	0	
06/01/99	Third Street in Jordan	Methamphetamine Lab	0	2	1	0	6000	R
01/02/01	Chaska	Methamphetamine Lab	0	1	1	0	6000	R
01/05/01	NW Howard Lake Rd & SW Spring lake Rd Prior Lake	Meth Lab found in wooded area	0	0	0	0		R
01/11/01	4000 block of Colorado St Prior Lake	Methamphetamine Lab	0	2	1	0	6000	R
03/01/01	828 Atwood Shakopee	Meth lab in house	0	0	1	10,000	7000	C R
4/09/01	2840 Spring Lake Rd Prior Lake	Meth lab found in residence	0	0	1	0	6000	R
04/19/01	Prior Lake	Methamphetamine Lab	0		1	0	6000	R
04/26/01	Prior Lake	Methamphetamine Lab in bedroom along with 3 Adults and 3 children	0	6	1	0	6000	R
08/04/01	New Market Township	Methamphetamine manufacturing	0	1	1	0	6000	R
11/27/01	100 S Varner St Jordan	Methamphetamine lab in the attic	0	1	1	0	6000	R
12/04/01	8300 block of Cypress Lane.	Methamphetamine Lab	0	1	1	0	6000	R
04/03/02	309 Mill Street Jordan	Methamphetamine lab in a garage	0	1	1	0	6000	R

Table 5.22 Historic Illegal Meth laboratories								
Event Date	Location or Map Reference	Extent Description Lab Type, Area Impacted, Assets Damaged Etc	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
05/16/02	203 SW 1ST St. New Prague	Meth Lab in trunk of car	0	0	1	0	500	R
05/08/03	Jordan	Methamphetamine lab in trunk of a car	0	1	1	0	500	R
02/18/04	Hwy 169 and Delaware Jordan	Methamphetamine lab found in Vehicle	0	0	1		500	R
08/13/04	501 N Central Ave New Prague	Meth Lab components in detached garage	0	0	1		6000	R
08/07/06	New Market Township	Residence meth lab.		1	1		6000	R
08/01/07	500 block of West 3rd St. Shakopee	Meth lab in house	0	0	1	0	6000	R
		TOTALS	0	12	19	0	74500	
Data Sources	DEA, Law Enforcement, Public Health Departments							
Loss Type	A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup							

Major Historic Occurrences Discussion

01/05/01 Officer from Prior Lake found the remains of a drug operation. Southwest Metro Drug Task Force and DEA took control of the scene.

03/03/01 Individual was cooking meth inside of house in Shakopee. Damage to windows occurred when fire department broke windows to vent vapors in house. Very little property was in house and house not destroyed

11/27/01 Jordan Officers conducting a search warrant found a meth lab in operation in the attic of the residence. Bureau of Criminal Apprehension lab team called to clean up chemicals

04/03/02 Jordan Police executed a search warrant that produced an active meth lab in garage at residence. Outside contractor called to remove and clean up lab

In Savage the Comfort Inn Motel called police and indicated a vehicle had been abandoned in their parking lot. Upon inspection of vehicle officers found materials left in the vehicles trunk that had been used to produce meth. Southwest Metro Drug Task Force was called.

5.4.3 Pandemic/Epidemic/Vector Profile

Pandemics and epidemics in Minnesota including Scott County were major killers in the 1700s and 1800s. The worst culprits were smallpox, polio, influenza, measles, and cholera, and yellow fever. In 1918, the Spanish flu pandemic struck Minnesota including Scott County. The cost in the U.S. is $71 to $167 billion annually. Some 36,000 in the U.S. and 250,000 to 500,000 worldwide die annually.

One of the "emerging" threats to Minnesota and Scott County are vector-based threats - bacteria, insects and other animals that pose a direct or indirect hazard to humans, their food supply, or the state's economy. Vector-borne diseases diagnosed in Minnesota include: Western equine

encephalitis, St. Louis encephalitis, Colorado tick fever, Rocky Mountain spotted fever, Lyme Disease, tularemia, rabies, plague, and Hanta-Virus.

Location

Scott County and its communities have experienced illness and fatalities from historic pandemic/epidemic events. In addition Scott County has experienced cases of infectious diseases over the last 50 years that have been isolated occurrences or minor exposures.

Extent

In contrast to typical natural disasters, in which critical components of the physical infrastructure may be threatened or destroyed, an infectious disease outbreak may also pose significant threats to the human infrastructure responsible for critical community services due to wide spread absenteeism in the workforce. Examples of such services and personnel in the non-health sector might include highly specialized workers in the public safety, utility, transportation and food service industries, and will likely vary from jurisdiction to jurisdiction. State and local officials should carefully consider which important to identify were absenteeism would pose a serious threat to public safety or would significantly interfere with the ongoing response to the outbreak.

Lyme disease is a potentially serious bacterial infection caused by the bite of an infected deer tick. The disease affects both humans and animals. The Minnesota Department of Health is monitoring the spread of the disease across the state and working to limit exposure to the ticks causing the disease. The reported cases of Lyme disease is steadily increasing in the twin Cities metropolitan area of which Scott Count is a part however Scott County has had no reported cases of Lyme disease. While the probability of future events exists, the risk is low for all jurisdictions.

Avian Influenza (Bird Flu)

Figure 5.22 Bird Flu Exposure

Source: State of Minnesota

Minnesota produces more than one billion pounds of turkey each year so turkey farmers are always watching their flocks for signs of avian flu.

Minnesota has been planning for an outbreak of bird flu since 1999. State officials are modifying those plans now because of a highly aggressive form of avian flu circulating among domestic and wild birds in Asia. It has now spread to Eastern Europe.

As long as vectors are present in the state, the potential for recurring disease exists. The likelihood of Western equine encephalitis and St. Louis encephalitis infecting the population is greater in the high mountainous areas of the state. Colorado tick fever and Rocky Mountain spotted fever have been small problems in the state. The state should be considered vulnerable to future incidence of tick fever. Most, but not all cases of tularemia appear to be associated with ticks in the southeastern part of the state including Scott County.

Fire ant colonies can quickly become a human health hazard. Fire ants inject a dose of venom that causes a burning sensation. These stings can cause blisters and infections, and can even cause anaphylactic shock or death in the most sensitive victims. It is also not uncommon for colonies of fire ants to attack and sometimes kill domestic animals, pets, and wildlife. Fire ant colonies can destroy entire fields of corn and soybeans. These insects are capable of causing major damage, both in terms of human and animal harm, and in crop damage.

West Nile Virus (WNV) is one of several mosquito-borne viruses in the United States. Mosquitoes become infected with WNV when they feed on infected birds. Less than one percent of humans infected may develop meningitis or encephalitis, the most severe forms of the disease, which occur primarily in persons over 50 years of age. Symptoms of encephalitis or meningitis may include severe headache, high fever, neck stiffness, stupor, disorientation, tremors, convulsions, paralysis, coma and sometimes, death. Tests performed in 2004 on a dead bird confirmed the presence of WNV in Scott County. No human cases have been reported..Infectious disease can affect any species. Some can be transferred between species, such as the swine flu, and cause problems for the receiving population. As long as vectors are present in the state, the potential for recurring disease exists. The likelihood of Western equine encephalitis and St. Louis encephalitis, Colorado tick fever and Rocky Mountain spotted fever is low.

An infectious disease outbreak could be perceived as a terrorist attack and cause widespread panic and civil disturbance. This would tax the already stretched public safety resources. A pandemic would result in critical workers not being able to perform their jobs. Possibilities include medical personnel, public safety personnel, and utility staff. A pandemic would not directly destroy property; however it could be damaged by lack of maintenance because of inadequate staff. A negative impact on the economy would also occur, however, if a widespread outbreak happened and businesses were forced to shut down for an extended period of time.

As of 7/31/2009, there have been 252 hospitalized cases of laboratory confirmed H1N1 with 3 fatalities in Minnesota, 3 cases in Scott County. Pandemics/Epidemics in Scott County. Pandemics/Epidemics in Scott County have caused 6 fatalities, 98 injuries and 0 property damage.

Future Probability

The probability of a Pandemic-affecting Scott County is low, however should a pandemic occur vulnerability would be considered high and the entire county would be equally impacted by human pandemic/epidemic events.

The probability for future vector or agriculture infestation incidents is medium and vulnerability would be medium. West Nile Virus events exists, this hazard presents a low risk to Scott County and its municipalities Scott County has not experienced (Foot and Mouth Disease) FMD. Livestock in the rural areas of the county would be at greatest risk for FMD. Fire ants have invaded Scott County.

Historic Occurrences

Many of the below 18 historical events have been reported Statewide. The impact expressed in the below table in these cases has been extrapolated based on population.

Table 5.23 Historic Pandemic, Epidemic, Infection, Infestation Events								
Event Date	Location or Map Reference	Extent Description Severity, Type, Area Impacted, Assets Damaged, Evacuation, Etc	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
1918-19	Countywide	Spanish Flu Estimates based on 500 deaths in Minnesota	5		0	0	0	
1935-38	Countywide	Typhoid	0	0	0	0	0	
1947-49	Countywide	Scarlet Fever	0	0	0	0	0	
1950-59	Countywide	Poliomyelitis	0	0	0	0	0	
1950-59	Countywide	Measles	0	0	0	0	0	
1957-58	Countywide	Asian Flu Estimates based on 170 cases statewide	0	3	0	0	0	
1968-69	Countywide	Hong Kong Flu Estimates based on 90 cases statewide	0	2	0	0	0	
1937	Countywide	Grasshopper destruction of crops.	0	0	0	0	0	
2004	Scott County	West Nile virus in two birds	0	0	0	0		
2004	Countywide	Whooping cough Estimates based on 727 cases statewide	0	7	0	0	0	
2003	Countywide	One child in Scott County severe acute respiratory syndrome, or SARS	0	0	0	0	0	
2003	Countywide	Whooping cough Estimates based on 207 cases statewide	0	2	0	0	0	
2001	Scott County	e-coli	1	2	0	0	0	
09/18/02	Scott County	Four cases of West Nile virus in horses	0	0	0	0	0	
2005	Scott County	Whooping cough	0	12	0	0	0	
2006	Scott County	Whooping cough	0	31	0	0	0	
04/04/02	Shakopee Jr. High School	Salmonella	0	36	0	0	0	
2009	Countywide	H1N1 (Swine Flue) through July Estimates based on 252 cases statewide	0	3	0	0	0	
		TOTALS	6	98	0	0	0	
Data Sources	CDC/Public Health Departments/Local Medical Servers/Agriculture							
Loss Type	A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup							

Major Historic Occurrences Discussion

In 1918, the Spanish flu pandemic struck Minnesota, 10,000 Minnesotans died, over twenty percent in the Twin Cities. Small towns were infected as severely as larger cities.

In the twin cities in 1935, a failure of the chlorination units at the public water supply plant resulted in a serious typhoid epidemic with 213 cases and 7 deaths.

1919-1953 Before anthrax became commonly known as a tool of terrorists, the bacteria was known in Scott County and other rural places for killing livestock. Anthrax outbreaks occurred from 1919 to 1953 in animal herds in Belle Plaine, Helena and St. Lawrence townships.

In 1979 an outbreak of Red Measles occurred, over 200 cases were reported.

In August 2003, an outbreak of E. coli O157:H7 infections occurred at the Scott County Fair. Two of the five cases were hospitalized, including one who developed hemolytic uremic syndrome. The fair held a petting zoo that included calves, sheep, and goats, but no specific source of the outbreak could be confirmed.

On September 26, 2001 the Minnesota Department of Health (MDH) was notified through the food-borne illness hotline of gastrointestinal illness in three of six individuals who ate together at a restaurant in Savage.

On November 6, 2001 the Minnesota Department of Health (MDH) was notified of gastrointestinal illness occurring among guests of a family in Savage. All 15 persons staying at the residence were interviewed, and 13 (87%) met the case definition.

04/04/02 Dozens of Shakopee Junior High School staff members became ill over the weekend after eating lunch together on Friday. School principal Jean Wyatt was among the victims of apparent food poisoning during staff "Wellness Day," a day dedicated to health and physical activity. Students were on break. "We were trying to eat healthy food," said Wyatt, who had only a few bites of one of the foot-long sub sandwiches the group shared.

04/30/03 Two Minnesota children with pneumonia -- including one in Scott County -- are being monitored as probable cases of severe acute respiratory syndrome, or SARS, state health officials announced Friday. A 2-year-old Ramsey County boy developed pneumonia shortly after returning from a month long visit to the Toronto area, which has 140 probable SARS cases, including 17 deaths linked to the disease. The second probable case involves a 14-month-old Scott County child who developed pneumonia.

03/17/04 Whooping cough, a highly contagious disease once nearly eradicated by childhood vaccinations turned up in three Eagle Ridge Junior High students in Savage last week.

09/03/04 a quickly spreading fungus is infecting the city's elm and oak trees this season. Experts say the diseases, particularly Dutch elm disease, are hitting the area's trees at an alarming and unprecedented rate. In Prior Lake, Dutch elm disease already has caused the death of more than 500 trees,

06/07/08 The Ebola virus for fish: Perhaps that's the best way to describe VHS, or viral hemorrhagic septicemia. The lethal fish virus causes severe hemorrhaging and is capable of producing massive fish kills in some of Minnesota anglers' favorite game and eating fish including: Muskie, walleye, perch, sunfish, crappie, and small-and largemouth bass. The invasive disease (which is not native to the Great Lakes) was first diagnosed in Lakes St. Clair and Ontario in 2005.

09/06/07 an exotic mosquito that's never been seen before in Minnesota has been found in Scott County. The Japanese rock pool mosquito - which can transmit the West Nile virus and encephalitis, was discovered in a routine sampling by the Metropolitan Mosquito Control District (MMCD) last month. Common in Asia, the Japanese mosquito is fairly new to the United States. It was first spotted in New Jersey and New York in 1998 and has been moving across the country.

5.4.4 Terrorism Profile

The Domestic Preparedness Program is a partnership of federal, state, and local agencies with the goal of ensuring that, as a nation state and county, we are prepared to respond to a terrorist attack

involving nuclear, biological, or chemical weapons - weapons of mass destruction (WMD). Today, the term "Homeland Security" is used to denote the concept of preparing for these kinds of events. Terrorism involves incidents committed by both international and domestic agents.

Location

The county contains potential target sites for terrorist attack. The presence of these facilities places Scott County at a high threat level for forms of terrorist attack. A terrorist event at these facilities would affect the entire county. The most dangerous variants of terrorism - nuclear, biological, or chemical attacks could affect Scott County. At present, the most likely form of nuclear, biological, or chemical terrorism may be a threat or hoax of a chemical device or sabotage. The county and its municipalities are at equal risk of Terrorism events. Scott County has experienced domestic terrorist events in the form of:

Bomb Threats: Though none have been found credible, bomb threats by telephone are becoming an increasing problem for schools and government throughout Scott County.

Cyber-terrorism: Several facilities in Scott County have been affected by computer viruses and attempted system entry by "hackers." Improved virus detection capability and system security safeguards have reduced the threat of cyber-terrorism for Scott County's larger industrial and government facilities. Smaller businesses and jurisdictions throughout the entire county remain at future risk of this hazard.

Extent

A hostile attack is the most threatening manmade hazard that could affect Scott County. There is no history of hostile attacks; however, the potential exists. With the mobility of the world's population and the possibility of a terrorist attack, it is possible to have a major disease outbreak or nerve gas release anywhere in the US, including Scott County. Although extremist groups exist within the state, it is unlikely that any terrorist act perpetrated by these groups would be disastrous statewide. Authorities on terrorism generally agree that terrorism cannot be wiped out entirely. For the present, it is a problem to be managed, not solved. Efforts to manage political terrorism in Scott County should include:

- Gathering intelligence on terrorist operations, members and their ideology.
- Pooling intelligence and information with knowledgeable sources.
- Physically protecting suspected targets.
- Promoting public awareness.
- Controlling arms and explosives.
- Improving screening of applicants for jobs requiring use of arms and explosives.
- Preparing contingency plans for different kinds of terrorist acts.

The County prepared a Department of Homeland Security sponsored terrorism assessment in 2002 to identify potentially at-risk critical facilities, since intentional human-caused disasters cannot be quantified with as great a degree of accuracy as many natural hazards. The assessment drew on the county's Emergency Operations Plan. The assessment considered terrorism as a primary mode of a possible disaster: contamination (chemical, biological, radiological or nuclear), energy (explosive, arson) or failure/denial of services (sabotage, infrastructure breakdown and disruption). It considered eight critical infrastructure categories: telecommunications, electrical power systems, gas and oil facilities, financial institutions,

transportation networks, water supply systems, government services and emergency services. Finally, it considered the vulnerability of the county's assets, both with respect to its "attractiveness," for example, is it highly visible or it draws large crowds and its current level of protection from an attack.

A terrorism vulnerability assessment of each identified target was conducted using the below table builds on the Office of Domestic Preparedness Terrorist Vulnerability Assessment of 2002. For security purposes the detailed information on identified targets is documented in the Annex.

Table 5.24 Scott County Terrorism Assessment

Criteria	0	1	2	3	4	5
Asset Visibility	X	Existence not well known	X	Existence known locally	X	Existence well known
Target Utility	None	Very Low	Low	Medium	High	Very High
Asset Access	Secure area 24/7 armed guards & access controlled	Fenced guards access controlled	Access & parking restricted	Access Strictly controlled	Entry controlled	Open access
Asset Mobility	X	Moved frequently	X	Moved some	X	Fixed in place
Hazard Materials present	No materials	Limited quantity secured	Moderate quantity strict control	Large quantity some control	Large quantity little control	Large quantity no control
Potential Collateral Damage	No Risk	Low risk; immediate area only	Medium risk; local area only	Moderate risk within 1mi. radius	High risk within 1 mi. radius	High risk beyond 1mi. radius
Site Population	0	1-250	251-500	501-1000	1001-5000	>5000

Within the county, the Fire Service and Law Enforcement departments have the primary responsibility for responding to WMD/Terrorist incidents. A WMD/Terrorist incident is a potential crime scene and the responsibility of law enforcement is primary in these types of incidents. At a minimum each county fire department is trained to hazardous materials Awareness Level, as defined in 29 CFR 1910.120. The Fire Departments would also utilize the County Hazardous Materials Team to assist in the mitigation of a WMD/Terrorist incident. These group members are trained at Hazardous Materials Operational Level, Hazardous Material Technical Level, and Hazardous Material Specialist Level. In the event of hazardous materials, weapons of mass destruction / terrorism incident that are beyond the capabilities of the county, assistance from State and Federal agencies can be requested.

The specific hazards created by a terrorist event are dependent on the type of threat, the amount population affected and involved, and the location where the event occurs. The hazards to life presented by a terrorist event is dependant on the type of event the physical attributes (topography, bodies of water), weather conditions, buildings/structures/people exposed) and the area where the detonation occurs. People on or immediately adjacent to high-risk facilities are at highest risk. It is fair to assume that a event would most likely occur in a suburban/urban area; where the impact would be greater. Domestic terrorism events in Scott County have resulted in 3 fatalities, 1 injury and $12,000 in recovery costs.

Future Probability

There have been 29 reports of domestic terrorism reported in Scott County since 2001, a period of 8 years. This results in the probability of 3.5 terrorism events a year. The expectation is that the future occurrence of a major terrorist's incident in the county will continue to be high and the vulnerability to be low, however a significant event would increase the vulnerability to high.

Historic Occurrences

A detailed list of 29 reported terrorist events is provided in the table below.

Table 5.25 Historic Terrorist (Domestic/International CBRNE, Cyber) Threats/Events

Event Date	Location or Map Reference	Extent Description Severity, Type, Area Impacted, Assets/Utilities Roads/Bridges Damaged, Evacuation, Etc	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
10/17/01	Shakopee	4 pieces of mail 3 to residential addresses and one from a business containing a white powdery substance						
9/12/07	Prior lake High School	Bomb threat Evacuated students Explosive sweep of the building.	0	0	0	0	5000	
12/21/07	Prior Lake High School	Bomb threat Students were secured in classrooms 1.5HRS	0	0	0	0	50000	
09/30/07	Valleyfair Amusement Park.	Bomb threat 50 employees were sent home..	0	0	0	0	5000	
04/21/07	Glendale Elementary School Savage	Spray-painted bomb threat	0	0	0	0	2000	
04/20/07	Prior Lake High School	Gun threat	0	0	0	0	1000	
04/25/07	Pioneer Ridge Freshmen Center Chaska	Bomb threat	0	0	0	0	3000	
05/17/00	Prior Lake High School	Bomb threat on a table in the cafeteria	0	0	0	0	3000	
10/24/05	E. Pioneer Trail Chaska	Bomb threat.	0	0	0	0	3000	
10/05/04	Shakopee High School	Bomb threat 900 students and staff were evacuated	0	0	0	0	10000	
12/04/00	Friendship Manor Nursing Home Shakopee	Bomb threat 74 residents evacuated.	0	0	0	0	5000	
09/24/03	Prior Lake Savage School District	School shooting Threat	0	0	0	0	2000	
01/17/03	Southwest Metro Transit Station, 13500 Technology Drive	A man threatened to blow himself up on a bus	0	0	0	0	2000	
04/06/01	Prior Lake High School	A bomb threat note was found The high school was evacuated	0	0	0	0	5000	
04/14/04	North Meadow Apartments Chaska	Bomb-making materials were found	0	0	0	0	1000	

Table 5.25 Historic Terrorist (Domestic/International CBRNE, Cyber) Threats/Events								
Event Date	Location or Map Reference	Extent Description Severity, Type, Area Impacted, Assets/Utilities Roads/Bridges Damaged, Evacuation, Etc	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
04/29/04	Jordan	Explosives and weapons found in a truck.	0	0	0	0	1000	
04/28/02	Savage	2 explosive devices made out of plastic bottles were found	0	0	0	0	1000	
04/29/02	14900 block of Overlook Drive Savage	Explosion outside a home, a bottle with a type of gas was found	0	0	0	0	5000	
9/11/01	104 NW 4th Ave New Prague	Bomb threat	0	0	0	0	2000	
9/16/01	104 NW 4th Ave New Prague	Bomb threat	0	0	0	0	2000	
8/03/02	104 NW 4th Ave New Prague	Bomb threat	0	0	0	0	2000	
4/02/02	221 NE 12th St New Prague	Bomb threat	0	0	0	0	2000	
06/18/04	13400 Glenhurst Ave. Savage	Car fires caused by Molotov cocktails,	0	00	0	0	0	
07/08/04	221 NE 12th St New Prague	Bomb threat	0	0	0	0	2000	
09/15/06	Highway 13 Toledo Ave. Savage	Cut gas line	0	0	0	0	0	
10/15/07	721 N Central Ave New Prague	Bomb threat	0	0	0	0	2000	
8/01/07	800W 1st Ave Shakopee	Pipe bomb found under Propane tanks	0	0	0	0	5000	
2003	6957 E Hwy 101 Shakopee	Pipeline was damaged	0	0	1	40000	10000	
08/01/07	1100 S Canterbury Rd Shakopee	PETA threat to Horse Track	0	0	0	0	3000	
29		Totals	0	0	1	40000	134000	
Data Sources	911/Fire Departments/Law Enforcement/Education/DHS/Private Sector							
Loss Type	A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup							

Major Historic Occurrences Discussion

In 2001 In Shakopee a disgruntled employee attempted to damage pipeline by cutting it open. Also did some damage to office equipment. The pipeline did not rupture.

10/17/01 within the past week, police have recovered four pieces of mail - three delivered to residential addresses and one from a business - containing a white powdery substance or a paint-like material. Two of the letters came from outside the United States.

On 09/11/01, 09/16/01 and 08/03/02 incidents that occurred at 104 NW 4th Ave. Phone threat received at a grocery store by person who indicated a bomb was in the store. Store was evacuated and searched. There were no injuries or damage.

On 04/02/02 and 07/08/04 incidents occurred at 221 NE 12th St. In the first a message was left in a bathroom at New Prague Senior High School about a bomb set for 4/3/02. No bomb was found, no injuries. The case is still under investigation. In the second incident, note found that indicated school would blow up at noon in October. No bomb was found, no injuries.

06/18/04 Two car fires, both caused by Molotov cocktails, are under investigation by the Savage Police Department. Police responded to the two calls within half an hour of each other. Extensive damage was reported to a car parked in the 13400 block of Glenhurst Avenue. The second in the 4000 block of West 135th Street.

On 08/01/07 a pipe bomb was found underneath one of the large propane tanks (capacity not know) in Shakopee. Bomb was deactivated by bomb squad. This business stores large quantities of propane for business use

On 08/01/07 the PETA organization threatened to disrupt races and traffic by protesting. The Racetrack incurred costs by hiring additional private security (costs not known). Protesters did not show up and races went on as normal.

On 10/15/07 an incident occurred at 721 N Central Ave, writing on bathroom walls at New Prague Middle School with picture of stick person holding a suitcase of explosives. No bomb was found, no injuries.

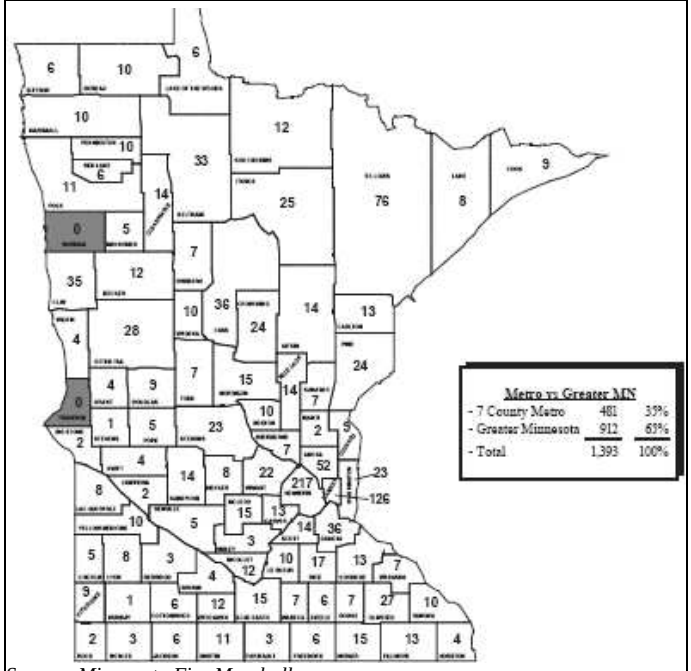
5.4.5 Urban Structure Fire Profile

An urban fire is any instance of uncontrolled burning which results in major structural damage to large residential, commercial, industrial, institutional, or other properties in developed areas. Generally a large structure is defined as any structure exceeding 25,000 square feet. Large structural fires therefore would include fully involved structures of this size or greater. Multiple stories may be involved as well and constitute square footage.

Location

Almost every county has at least one city that has significant development including a downtown area, industrial park, hospital, government center, churches, manufacturing facilities, warehouses, and multiple-story buildings. Each of these locations is a prime target for urban fire events.

Figure 5.23 Fire Deaths in Minnesota and Scott County 1982 - 2007



Source: Minnesota Fire Marshall

The Minnesota State Fire Marshall reports on rural fire in Minnesota. Fires occur in similar proportions in both rural and urban areas. Structures fires are the most prevalent (33%) type of fire and are responsible for the most deaths and injuries. In structures, the two leading causes are 1) heating and 2) other equipment. Rural residential structure fires are twice as likely to be caused by heating, as fires in urban areas; fireplaces and chimneys are the most likely type of equipment involved in the fire. Of the structure fires, 48% occurred in structures without an operational smoke alarm. Flame damages were more extensive in rural structure fires, contained to the building, than urban structure fires that were contained to an object or room.

Extent

Fires have affected individual structures throughout the rural unincorporated areas of Scott County and its municipalities, occurring in homes, businesses, and government buildings. The potential for future events exists. The entire county is at equal risk of fires in individual structures. In terms of large, urban fires within Scott County, the downtown areas of Municipality's comprised of adjoining old wood structures, are at greatest risk.

Damages from fire can range from human and livestock deaths to significant property damage and infrastructure problems. All areas of Scott County are vulnerable to fire conditions. However, the urban areas have the greatest potential for significant loss. The potential for loss for human life in fires is a significant concern. Fires can have a dramatic and sometimes permanent impact on individuals, property and the environment in the area of the fire.

In 2007 Scott County fire departments made 370 fire runs and 4,101 other runs. Total fire loss in the county was $2,522,420. The Belle Plaine fire department made 18 fire and 94 other runs and had zero dollar loss. Elko-New Market fire department made 25 fire and 230 other calls and had zero dollar loss. The Jordan fire department made 27 fire and 91 other calls and reported $162,700 in fire losses. The New Prague fire department responded to 30 fire and 93 other calls and reported fire losses of $159,000. The Prior Lake fire department responded to 80 fire and 1,034 other calls and experienced $843,500 in fire losses. The Savage fire department made 42 fire and 358 other calls and reported $574,000 in fire damage. The Shakopee made 115 fire and

494 other runs and reported $774,200 in fire losses. The Shakopee Mdewakanton fire department responded to 33 fire and 1,707 other calls and reported fire losses of $9,020. Since 1999 32 Major fires in Scott County resulted in 3 fatalities, 6 injuries and $8,813,000 in property damage

Future Probability

Multiple major fires occur in Scott County every year and will continue to occur. The probability of a major fire is high and the vulnerability is also high

Historic Occurrences

In the table below major fires are documented.

Table 5.26 Historic Urban Fire (Commercial/Large Structure, Fatality/Injury) Events

Event Date	Location or Map Reference	Extent Description Severity, Cause, Area Impacted, Assets/Utilities Damaged, Evacuation, Etc	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
02/26/99	Shakopee	Arson fire 32 food and craft booths destroyed	0	0	32	200,000	300,000	C
01/18/01	Prior Lake	Landing fire damaged offices, apartments County Rd 101 closed.	0	0	0	0	0	
11/25/01	20335 Sawmill Rd. Jordan	Six fire departments responded to a huge fire at a large hay barn and a horse barn. One animal was lost.	0	0	0	$1,000,000	$500,000	
10/01/02	Rahr Malting, Shakopee.	A four-alarm blaze County Road 69 was shut down	0	0	0	0	0	
12/01/03	4900 Valley Industrial Blvd Shakopee	Commercial business fire	0	0	0	0	0	
03/19/08	Shakopee	A man died in an Apartment fire	1	0	1	100,000	25,000	C
01/28/08	21846 Sielaff Dr. St. Lawrence Twp	Arson fire destroyed a home	0	0		120,000	30,000	C
07/16/08	Rollx Vans, 6591 Hwy. 13,	Vans designed for the disabled were destroyed by arson	0	0	6	180,000	0	
02/01/08		Arson destroyed vans 2 miles west of the Rollx Vans lot	0	0	2	60,000	0	
07/22/08	Prior Lake High School	Air-conditioning unit fire. 75 to 100 were evacuated	0	0	1	30,000	0	
	Tractor Supply 16907 Hwy 13,Prior Lake	Flames spread from the trash bin to the building.	0	0	1	10,000	5,000	C
08/24/05 11 hrs	St. Mark's Catholic Church Shakopee	2 historic stained glass windows the roof, floor and pews were damaged	0	0	1	300,000	100,000	C
03/31/08	2077 12th Avenue West, Shakopee	Apartment complex fire. 1 child and 2 adults were injured	0	3	1	100,000	40,000	C
07/16/07 7hrs	Shingle factory Warehouse	Warehouse Damaged	0	0	1	100,000	20,000	C
09/11/06 6 hrs	Hughes Garage 2nd & Lewis St. Shakopee	Building fire-fireman victim	1	0	1	200,000	0	

Table 5.26 Historic Urban Fire (Commercial/Large Structure, Fatality/Injury) Events								
Event Date	Location or Map Reference	Extent Description Severity, Cause, Area Impacted, Assets/Utilities Damaged, Evacuation, Etc	Fatalities	Injuries	# Of Assets Damaged	Structure Loss	Other Loss or Cost	
							Amount	Type
07/14/07	Murphy Hanrehan Park, Shakopee	Grass fire	0	0	0	0	0	
07/16/07	CertainTeed, 3303 4th Ave E. Shakopee	Business Damaged	0	0	0	0	0	
07/06/07	1294 78th St Belle Plaine Twp	Home and business destroyed	0	0	0	0	0	
10/19/05	101 West Main St Belle Plaine.	Wood and brick building. Entire building destroyed	0	0	1	$1,200,000	0	
05/31/05	155 Laredo St. Belle Plaine	Pole shed type of building. Entire building destroyed	0	0	1	$600,000	200,000	C
01/11/04	Prior Lake	Townhouse complex	0	0	3	500,000	140,000	
01/13/04	7599 Arbor Lane Savage	Townhouse Complex	0	3	16	$1,000,000	300,000	C
08/18/02	9747 Hwy 101 Savage	Single Family Residence	1	0	1	$180,000	$50,000	C
03/20/04	101 Main St W New Prague	Restaurant	0	0	1	$300,000	70,000	C
12/07/06	26370 Helena Blvd New Prague	Machine Shop	0	0	1	$300,000	$350,000	C
04/24/05	313 2nd Street New Prague	Large residence	0	0	1	$90,000	$35,000	C
02/23/08		A truck and trailer was set ablaze	0	0	0	0	0	
06/24/07	Valley Green Mobile Home Park, Jordan	Arson fire	0	0	0	0	0	
07/22/06	!st Ave, Eagle Creek Blvd Shakopee	Trailer home and horse stable arson fire	0	0	0	0	0	
04/04/06	Edgewood School, Prior Lake	Under construction school building,	0	0	0	0	0	
02/02/06	Bunge North America, Savage	After 15 hours on the scene of a fire in a grain bin. The bin, contained	0	0	0	0	0	
10/19/05	Belle Plaine	Apartment/commercial building fire	0	0	0	0	0	
32		TOTALS	3	6	39	$6,570,000	$2,165,000	
Data Sources	**911/Fire Departments/Law Enforcement/Education/DHS/Private Sector**							
Loss Type	**A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup**							

Major Historic Occurrences Discussion

10/01/02 Four area fire departments responded to reports of a four-alarm blaze at Rahr Malting in Shakopee late Tuesday morning. Scott County dispatchers fielded the call just before 11 a.m. Fire crews from Savage, Jordan and Chaska assisted Shakopee firefighters at the scene on the north side of Rahr. County Road 69 was shut down while officials investigated one of the interior units of the city's tallest building. No smoke or flames were visible Shakopee Fire Marshal Tom Pitschneider said.

On July 17, 2007 About 100 firefighters from Shakopee, Savage and Prior Lake were called out to CertainTeed Corp. around 3 a.m. A heat gun used to shrink wrap materials loaded on pallets is the likely cause of a fire Monday that damaged a warehouse at the roofing material manufacturing plant in Shakopee. The fire caused about $350,000 damage

03/20/04 A restaurant in New Prague was completely destroyed. The building was a brick and wood structure. Cause is believed to be electrical.

2/07/06 A New Prague Machine shop was completely destroyed. The building was a wood frame with tin covering. The cause was believed to be caused by a hole or crack in the chimney, which ignited a structural member of the frame.

On February 26, 1999, fire swept through a local renaissance faire near Shakopee MN. The damages were estimated at $500,000 An early-morning fire that destroyed 32 food and craft booths on the Renaissance Festival grounds Friday in rural Shakopee has been ruled arson, authorities said. The blaze was confined to the southwest corner of the festival site, an area intended for children. Ten percent of 320 vendor booths burned to the ground. The fire was reported by Carver County deputies at 3:03 a.m. Friday. At first, they thought the blaze was in the city of Carver but soon realized it was on the festival grounds, near the intersection of Hwy. 169 and Hwy. 41 in rural Scott County. Seven fire departments responded: Shakopee, Jordan, Savage, Chaska, Carver, Chanhassen and Prior Lake with more than 100 firefighters. The blaze was extinguished by 5:30 a.m. Thomas Neudahl, deputy state fire marshal investigator, said four or five fires had been set. Mid-America Festivals, which runs the outdoor event that attracts more than 300,000 people annually to the 22-acre spread, said the area would be rebuilt in time for its Aug. 14 opening

A Fourth of July Fire in 1973 at the Pollution Control Agency facility on the border of Shakopee and Savage created a large fireball and caused barrels of substances stored there to shoot up in the air.

08/18/02 A Large single-family residence in Savage burned. A 5-month-old child perished. Cause of fire was children playing with candles.

11/13/04 A Savage 16 unit townhouse construction project, not completed. Town homes destroyed and surrounding exposures damaged. 3 injuries due to icy conditions, slip, trips, or falls. Cause of fire unknown at this time

02/02/06 After 15 hours on the scene of a fire in a grain bin at Bunge North America, located along Highway 13, firefighters turned the scene over to company officials. The Savage Fire Department was summoned to the scene and found heavy black smoke billowing out from a ventilation fan on the side of one of the large storage bins. The bin, which was nearly full, contains 1.7 million bushels of grain, according to Bunge officials

On 04/04/06 Superintendent Tom Westerhaus was working late Tuesday night when School Board Member Sue Bruns suddenly burst into his office with the news that Edgewood School was on fire. Looking out his window from his temporary office at nearby Oakridge Elementary, Westerhaus could see the tower of black smoke extending into the sky from the vicinity of the under construction building, which will house half-day kindergarten and early childhood programs this fall.

10/19/05 A Wood and brick building in Belle Plaine was destroyed. The building housed several businesses and apartments. Cause of the fire was arson, perpetuator was caught and prosecuted and sentenced to prison. Accelerant was gasoline and building was totally destroyed.

11/25/01 A Barn in Jordan containing thoroughbred horses caught on fire and was destroyed. Water heater short-circuited which caused the fire. The barn and two outbuildings were destroyed and one horse was burned and was euthanized.

SECTION 6
RISK ASSESSMENT – ASSESSING VULNERABILITY

6.1 ASSESSING VULNERABILITY OVERVIEW

This Vulnerability Assessment Section provides a vulnerability summary and builds upon the information provided in the hazard profile section. This section summarizes the historic hazards and identifies community assets and development trends in Scott County, then assessing the potential impact and amount of damage that could be caused by each hazard event.

Multi-hazard Requirement §201.6(c)(2)(ii): [The risk assessment shall include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community.
A. Does the new or updated plan include an overall summary description of the jurisdiction's vulnerability to each hazard?
B. Does the new or updated plan address the impact of each hazard on the jurisdiction?

CRS Step 5: Assess the Problem Credit is based on what is included in the assessment of vulnerability to the hazards identified. At a minimum the plan must include an overall summary of each hazard and its impact on the community

The vulnerability findings in this section result in an approximation of vulnerability. These estimates should be used to understand relative vulnerability from hazards and the potential losses that may be incurred, however, uncertainties are inherent in loss estimation methodology, arising from incomplete scientific knowledge concerning specific hazards and their effects on the environment, incomplete data, and from approximations and simplifications that are necessary to provide a meaningful analysis. Further, most data used in this assessment covers relatively short periods of records which increases the uncertainty of any statistically based analysis.

To complete the assessment, each participating entity provided the best available local data. The mitigation Committee then collected data from a variety of sources, including state and federal agencies. Additional work will be done on an ongoing basis to enhance, and further improve the accuracy of the baseline information. It is expected that this vulnerability assessment will continue to be refined through future plan updates as new data and loss estimation methods or tools become available.

Two distinct methodologies were applied to assess the risk for Scott County. The first includes qualitative analysis that relies more on local knowledge and rational decision-making. This qualitative methodology was described in the hazards profile section. The second methodology, a quantitative analysis utilizing data from a detailed GIS-based approach using best available local data from Scott County. When combined with qualitative methodology the results are an assessment of potential hazard losses (in dollars). Both methodologies rely upon best available data and technology. The methodologies are combined to create a "hybrid" approach for assessing hazard vulnerability for Scott County that allows for some degree of quality control and assurance.

It should be noted that some of the quantities and values of structure in this section are best effort estimates as valid data is unavailable. These values will be adjusted during plan updates.

6.1.1 Hazard Event Disaster Declarations

Scott County has been included in a total of 5 federal disaster declarations from 1965 through 2008. All of these events did not necessarily occur within the boundaries of Scott County. The table below identifies those declarations and the economic relief provided.

Table 6.1 Scott County Disaster Declaration Economic Relief

Date	Declaration Number	Hazard Incident	Economic Relief Amount	Economic Relief Source
4/11/65	OEP188	Flooding	Unknown	FEMA
4/18/69	OEP255	Flooding	Unknown	FEMA
06/11/93	DR993	Tornadoes, Flooding	461,619	FEMA
4/8/97	DR-1175	Flooding	$116,031	FEMA
05/16/2001	DR1370	Flooding	117,287	FEMA

6.1.2 Hazard Vulnerability Summary

The below table summarizes the historic hazards that have occurred in Scott County. It should be noted that the data is not completely accurate, as much information was not captured especially in the early years. Flooding includes Dam/Levee failure, riverine and storm water. Note: High Winds include tornadoes, thunderstorms and windstorms.

Table 6.2 Scott County Hazard Profile Summary

Hazard	Incidents	Years	Avg./yr	Fatalities	Injuries	Assets	Asset Loss
Drought	3	21	7	0	0	0	$0
Earthquake	3	149	50	0	0	0	$0
Extreme Temperatures	16	15	1.1	4	1	1	$1,000,000
Flooding	23	56	.5	4	1	0	$9,591,740
Hail	4	21	.25	0	0	0	$10,500,000
High Winds	132	59	2.2	0	6	0	$196,930,624
Ice/Snow	27	15	1.7	0	0	0	0
Landslides/Mudslides	0	0	0	0	0	0	0
Land Subsidence	0	0	0	0	0	0	0
Lightning	7	13	1.9	1	0	0	$916,000
Wild Fire	5	8	.7	0	2	0	$50,000
Hazardous Materials	765	19	40	0	1	0	0
Illegal Meth Labs	20	10	2	0	12	0	$74,500
Pandemics/Vectors	18	91	.2	6	98	0	0
Terrorism	29	9	3.1	0	0	0	$174,000
Urban Fires	32	10	3.2	3	6	32	$8,813,000
Totals	1084	496		18	127	33	$228,049,864.00

The Scott County Hazard Mitigation Committee designed a Qualitative Methodology hazard rating that relies on historical and anecdotal data, community input, and professional judgment regarding historic and projected future hazard event. The qualitative assessment is built around

varying degrees and weights of risk values as assigned by the Mitigation Steering Committee. The hazard vulnerability assessment for Scott County uses a scoring system based on the below table.

Table 6.3 Hazard Qualitative Rating Table

Category	0	1	2	3	4	5
Fatalities and Injuries	0 fatalities or Injuries	<3 fatalities or injuries	4 to 14 fatalities and injuries	15 to 49 fatalities or Injuries	50 to 99 fatalities or Injuries	>100 fatalities or Injuries
Economic Loss	No Loss	Less than 500K cost	From 500K to 2.9Mil cost	From 3 Mil to 7.9 Mil cost	From 8Mil to 19.9Mil cost	More than $20Mil cost
Area Impacted	Local no evacuation	Local minimal evacuation	Local some evacuation	1 mile some evacuation	1 mile high evacuation	>3 mile and evacuation
Probability of Occurrence	Once every 50+ years	Once every 11 to 49 years	Once every 4 to 10 years	Once every 1 to 3 years	Between 1 and 3 times a year	More than 3 times a year
Repetitive Loss	>50 years	26 to 49 years	11 to 25 years	4 to 10 years	1 to 3 years	>1 per year

The Hazard Mitigation Committee developed a historic and future hazard vulnerability table using the risk table above by assigning a value (1 through 5). As can be seen from the below table high winds, flooding and urban fires received the highest vulnerability rating.

Table 6.4 Scott County Historic Hazard Profile Vulnerability Assessment

Hazard Event	Fatality and Injury	Economic Loss	Extent or Impact	Probability of Occurrence	Repetitive Loss	Vulnerability Score	Priority
Drought	0	2	0	2	3	7	**13**
Earthquake	0	0	0	0	0	0	**14**
Extreme Temperatures	2	2	0	4	3	11	**7**
Flooding (dam/levee failure, riverine, storm water)	2	4	3	4	4	17	**2**
Hail	0	4	0	2	3	9	**12**
High Winds (Tornadoes, thunderstorms, windstorms)	2	5	1	5	5	18	**1**
Ice/Snow	0	1	0	4	4	9	**9**
Landslides/Mudslides	0	0	0	0	0	0	**15**
Land Subsidence	0	0	0	0	0	0	**16**
Lightning	1	2	0	4	2	9	**11**
Wild Fire	1	1	0	4	4	10	**8**
Hazardous Materials	1	1	0	5	5	12	**4**
Illegal Meth Labs	2	1	0	4	5	12	**5**
Pandemics/Vectors	5	0	1	2	1	9	**10**
Terrorism	0	0	1	5	5	11	**6**
Urban Fires	2	4	0	5	5	16	**3**

The future vulnerability table uses the same hazard-rating table above but assumes a single worst-case event and future increases in population and structures. As can be seen by the ratings high winds and floods would impact the county the most. However it is possible that a hazardous materials event could be very devastating.

Table 6.5 Scott County Future Hazard Profile Vulnerability Assessment

Hazard Event	Fatality and Injury	Economic Loss	Extent or Impact	Probability of Occurrence	Repetitive Loss	Vulnerability Score	Priority
High Winds (Tornadoes, thunderstorms, windstorms)	4	5	0	5	5	19	**1**
Flooding (dam/levee failure, riverine, storm water)	2	4	1	4	4	15	**2**
Hazardous Materials	3	2	4	2	2	13	**3**
Urban Fires	2	3	1	3	3	12	**4**
Ice/Snow	1	2	1	4	3	11	**5**
Wild Fire	2	2	1	3	3	10	**6**
Extreme Temperatures	2	2	1	2	2	9	**7**
Lightning	1	2	0	3	2	8	**8**
Terrorism	3	3	0	1	1	8	**9**
Drought	0	3	0	1	2	7	**10**
Illegal Meth Labs	1	1	0	3	2	7	**11**
Hail	1	1	0	2	2	6	**12**
Pandemics/Vectors	4	2	0	0	0	6	**13**
Landslides/Mudslides	0	1	0	2	2	5	**14**
Land Subsidence	0	1	0	2	1	4	**15**
Earthquake	1	2	0	0	0	3	**16**

6.2 VULNERABILITY: REPETITIVE LOSS PROPERTIES

Multi-hazard Requirement §201.6(c)(2)(ii): [The risk assessment shall include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community.
A. Does the new or updated plan describe vulnerability in terms of the types and numbers of repetitive loss properties located in the identified hazard areas?

CRS Step 5: Assess the Problem The risk assessment must also address National Flood Insurance Program (NFIP) insured structures that have been repetitively flooded. The community must also address all properties identified in the repetitive loss areas as defined by the community.

The NFIP tracks properties that file multiple claims of a certain value over a specific period of time, termed Repetitive Loss Properties (RLP) and Severe Repetitive Loss Properties (SRL). A RLP is an NFIP-insured property that, since 1978 and regardless of any changes in ownership during that period, has experienced any of the following:

- Four or more paid losses in excess of $1,000
- Two paid losses in excess of $1,000 within any rolling 10-year period
- Three or more paid losses that equal or exceed the current value of the insured property.

Repetitive loss properties make up only about 2% of the flood insurance policies currently in force nationally, yet they account for 40% of the flood insurance claim payments. The RLPs are the biggest draw on the Fund. Analysts believe that by reducing the number of RLPs, flood insurance claims will be reduced. This will both diminish the pressure to raise flood insurance rates and stabilize the finances of the NFIP. RLPs exist in all 50 states, however, five states (Louisiana, Texas, Florida, North Carolina, and New Jersey) accounted for 63% of all repetitive loss payments from 1978 - 2004. The majority of existing flood-prone structures are residences (not vacation or income-producing homes). These properties have been repaired multiple times with subsidized flood insurance claim dollars. FEMA estimates that 90% of RLPs were built prior to 1975. These older pre-FIRM buildings were built before flood hazard risks were fully known and not constructed to resist floodwaters. Most owners of RLPs pay subsidized rates for flood insurance. FEMA has pursued a variety of insurance and mitigation strategies to stem the costs to the NFIP associated with these properties.

The SRL program was created pursuant to Section 1361A of the National Flood Insurance Act of 1968 (42 U.S.C. 4102A), as amended by the Flood Insurance Reform Act of 2004 (Public Law 108-264). The SRL program provides funding to reduce or eliminate the long-term risk of flood damage to severe repetitive loss residential structures insured under the NFIP. An SRL property is defined as a residential property that is covered under an NFIP flood insurance policy and:

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

The long-term goal of the SRL program is to reduce or eliminate NFIP claims. The SRL program will fund mitigation projects, which will result in the greatest savings to the National Flood Insurance Fund (NFIP) in the shortest period of time, based on a Benefit-Cost Ratio (BCR) using a FEMA approved methodology to conduct the Benefit-Cost Analysis (BCA).

A local mitigation plan must include a section in its risk assessment that describes the source of repetitive flooding problems and identifies the number and type (residential, commercial or governmental) of repetitive loss properties in the jurisdiction, including the extent of flood depth and damage potential. The tables below identify Repetitive Loss and Severe Repetitive Loss Properties in Scott County. As can be seen in the below table there is some data missing as to repetitive properties. This is believed to be data from floods occurring prior to 1997.

Table 6.6 NFIP RLP/SRL Properties

Flood Location	Number	Property Type	Total Losses	Insured	Flood Depth	Potential Risk H/M/L	Flood Type Out of Banks Storm Water Maintenance Low Lying
Shakopee	1	Commercial	2	No	Unk	High	Out of Banks
Shakopee	1	Commercial	2	No	Unk	High	Out of Banks
Scott Co	1	Residential	2	No	Unk	High	Out of Banks
Prior Lake	1	Residential	2	No	Unk	High	Out of Banks
Prior Lake	1	Residential	2	No	Unk	High	Out of Banks
Shakopee	1	Commercial	3	Yes	Unk	High	Out of Banks

Table 6.7 Total NFIP Losses by Jurisdiction

Community Name Flood Location	Total Losses	Closed Losses	Open Losses	CWOP Losses	Total Payments
BELLE PLAINE, CITY OF	1	1	0	0	7,408.44
JORDAN, CITY OF	7	3	0	4.00	7,931.39
PRIOR LAKE, CITY OF	46	34	0	12	241,262.07
SCOTT COUNTY*	2	2	0	0	13,295.82
SHAKOPEE, CITY OF	9	7	0	2	290,572.99
Total	65	47	0	18	560,470.71

6.2.1 Future Structure Vulnerability

The hazard narratives in the hazard analysis section describe the vulnerability of current structures in existing flood hazards in terms of impact, extent and future occurrences of flooding.

All the above structures will be considered for elevation above the flood elevation or have the structure area removed from floodplain. Any time development occurs near a floodplain, the cities ensure that the structures are at least two feet above the 100-year flood elevation. Structures proposed to be built in floodplain areas must go through the LOMR process with FEMA, so that they can be removed from floodplain status. The cities will not allow a structure to be built in a floodplain below the Base Flood Elevation.

6.3 VULNERABILITY: IDENTIFYING STRUCTURES

Requirement §201.6(c)(2)(ii)(A): The plan should describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard area
A. Does the new or updated plan describe vulnerability in terms of the types and numbers of existing buildings, infrastructure, and critical facilities located in the identified hazard areas?
B. Does the new or updated plan describe vulnerability in terms of the types and numbers of future buildings, infrastructure, and critical facilities located in the identified hazard areas?

CRS Step 4: Step 4: Assess the Hazard& Step 5: Assess the Problem: For multi-jurisdictional plans, the risk assessment must assess each jurisdiction's risks where they vary from the risks facing the entire planning area.

According to FEMA, critical facilities and infrastructure are those systems "whose incapacity or destruction would have a debilitating impact on the defense or economic security of that community." These systems include the following eight general categories: telecommunications infrastructure; electrical power systems; gas and oil facilities; banking and finance institutions; transportation networks; water supply systems; government services; and emergency services.

Participating municipalities provided the critical facilities and or assets within their communities. The Mitigation Committee then combined the local jurisdiction information with the county information to identify all critical assets and structures. The structure value information was gathered from tax records and other sources. The content value was estimated using the structure value as a basis and the following average percentages

- Residential=30%
- Government=40%
- Commercial/Industrial=50%

For security purposes the detailed tables are located in the Annex. An example is detailed below.

CRITICAL FACILITIES TABLE ENTRIES	
Hours Open	24 7, 8 5 etc
In Hazard	F = facility is within a 100/500 year floodplain or subject to riverine, storm water and/or dam or levee failure flooding H = facility is within 1 mile of a hazardous materials/nuclear facility/pipeline R = facility is within 1 mi. of a hazardous materials route (Roadway/Railroad). T = facility can be considered a terrorist target W = facility is in close proximity to a potential Wildland fire area
Asset Type	C = Commercial/Industrial G = Government E = Economic: The asset or facility generates jurisdictional revenu beyond taxes H = Historic: The asset or Structure a historic entity or have historic content S = The facility houses a special needs population i.e. patients children, elderly, etc.
Emergency Gen.	Y/N = Does the facility have an emergency generator
Construction	Indicate the primary building material-B=brick or block, C= concrete, M= metal, W= wood.
Flood Elevation	Elevation above flood stage. Only needed if in Flood plain
Structure Value	The structure value is determined from Insurance or property tax records
Content Value	If content value is unknown use common uplift factors 30% for residences, 40% for government and 50% for commercial/Industrial.

Table 1.1 Jurisdiction Critical Facilities (Replace "jurisdiction" with city or town name)

CRITICAL FACILITIES TABLE ENTRIES												
Education Fire Service Law Enforcement Medical/Nursing Child Care Utility, etc Facility Name and Type	Street City/Town Address	Time Open	In Hazard?	Asset Type	Emergency Generator	Construction B/C/M/W	Floors	Elevation	People Capacity	Building Sq. Feet	Structure Value	Content Value
County/City Facilities		8/4										
Nursing/Daycare												
Education facilities												
Medical facilities, etc												

The table below is a summary table that is extracted from the detailed tables in the supporting Annex and specifically lists the potentially at-risk facilities based on the GIS analysis of Scott County's critical facilities database in combination with the databases of hazardous material facilities and Federal and State-owned facilities. There are some extrapolated and estimated values in the vulnerability tables to account for growth since 2000 census and because of incomplete valuations especially for properties exempt from property tax.

Table 6.8 Participating Jurisdictions Critical Facility Summary					
Jurisdiction	Total Facilities	Total Sq. Footage	Total Structure Value	Total Content Value	Total Value
Scott County	13	1,483,187	$161,328,017	$36,559,705	$199,370,922.00
Belle Plaine	20	460,007	$81,440,972	$23,226,692	$105,127,691
Belle Plaine Township	1	1,196	$202,443	$12,000	$215,640.00
Blakeley Township	1	1,000	$500,000	$20,000	$520,000.00
Cedar Lake Township	2	8,000	$1,575,000	$400,000	$1,983,002.00
Credit River Township	1	1,000	$59,000	$10,000	$70,001.00
Elko-New Market	7	935,200	$5,935,000	$3,132,000	$10,002,207.00
Helena Township	3	13000	1,115,0000	424,0000	$15,403,003.00
Jackson Township	2	4,402	$572,100	$135,000	$711,504.00
Jordan	16	325,276	$90,375,724	$31,270,654	$121,971,670.00
Louisville Township	4	10,006,000	$11,400,000	$2,425,000	$23,831,004.00
M Sioux Tribal Area	13	93,000	43,600,0000	18,450,0000	620,593,0130
New Market Township	4	1,012,35	$2,663,000	$880,000	$3,544,051.00
New Prague	26	691,603	$113,403,107	$4,900,000	$118,994,736.00
Prior Lake	28	1,073,290	$162,894,270	$55,028,576	$218,996,164.00
St Lawrence Township	3	21500	$198,500	$34,000	$254,003.00
Sand Creek Township	3	1,040,397	$3,050,000	$1,020,000	$5,110,400.00
Savage	24	955,015	$71,525,000	$37,310,000	$109,790,039.00
Shakopee	33	1,865,769	$302,906,300	137,623,110	$442,395,212.00
Spring Lake Township	1	5,031	$1,200,000	$300,000	$1,505,032.00
Totals	205	18,984,920	$1,458,078,433.00	$523,026,737.00	$7,585,947,412.00

6.3.1 Asset Inventory For Flooding and High Winds Hazards

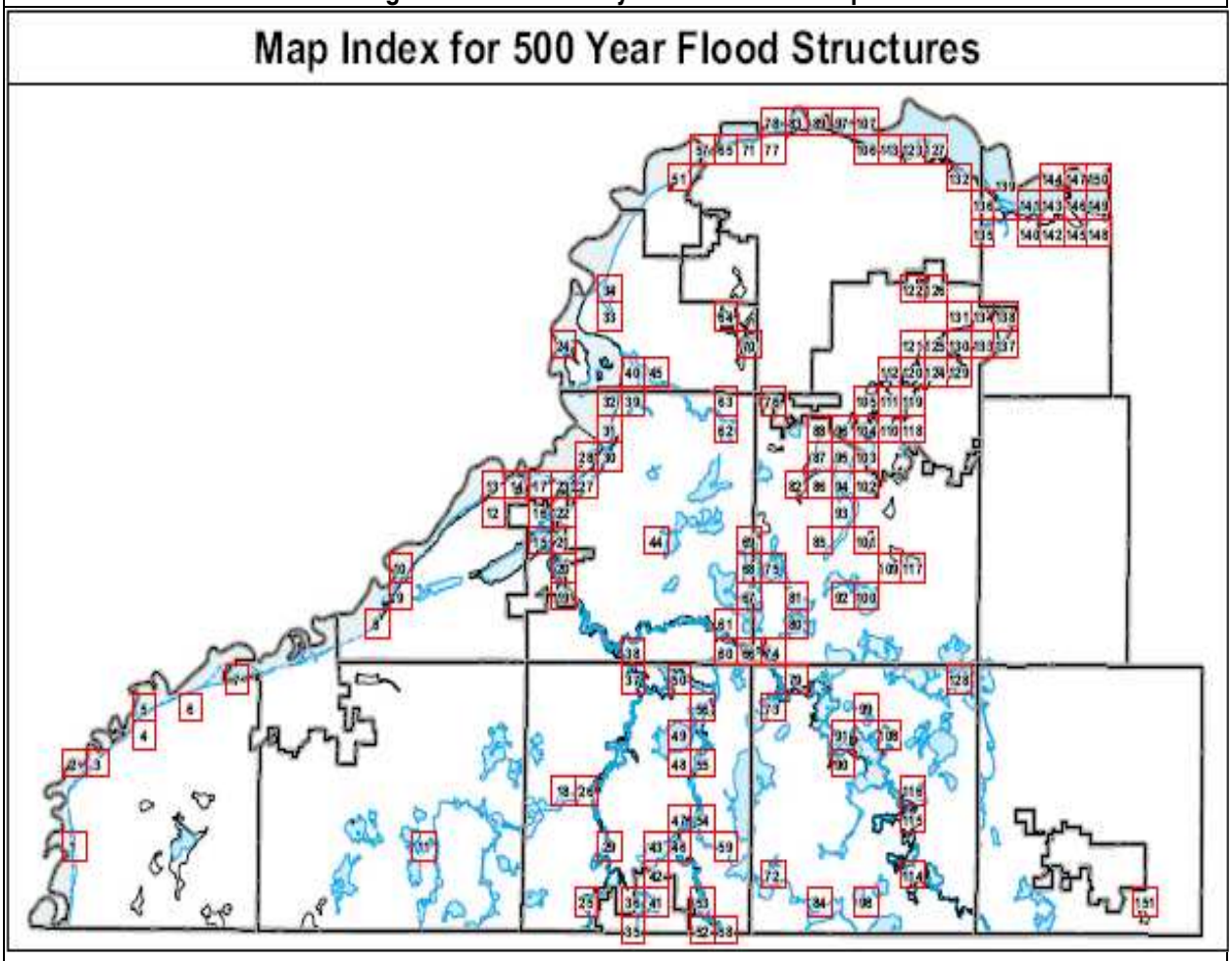
Current and future population and structures are identified and calculated within the defined flood area. The table below identifies the estimated potential total losses, for all of Scott County that may occur from a 500-year flood event

Table 6.9 Scott County Asset Inventory (500yr Flood)

Current Inventory	Total Number	Total Structure Value	Qty In Hazard	In Hazard Structure Value	Qty Percent	Value Percent
Population	106,429		5,831		5.48%	
Residential	36,155	8,719,381,907	1,192	216,415,400	3.30%	2.48%
Commercial/Ind	2,631	1,101,908,900	204	168,987,800	7.75%	15.34%
Government/NP	149	809,965,455	34	62,615,862	22.82%	7.73%
Total	38,935	$10,631,256,262	1,430	$448,019,062	3.67%	4.21%
Future Inventory	**10 years**					
Population	138357		6,997		5.06%	
Residential	47002	$12,207,134,670	1,311	$302,981,560	2.79%	2.48%
Commercial/Ind	3157	$1,542,672,460	214	$236,582,920	6.78%	15.34%
Government/NP	179	$1,133,951,637	34	$87,662,207	19.02%	7.73%
Total	50338	$14,883,758,767	1,559	$627,226,687	3.10%	4.21%

Flooding has an identified geographic location (500 year flood plan map) for Scott County illustrated below.

Figure 6.1 Scott County Flood Structure Map

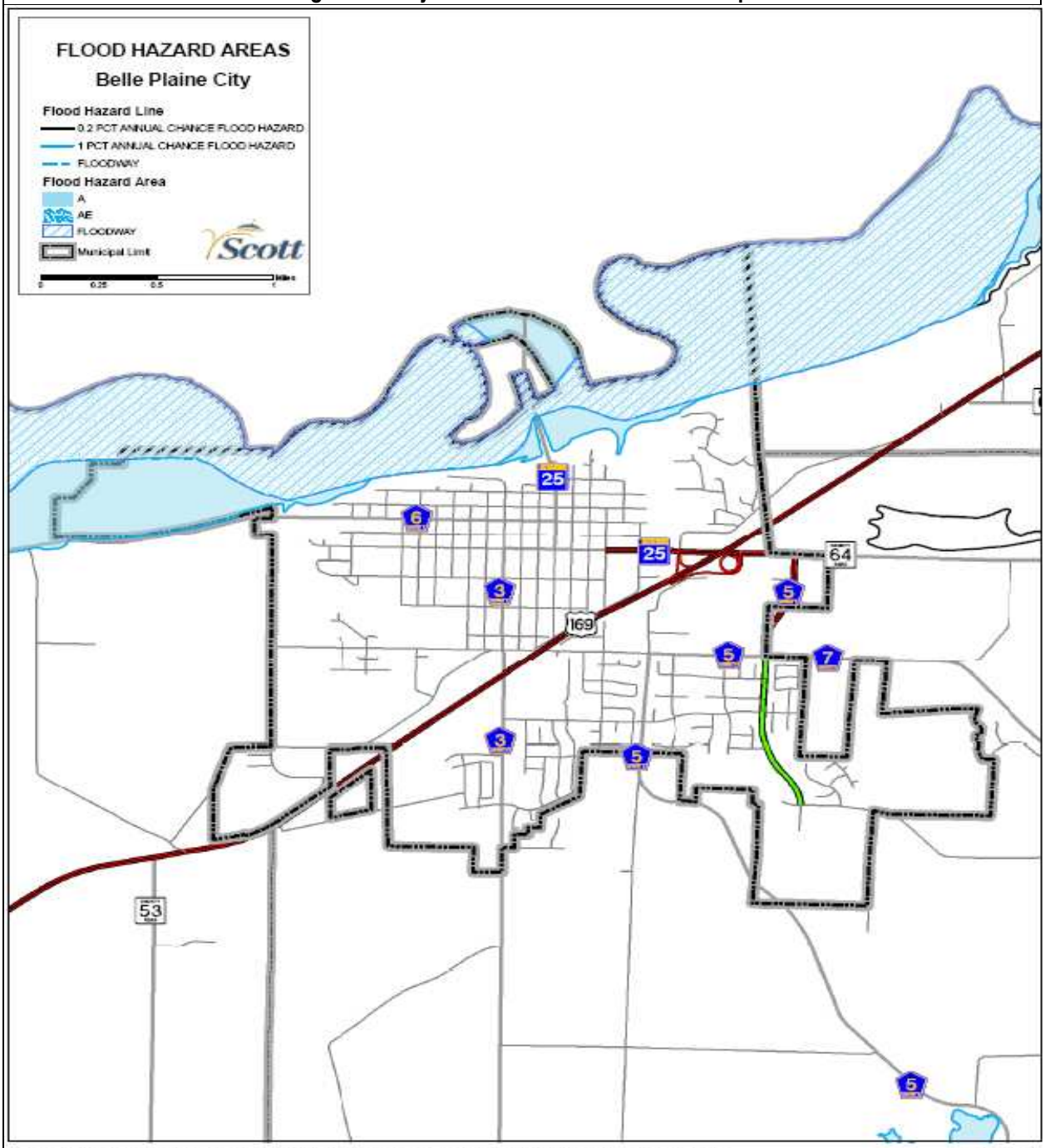


Source: Scott County

For High Wind events where a specific geographical location cannot be identified hypothetical locations are identified. For a High Wind event, an F4 tornado 300 yards wide and 1 mile long was predicted with the center point being the courthouse/administration facility of a jurisdiction.

Below is the City of Belle Plaine maps that identify current and estimated future population and currant and estimated future structures in individual jurisdictions for Flooding and High Winds. Because of size constraints the maps for the remainder Scott County and its jurisdictions are located in the Supporting Annex. They are also used in the vulnerability loss calculations. The tables that identify estimated future populations and structure quantities and values are located below following the maps.

Figure 6.2 City of Belle Plaine Flood Hazard Map



Source: S:\gis\departments\emergency_mgmt\projects\500 Year Flood Strucures by MCD\Belle Plain City Flood Structures.mxd Date: 4/9/09

Figure 6.3 City of Belle Plaine High Wind Hazard Map

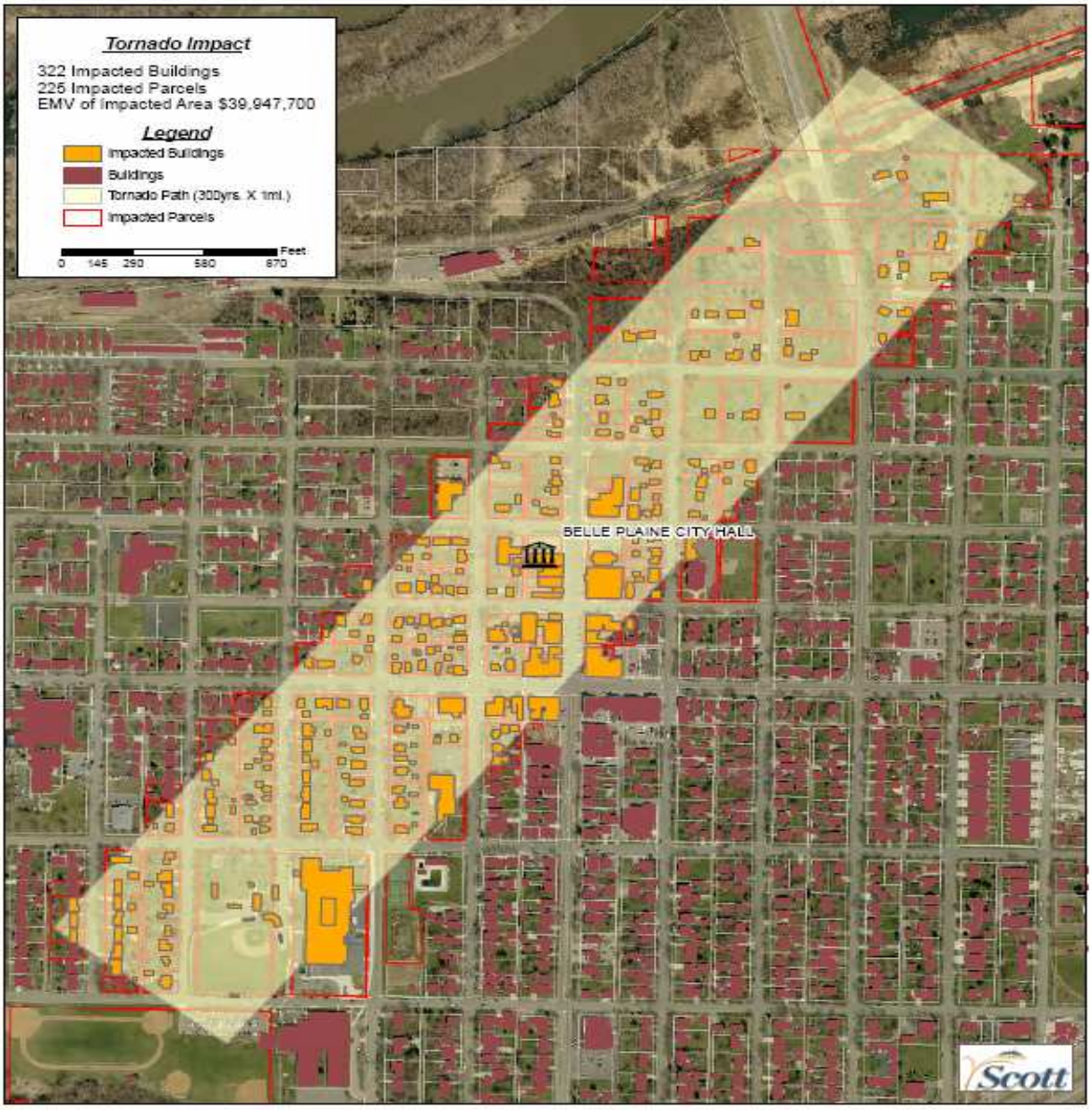


Table 6.10 City of Belle Plaine Asset Inventory (500yr Flood)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	4,168		137		3.29%	
Residential	1,696	317,388,900	33	$7,260,000	1.95%	2.29%
Commercial/Ind	99	$33,097,900	11	$4,400,000	11.11%	13.29%
Government/NP	17	$78,991,272	7	$24,920,262	41.18%	31.55%
Total	1,812	$429,478,072	51	$36,580,262	2.81%	8.52%
Future Inventory	**10 years**					
Population	5418		164		3.03%	
Residential	2205	$444,344,460	36	$10,164,000	1.65%	2.29%
Commercial/Ind	119	$46,337,060	12	$6,160,000	9.72%	13.29%
Government/NP	20	$110,587,781	7	$34,888,367	34.31%	31.55%
Total	2344	$601,269,301	55	$51,212,367	2.34%	8.52%
Belle Plaine Asset Inventory (High Wind Event)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	4,168		790		18.95%	
Residential	1,696	317,388,900	289	$25,349,500	17.04%	7.99%
Commercial/Ind	99	33,097,900	28	$7,418,700	28.28%	22.41%
Government/NP	17	78,991,272	5	$7,179,500	29.41%	9.09%
Total	1,812	$429,478,072	322	$39,947,700	17.77%	9.30%
Future Inventory	**10 years**					
Population	5418		948		17.50%	
Residential	2205	$444,344,460	347	$35,489,300	15.73%	7.99%
Commercial/Ind	119	$46,337,060	32	$10,386,180	27.10%	22.41%
Government/NP	20	$110,587,781	6	$10,051,300	28.19%	9.09%
Total	2344	$601,269,301	385	$55,926,780	16.41%	9.30%

Table 6.11 Belle Plaine Twp Asset Inventory (500yr Flood)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	887		5		0.56%	
Residential	267	31,227,270	2	$223,600	0.75%	0.72%
Commercial/Ind	3	$789,000	0	$0	0.00%	0.00%
Government/NP	1	$202,443	0	$0	0.00%	0.00%
Total	271	$32,218,713	2	$223,600	0.74%	0.69%
Future Inventory	**10 years**					
Population	1153		6		0.52%	
Residential	347	$43,718,178	2	$313,040	0.63%	0.72%
Commercial/Ind	4	$1,104,600	0	$0	0.00%	0.00%
Government/NP	1	$283,420	0	$0	0.00%	0.00%
Total	352	$45,106,198	2	$313,040	0.63%	0.69%
Belle Plaine Twp Asset Inventory (High Wind Event)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	887		22		2.48%	
Residential	267	31,227,270	5	$573,257	1.87%	1.84%
Commercial/Ind	3	789,000	0	$0	0.00%	0.00%
Government/NP	1	202,443	1	$202,443	100.00%	100.00%
Total	271	$32,218,713	6	$775,700	2.21%	2.41%
Future Inventory	**10 years**					
Population	1153		26		2.29%	
Residential	347	$43,718,178	6	$802,560	1.73%	1.84%
Commercial/Ind	4	$1,104,600	0	$0	0.00%	0.00%
Government/NP	1	$283,420	1	$283,420	95.83%	100.00%
Total	352	$45,106,198	7	$1,085,980	2.03%	2.41%

Table 6.12 Blakeley Twp Asset Inventory (500yr Flood)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	546		31		5.68%	
Residential	166	13,668,000	7	$462,900	4.22%	3.39%
Commercial/Ind	2	$419,200	0	$0	0.00%	0.00%
Government/NP	1	$200,000	1	$200,000	100.00%	100.00%
Total	169	$14,287,200	8	$662,900	4.73%	4.64%
Future Inventory	**10 years**					
Population	709		37		5.24%	
Residential	216	$19,135,200	8	$648,060	3.57%	3.39%
Commercial/Ind	2	$586,880	0	$0	0.00%	0.00%
Government/NP	1	$280,000	1	$280,000	100.00%	100.00%
Total	219	$20,002,080	9	$928,060	3.97%	4.64%
Blakeley Asset Inventory (High Wind Event)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	546		18		3.30%	
Residential	166	13,668,000	18	$473,800	10.84%	3.47%
Commercial/Ind	2	419,200	1	$219,000	50.00%	52.24%
Government/NP	1	200,000	1	$200,000	100.00%	100.00%
Total	169	$14,287,200	20	$892,800	11.83%	6.25%
Future Inventory	**10 years**					
Population	709		22		3.05%	
Residential	216	$19,135,200	22	$663,320	10.01%	3.47%
Commercial/Ind	2	$586,880	1	$306,600	47.92%	52.24%
Government/NP	1	$280,000	1	$280,000	95.83%	100.00%
Total	219	$20,002,080	24	$1,249,920	10.89%	6.25%

Table 6.13 Cedar Lake Twp Asset Inventory (500yr Flood)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	2,417		48		1.99%	
Residential	859	$202,835,150	16	$2,631,100	1.86%	1.30%
Commercial/Ind	6	$1,572,100	0	$0	0.00%	0.00%
Government/NP	2	$1,575,000	0	$0	0.00%	0.00%
Total	867	$205,982,250	16	$2,631,100	1.85%	1.28%
Future Inventory	**10 years**					
Population	3142		58		1.83%	
Residential	1117	$283,969,210	18	$3,683,540	1.58%	1.30%
Commercial/Ind	7	$2,200,940	0	$0	0.00%	0.00%
Government/NP	2	$2,205,000	0	$0	0.00%	0.00%
Total	1126	$288,375,150	18	$3,683,540	1.56%	1.28%
Cedar lake Twp Asset Inventory (High Wind Event)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	2,417		0		0.00%	
Residential	859	$202,835,150	22	$3,300,000	2.56%	1.63%
Commercial/Ind	6	$1,572,100	1	$300,000	16.67%	19.08%
Government/NP	2	$1,575,000	2	$1,575,000	100.00%	100.00%
Total	867	$205,982,250	25	$5,175,000	2.88%	2.51%
Future Inventory	**10 years**					
Population	3142		0		0.00%	
Residential	1117	$283,969,210	26	$4,620,000	2.36%	1.63%
Commercial/Ind	7	$2,200,940	1	$420,000	15.97%	19.08%
Government/NP	2	$2,205,000	2	$2,205,000	95.83%	100.00%
Total	1126	$288,375,150	30	$7,245,000	2.65%	2.51%

Table 6.14 Credit River Twp Asset Inventory (500yr Flood)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	4,285		0		0.00%	
Residential	1,430	$1,384,219,900	0	$0	0.00%	0.00%
Commercial/Ind	20	$6,520,400	0	$0	0.00%	0.00%
Government/NP	1	$59,000	0	$0	0.00%	0.00%
Total	1,451	$1,390,799,300	0	$0	0.00%	0.00%
Future Inventory	**10 years**					
Population	5570		0		0.00%	
Residential	1859	$1,937,907,860	0	$0	0.00%	0.00%
Commercial/Ind	24	$9,128,560	0	$0	0.00%	0.00%
Government/NP	1	$82,600	0	$0	0.00%	0.00%
Total	1884	$1,947,119,020	0	$0	0.00%	0.00%
Credit River Twp Asset Inventory (High Wind Event)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	4,285		109		2.54%	
Residential	1,430	$1,384,219,900	32	$12,000,000	2.24%	0.87%
Commercial/Ind	20	$6,520,400	3	$2,245,400	15.00%	34.44%
Government/NP	1	$59,000	1	$59,000	100.00%	100.00%
Total	1,451	$1,390,799,300	36	$14,304,400	2.48%	1.03%
Future Inventory	**10 years**					
Population	5570		131		2.35%	
Residential	1859	$1,937,907,860	38	$16,800,000	2.07%	0.87%
Commercial/Ind	24	$9,128,560	3	$3,143,560	14.38%	34.44%
Government/NP	1	$82,600	1	$82,600	95.83%	100.00%
Total	1884	$1,947,119,020	43	$20,026,160	2.28%	1.03%

Table 6.15 Elko New Market Asset Inventory (500yr Flood)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	519		10		1.93%	
Residential	185	$277,366,350	0	$0	0.00%	0.00%
Commercial/Ind	24	$6,171,200	0	$0	0.00%	0.00%
Government/NP	7	$5,935,000	1	$2,400,000	14.29%	40.44%
Total	216	$289,472,550	1	$2,400,000	0.46%	0.83%
Future Inventory	**10 years**					
Population	675		12		1.78%	
Residential	241	$388,312,890	0	$0	0.00%	0.00%
Commercial/Ind	29	$8,639,680	0	$0	0.00%	0.00%
Government/NP	8	$8,309,000	1	$3,360,000	11.90%	40.44%
Total	278	$405,261,570	1	$3,360,000	0.36%	0.83%
Elko New Market Asset Inventory (High Wind Event)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	519		332		63.94%	
Residential	185	$277,366,350	88	$9,291,300	47.57%	3.35%
Commercial/Ind	24	$6,171,200	4	$1,750,100	16.67%	28.36%
Government/NP	7	$5,935,000	4	$2,500,000	57.14%	42.12%
Total	216	$289,472,550	96	$13,541,400	44.44%	4.68%
Future Inventory	**10 years**					
Population	675		398		59.03%	
Residential	241	$388,312,890	106	$13,007,820	43.91%	3.35%
Commercial/Ind	29	$8,639,680	5	$2,450,140	15.97%	28.36%
Government/NP	8	$8,309,000	5	$3,500,000	54.76%	42.12%
Total	278	$405,261,570	115	$18,957,960	41.34%	4.68%

Table 6.16 Helena Twp Asset Inventory (500yr Flood)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	1,584		75		4.73%	
Residential	540	$91,095,600	25	$5,722,500	4.63%	6.28%
Commercial/Ind	5	$1,314,600	0	$0	0.00%	0.00%
Government/NP	3	$1,115,000	2	$115,000	66.67%	10.31%
Total	548	$93,525,200	27	$5,837,500	4.93%	6.24%
Future Inventory	**10 years**					
Population	2059		90		4.37%	
Residential	702	$127,533,840	28	$8,011,500	3.92%	6.28%
Commercial/Ind	6	$1,840,440	0	$0	0.00%	0.00%
Government/NP	4	$1,561,000	2	$161,000	55.56%	10.31%
Total	712	$130,935,280	30	$8,172,500	4.15%	6.24%
Helena Twp Asset Inventory (High Wind Event)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	1,584		0		0.00%	
Residential	540	$91,095,600	54	$24,869,500	10.00%	27.30%
Commercial/Ind	5	$1,314,600	2	$520,000	40.00%	39.56%
Government/NP	3	$1,115,000	1	$100,000	33.33%	8.97%
Total	548	$93,525,200	57	$25,489,500	10.40%	27.25%
Future Inventory	**10 years**					
Population	2059		0		0.00%	
Residential	702	$127,533,840	65	$34,817,300	9.23%	27.30%
Commercial/Ind	6	$1,840,440	2	$728,000	38.33%	39.56%
Government/NP	4	$1,561,000	1	$140,000	31.94%	8.97%
Total	712	$130,935,280	68	$35,685,300	9.59%	27.25%

Table 6.16 Jackson Twp Asset Inventory (500yr Flood)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	1,497		3		0.20%	
Residential	461	$41,510,700	0	$0	0.00%	0.00%
Commercial/Ind	36	$10,491,000	1	$154,300	2.78%	1.47%
Government/NP	2	$572,100	0	$0	0.00%	0.00%
Total	499	$52,573,800	1	$154,300	0.20%	0.29%
Future Inventory	**10 years**					
Population	1946		4		0.18%	
Residential	599	$58,114,980	0	$0	0.00%	0.00%
Commercial/Ind	43	$14,687,400	1	$216,020	2.43%	1.47%
Government/NP	2	$800,940	0	$0	0.00%	0.00%
Total	645	$73,603,320	1	$216,020	0.16%	0.29%
Jackson Twp Asset Inventory (High Wind Event)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	1,497		63		4.21%	
Residential	461	$41,510,700	13	$2,975,100	2.82%	7.17%
Commercial/Ind	36	$10,491,000	3	$2,925,200	8.33%	27.88%
Government/NP	2	$572,100	2	$572,100	100.00%	100.00%
Total	499	$52,573,800	18	$6,472,400	3.61%	12.31%
Future Inventory	**10 years**					
Population	1946		76		3.88%	
Residential	599	$58,114,980	16	$4,165,140	2.60%	7.17%
Commercial/Ind	43	$14,687,400	3	$4,095,280	7.99%	27.88%
Government/NP	2	$800,940	2	$800,940	95.83%	100.00%
Total	645	$73,603,320	21	$9,061,360	3.31%	12.31%

Table 6.17 City of Jordan Asset Inventory (500yr Flood)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	4,216		975		23.12%	
Residential	1,610	$267,874,400	215	$24,692,100	13.35%	9.22%
Commercial/Ind	93	$32,349,000	30	$9,761,100	32.26%	30.17%
Government/NP	13	$89,240,724	3	$7,163,800	23.08%	8.03%
Total	1,716	$389,464,124	248	$41,617,000	14.45%	10.69%
Future Inventory	**10 years**					
Population	5481		1,170		21.35%	
Residential	2093	$375,024,160	237	$34,568,940	11.30%	9.22%
Commercial/Ind	112	$45,288,600	32	$13,665,540	28.23%	30.17%
Government/NP	16	$124,937,014	3	$10,029,320	19.23%	8.03%
Total	2220	$545,249,774	271	$58,263,800	12.21%	10.69%
Jordan Asset Inventory (High Wind Event)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	4,216		832		19.73%	
Residential	1,610	$267,874,400	135	$11,303,300	8.39%	4.22%
Commercial/Ind	93	$32,349,000	33	$7,869,700	35.48%	24.33%
Government/NP	13	$89,240,724	3	$3,000,000	23.08%	3.36%
Total	1,716	$389,464,124	171	$22,173,000	9.97%	5.69%
Future Inventory	**10 years**					
Population	5481		998		18.22%	
Residential	2093	$375,024,160	162	$15,824,620	7.74%	4.22%
Commercial/Ind	112	$45,288,600	38	$11,017,580	34.01%	24.33%
Government/NP	16	$124,937,014	3	$4,200,000	22.12%	3.36%
Total	2220	$545,249,774	203	$31,042,200	9.16%	5.69%

Table 6.18 Louisville Twp Asset Inventory (500yr Flood)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	1,495		66		4.42%	
Residential	492	$95,567,900	12	$3,971,600	2.44%	4.16%
Commercial/Ind	40	$16,961,500	3	$1,454,900	7.50%	8.58%
Government/NP	4	$11,400,000	0	$0	0.00%	0.00%
Total	536	$123,929,400	15	$5,426,500	2.80%	4.38%
Future Inventory	**10 years**					
Population	1943		79		4.08%	
Residential	640	$133,795,060	13	$5,560,240	2.06%	4.16%
Commercial/Ind	48	$23,746,100	3	$2,036,860	6.56%	8.58%
Government/NP	5	$15,960,000	0	$0	0.00%	0.00%
Total	692	$173,501,160	16	$7,597,100	2.36%	4.38%
Louisville Twp Asset Inventory (High Wind Event)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	1,495		0		0.00%	
Residential	492	$95,567,900	30	$4,500,000	6.10%	4.71%
Commercial/Ind	40	$16,961,500	0	$0	0.00%	0.00%
Government/NP	4	$11,400,000	0	$0	0.00%	0.00%
Total	536	$123,929,400	30	$4,500,000	5.60%	3.63%
Future Inventory	**10 years**					
Population	1943		0		0.00%	
Residential	640	$133,795,060	36	$6,300,000	5.63%	4.71%
Commercial/Ind	48	$23,746,100	0	$0	0.00%	0.00%
Government/NP	5	$15,960,000	0	$0	0.00%	0.00%
Total	692	$173,501,160	36	$6,300,000	5.20%	3.63%

Table 6.19 MDEWAKANTON Tribe Asset Inventory (500yr Flood)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	1,000		340		34.00%	
Residential	338	$33,800,000	10	$3,800,000	2.96%	11.24%
Commercial/Ind	9	$41,400,000	4	$18,000,000	44.44%	43.48%
Government/NP	2	$1,400,000	1	$800,000	50.00%	57.14%
Total	349	$76,600,000	15	$22,600,000	4.30%	29.50%
Future Inventory	**10 years**					
Population	1300		408		31.38%	
Residential	439	$47,320,000	11	$5,320,000	2.50%	11.24%
Commercial/Ind	11	$57,960,000	4	$25,200,000	38.89%	43.48%
Government/NP	2	$1,960,000	1	$1,120,000	41.67%	57.14%
Total	453	$107,240,000	16	$31,640,000	3.58%	29.50%
MDEWAKANTON Tribe Asset Inventory (High Wind Event)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	1,000		100		10.00%	
Residential	338	$33,800,000	2	$300,000	0.59%	0.89%
Commercial/Ind	9	$41,400,000	1	$800,000	11.11%	1.93%
Government/NP	2	$1,400,000	2	$1,400,000	100.00%	100.00%
Total	349	$76,600,000	5	$2,500,000	1.43%	3.26%
Future Inventory	**10 years**					
Population	1300		120		9.23%	
Residential	439	$47,320,000	2	$420,000	0.55%	0.89%
Commercial/Ind	11	$57,960,000	1	$1,120,000	10.65%	1.93%
Government/NP	2	$1,960,000	2	$1,960,000	95.83%	100.00%
Total	453	$107,240,000	6	$3,500,000	1.29%	3.26%

Table 6.20 New Market Twp Asset Inventory (500yr Flood)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	3,407		3		0.09%	
Residential	1,156	$321,394,000	1	$218,800	0.09%	0.07%
Commercial/Ind	27	$10,824,700	0	$0	0.00%	0.00%
Government/NP	4	$2,663,000	0	$0	0.00%	0.00%
Total	1,187	$334,881,700	1	$218,800	0.08%	0.07%
Future Inventory	**10 years**					
Population	4429		4		0.08%	
Residential	1503	$449,951,600	1	$306,320	0.07%	0.07%
Commercial/Ind	32	$15,154,580	0	$0	0.00%	0.00%
Government/NP	5	$3,728,200	0	$0	0.00%	0.00%
Total	1540	$468,834,380	1	$306,320	0.07%	0.07%
New Market Twp Asset Inventory (High Wind Event)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	3,407		87		2.55%	
Residential	1,156	$321,394,000	26	$2,830,000	2.25%	0.88%
Commercial/Ind	27	$10,824,700	5	$3,200,000	18.52%	29.56%
Government/NP	4	$2,663,000	1	$1,431,300	25.00%	53.75%
Total	1,187	$334,881,700	32	$7,461,300	2.70%	2.23%
Future Inventory	**10 years**					
Population	4429		104		2.36%	
Residential	1503	$449,951,600	31	$3,962,000	2.08%	0.88%
Commercial/Ind	32	$15,154,580	6	$4,480,000	17.75%	29.56%
Government/NP	5	$3,728,200	1	$2,003,820	23.96%	53.75%
Total	1540	$468,834,380	38	$10,445,820	2.47%	2.23%

Table 6.21 New Prague Asset Inventory (500yr Flood)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	5,015		99		1.97%	
Residential	1,994	$212,043,000	13	$1,674,000	0.65%	0.79%
Commercial/Ind	85	$33,872,800	3	$13,445,000	3.53%	39.69%
Government/NP	23	$100,887,846	3	$1,084,700	13.04%	1.08%
Total	2,102	$346,803,646	19	$16,203,700	0.90%	4.67%
Future Inventory	**10 years**					
Population	6519		119		1.82%	
Residential	2592	$296,860,200	14	$2,343,600	0.55%	0.79%
Commercial/Ind	102	$47,421,920	3	$18,823,000	3.09%	39.69%
Government/NP	28	$141,242,984	3	$1,518,580	10.87%	1.08%
Total	2722	$485,525,104	20	$22,685,180	0.75%	4.67%
New Prague Asset Inventory (High Wind Event)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	5,015		960		19.14%	
Residential	1,994	$212,043,000	178	$15,063,600	8.93%	7.10%
Commercial/Ind	85	$33,872,800	24	$9,666,800	28.24%	28.54%
Government/NP	23	$100,887,846	3	$8,590,600	13.04%	8.51%
Total	2,102	$346,803,646	205	$33,321,000	9.75%	9.61%
Future Inventory	**10 years**					
Population	6519		1,152		17.67%	
Residential	2592	$296,860,200	214	$21,089,040	8.24%	7.10%
Commercial/Ind	102	$47,421,920	28	$13,533,520	27.06%	28.54%
Government/NP	28	$141,242,984	3	$12,026,840	12.50%	8.51%
Total	2722	$485,525,104	245	$46,649,400	8.99%	9.61%

Table 6.22 Prior Lake Asset Inventory (500yr Flood)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	19,100		1,690		8.85%	
Residential	6,645	$1,539,942,200	570	$120,698,900	8.58%	7.84%
Commercial/Ind	192	$74,351,400	4	$691,000	2.08%	0.93%
Government/NP	25	$162,894,270	4	$23,000	16.00%	0.01%
Total	6,862	$1,777,187,870	578	$121,412,900	8.42%	6.83%
Future Inventory	**10 years**					
Population	24831		2,028		8.17%	
Residential	8639	$2,155,919,080	627	$168,978,460	7.26%	7.84%
Commercial/Ind	230	$104,091,960	4	$967,400	1.82%	0.93%
Government/NP	30	$228,051,978	4	$32,200	13.33%	0.01%
Total	8899	$2,488,063,018	635	$169,978,060	7.14%	6.83%
Prior Lake Asset Inventory (High Wind Event)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	19,100		983		5.15%	
Residential	6,645	$1,539,942,200	99	$9,757,000	1.49%	0.63%
Commercial/Ind	192	$74,351,400	30	$15,471,700	15.63%	20.81%
Government/NP	25	$162,894,270	5	$17,682,300	20.00%	10.86%
Total	6,862	$1,777,187,870	134	$42,911,000	1.95%	2.41%
Future Inventory	**10 years**					
Population	24831		1,180		4.75%	
Residential	8639	$2,155,919,080	119	$13,659,800	1.38%	0.63%
Commercial/Ind	230	$104,091,960	35	$21,660,380	14.97%	20.81%
Government/NP	30	$228,051,978	6	$24,755,220	19.17%	10.86%
Total	8899	$2,488,063,018	159	$60,075,400	1.79%	2.41%

Table 6.23 Sand Creek Twp Asset Inventory (500yr Flood)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	1,706		84		4.92%	
Residential	578	$88,308,137	18	$2,421,100	3.11%	2.74%
Commercial/Ind	28	$11,614,600	3	$2,287,300	10.71%	19.69%
Government/NP	1	$2,000,000	0	$0	0.00%	0.00%
Total	607	$101,922,737	21	$4,708,400	3.46%	4.62%
Future Inventory	**10 years**					
Population	2218		101		4.54%	
Residential	751	$123,631,392	20	$3,389,540	2.64%	2.74%
Commercial/Ind	34	$16,260,440	3	$3,202,220	9.38%	19.69%
Government/NP	1	$2,800,000	0	$0	0.00%	0.00%
Total	786	$142,691,832	23	$6,591,760	2.92%	4.62%
Sand Creek Twp Asset Inventory (High Wind Event)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	1,706		0		0.00%	
Residential	578	$88,308,137	5	$750,000	0.87%	0.85%
Commercial/Ind	28	$11,614,600	0	$0	0.00%	0.00%
Government/NP	1	$2,000,000	0	$0	0.00%	0.00%
Total	607	$101,922,737	5	$750,000	0.82%	0.74%
Future Inventory	**10 years**					
Population	2218		0		0.00%	
Residential	751	$123,631,392	6	$1,050,000	0.80%	0.85%
Commercial/Ind	34	$16,260,440	0	$0	0.00%	0.00%
Government/NP	1	$2,800,000	0	$0	0.00%	0.00%
Total	786	$142,691,832	6	$1,050,000	0.76%	0.74%

Table 6.24 Savage Asset Inventory (500yr Flood)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	25,338		1,835		7.24%	
Residential	8,207	$1,590,379,600	175	$24,691,800	2.13%	1.55%
Commercial/Ind	605	$242,343,600	126	$95,815,100	20.83%	39.54%
Government/NP	14	$47,275,000	7	$23,949,800	50.00%	50.66%
Total	8,826	$1,879,998,200	308	$144,456,700	3.49%	7.68%
Future Inventory	**10 years**					
Population	32939		2,202		6.69%	
Residential	10669	$2,226,531,440	193	$34,568,520	1.80%	1.55%
Commercial/Ind	726	$339,281,040	132	$134,141,140	18.22%	39.54%
Government/NP	17	$66,185,000	7	$33,529,720	41.67%	50.66%
Total	11412	$2,631,997,480	332	$202,239,380	2.91%	7.68%
Savage Asset Inventory (High Wind Event)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	25,338		534		2.11%	
Residential	8,207	$1,590,379,600	123	$10,698,000	1.50%	0.67%
Commercial/Ind	605	$242,343,600	20	$15,000,000	3.31%	6.19%
Government/NP	14	$47,275,000	5	$12,376,700	35.71%	26.18%
Total	8,826	$1,879,998,200	148	$38,074,700	1.68%	2.03%
Future Inventory	**10 years**					
Population	32939		641		1.95%	
Residential	10669	$2,226,531,440	148	$14,977,200	1.38%	0.67%
Commercial/Ind	726	$339,281,040	23	$21,000,000	3.17%	6.19%
Government/NP	17	$66,185,000	6	$17,327,380	34.23%	26.18%
Total	11412	$2,631,997,480	176	$53,304,580	1.55%	2.03%

Table 6.25 Shakopee Asset Inventory (500yr Flood)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	24,682		390		1.58%	
Residential	8,040	$1,868,815,500	21	$3,297,300	0.26%	0.18%
Commercial/Ind	1,344	$572,030,000	19	$22,979,100	1.41%	4.02%
Government/NP	26	$302,906,300	3	$1,660,800	11.54%	0.55%
Total	9,410	$2,743,751,800	43	$27,937,200	0.46%	1.02%
Future Inventory	**10 years**					
Population	32086		468		1.46%	
Residential	10452	$2,616,341,700	23	$4,616,220	0.22%	0.18%
Commercial/Ind	1613	$800,842,000	20	$32,170,740	1.24%	4.02%
Government/NP	31	$424,068,820	3	$2,325,120	9.62%	0.55%
Total	12096	$3,841,252,520	46	$39,112,080	0.38%	1.02%
Shakopee Asset Inventory (High Wind Event)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	24,682		1,310		5.31%	
Residential	8,040	$1,868,815,500	160	$15,764,400	1.99%	0.84%
Commercial/Ind	1,344	$572,030,000	46	$22,824,700	3.42%	3.99%
Government/NP	26	$302,906,300	9	$64,393,100	34.62%	21.26%
Total	9,410	$2,743,751,800	215	$102,982,200	2.28%	3.75%
Future Inventory	**10 years**					
Population	32086		1,572		4.90%	
Residential	10452	$2,616,341,700	192	$22,070,160	1.84%	0.84%
Commercial/Ind	1613	$800,842,000	53	$31,954,580	3.28%	3.99%
Government/NP	31	$424,068,820	10	$90,150,340	33.17%	21.26%
Total	12096	$3,841,252,520	255	$144,175,080	2.11%	3.75%

Table 6.26 Spring Lake Asset Inventory (500yr Flood)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	4,049		0		0.00%	
Residential	1,317	$309,693,600	64	$12,387,100	4.86%	4.00%
Commercial/Ind	9	$4,306,100	0	$0	0.00%	0.00%
Government/NP	1	$1,200,000	0	$0	0.00%	0.00%
Total	1,327	$315,199,700	64	$12,387,100	4.82%	3.93%
Future Inventory	**10 years**					
Population	5264		0		0.00%	
Residential	1712	$433,571,040	70	$17,341,940	4.11%	4.00%
Commercial/Ind	11	$6,028,540	0	$0	0.00%	0.00%
Government/NP	1	$1,680,000	0	$0	0.00%	0.00%
Total	1724	$441,279,580	70	$17,341,940	4.08%	3.93%
Spring Lake Asset Inventory (High Wind Event)						
Current Inventory	**Total Number**	**Total Structure Value**	**Qty In Hazard**	**In Hazard Structure Value**	**Qty Percent**	**Value Percent**
Population	4,049		70		1.73%	
Residential	1,317	$309,693,600	19	$1,911,900	1.44%	0.62%
Commercial/Ind	9	$4,306,100	2	$1,561,000	22.22%	36.25%
Government/NP	1	$1,200,000	1	$1,200,000	100.00%	100.00%
Total	1,327	$315,199,700	22	$4,672,900	1.66%	1.48%
Future Inventory	**10 years**					
Population	5264		84		1.60%	
Residential	1712	$433,571,040	23	$2,676,660	1.33%	0.62%
Commercial/Ind	11	$6,028,540	2	$2,185,400	21.30%	36.25%
Government/NP	1	$1,680,000	1	$1,680,000	95.83%	100.00%
Total	1724	$441,279,580	26	$6,542,060	1.52%	1.48%

Table 6.27 St Lawrence Twp Asset Inventory						
Current Inventory	Total Number	Total Structure Value	In Flood Hazard		Qty Percent	Value Percent
			Qty	Value		
Population	519		40		7.70%	
Residential	174	$32,251,700	10	$2,262,600	5.75%	7.02%
Commercial/Ind	4	$1,479,800	0	$0	0.00%	0.00%
Government/NP	3	$198,500	2	$48,500	66.67%	24.43%
Total	181	$33,930,000	12	$2,311,100	6.63%	6.81%
Future Inventory	**10 years**					
Population	675		48		7.11%	
Residential	226	$45,152,380	11	$3,167,640	4.86%	7.02%
Commercial/Ind	5	$2,071,720	0	$0	0.00%	0.00%
Government/NP	4	$277,900	2	$67,900	55.56%	24.43%
Total	235	$47,502,000	13	$3,235,540	5.54%	6.81%
Current Inventory	**Total Number**	**Total Structure Value**	**In High Wind Hazard**		**Qty Percent**	**Value Percent**
			Qty	**Value**		
Population	519		35		6.74%	
Residential	174	$32,251,700	1	$200,000	0.57%	0.62%
Commercial/Ind	4	$1,479,800	1	$900,000	25.00%	60.82%
Government/NP	3	$198,500	2	$99,400	66.67%	50.08%
Total	181	$33,930,000	4	$1,199,400	2.21%	3.53%
Future Inventory	**10 years**					
Population	675		42		6.22%	
Residential	226	$45,152,380	1	$280,000	0.53%	0.62%
Commercial/Ind	5	$2,071,720	1	$1,260,000	23.96%	60.82%
Government/NP	4	$277,900	2	$139,160	63.89%	50.08%
Total	235	$47,502,000	5	$1,679,160	1.98%	3.53%

6.3.2 Asset Inventory For Secondary Hazards

This section of the plan update describes the Scott County current and future assets that may be impacted by hazards that may impact the entire planning area equally. These hazards are Drought, Earthquake, Extreme Temperatures, Hail, Ice/Snow, Landslides/Mudslides, Land Subsidence Lightning, Wildfires, Hazmat, Pandemic, Terrorism and Urban Fire.

The table below identifies the current citywide assets and an estimate of future value (10 years) of those assets.

Table 6.28 Scott County Asset Inventory Secondary Hazards

Current Inventory	Total Number	Total Structure Value	Qty In Hazard	In Hazard Structure Value	Qty Percent	Value Percent
Population	36,155		36,155		100.00%	
Residential	2,631	1,101,908,900	2,631	1,101,908,900	100.00%	100.00%
Commercial/Ind	150	810,715,455	150	810,715,455	100.00%	100.00%
Government/NP	38,936	10,632,006,262	38,936	10,632,006,262	100.00%	100.00%
Total	41,717	$12,544,630,617	41,717	12,544,630,617	100.00%	100.00%
Future Inventory	**10 years**					
Population	47002		43,386		92.31%	
Residential	3420	$1,542,672,460	2,894	$1,542,672,460	84.62%	100.00%
Commercial/Ind	180	$1,135,001,637	158	$1,135,001,637	87.50%	100.00%
Government/NP	46723	$14,884,808,767	38,936	$14,884,808,767	83.33%	100.00%
Total	50324	$17,562,482,864	41,988	$17,562,482,864	83.44%	100.00%

6.4 VULNERABILITY: ESTIMATING POTENTIAL LOSSES

Requirement §201.6(c)(2)(ii)(B): The plan should describe vulnerability in terms of an] estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(ii)(A) of this section and a description of the methodology used to prepare the estimate
A. Does the new or updated plan estimate potential dollar losses to vulnerable structures?
B. Does the new or updated plan describe the methodology used to prepare the estimate?

CRS Step 5: Assess the Problem: CRS credit is given for an assessment that includes a review of all properties that received flood insurance claims (in addition to repetitive (loss properties) or an estimate of the potential dollar losses to vulnerable structures. This is optional.

To complete the loss estimation, the level of damage must be assessed, both as a percentage of the asset structural and content replacement value, function and usage loss.

To determine the loss to the structure in a particular hazard event, multiply the structure and content value by the expected percent damage.

For example, if the library's structure value is $100,000 and the expected damage from a 100-year flood is 40 percent of the structure, then the loss to this structure from a flood is $40,000.

To determine the losses to the contents from a particular hazard event, multiply the replacement value of the contents by the expected percent damage.

For example, if the library's content value is $225,000 and the expected damage from a 100-year flood is 10 percent of the contents, then the losses to these contents from a flood is $22,500.

If content value is unknown the following uplift factors can be applied to the structure value:

- Residences – 30%
- Government – 40%
- Commercial – 50%

To determine the cost of the loss of function for the period that the business or service was unable to operate due to the hazard event estimate the losses to structure use and function by determining functional downtime, or the time (in days) that the function would be disrupted from a hazard event. Then estimate the daily cost of the functional downtime by dividing the average annual budget or sales by 365 to determine the average daily operating budget or sales. Then multiply the average daily operating budget or sales by the functional downtime to determine the cost of the loss of function for the period that the business or service was unable to operate due to the hazard event.

For example, if an ice cream shop had daily sales of $2,500 during the summertime and was forced to close for two weeks because of damages from a hazard event, the function loss would be $35,000 ($2,500 x 14 days).

For a public facility, such as a library with an annual budget of $600,000 and an average daily budget of $1,644 ($600,000 / 365), the loss estimate for a seven-day closure would be $11,508.

To determine the cost of the displacement from the regular place of business, determine the time (in days) that a function may need to operate from a temporary location due to a hazard event and multiply by the temporary location cost per day.

For example, if the library was closed for 7 days (loss of function) and then resumed operations from an empty trailer rented for $10 per day for the next 90 days, the displacement cost would be $900 (90 days x $10 per day).

For residences the cost of displacement would be the cost of alternate facilities and the average time of residential construction in the county.

When data on specific facilities Function and use is unavailable a general methodology is used. The general methodology used in this plan is based on the categories of structures. Calculations for function and use loss are based on averages identified in past disaster events both locally and those documented by FEMA

Cubic yards calculations are based on the structures square feet and the estimated damage. Then appropriate factors are used to estimate soil building demolition debris. Local sanitation officials provide disposal costs per cubic yard.

Response, evacuation, recovery and other costs are calculated using a factor times the total structure value. The premise is that structure loss is directly related to the impact and extent of the hazard and therefore can be used as a basis for costs estimates.

Wages lost are a direct calculation of displaced days, structure capacity or workforce and the average daily wage for the jurisdiction.

6.4.1 Vulnerability Loss Estimates For Flooding and High Winds Hazards

The following table identifies the potential 500-year Flood loss for all of Scott County

Table 6.22 Scott County Flood Hazard Loss								
Flood Hazard								
Qty	Structure Type	Structure Value		Loss %	Content Value		Loss%	Struc/Cont Loss
1,195	Residential	$215,826,800		40.0%	$107,913,400		20.0%	$107,913,400
207	Commercial/Ind	$182,432,800		30.0%	$72,973,120		15.0%	$65,675,808
35	Government/NP	$63,402,062		30.0%	$19,020,619		23.1%	$23,409,992
Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss
1,195	Residential	60	$50	$3,585,000	60	$200	$14,340,000	$17,925,000
207	Commercial/Ind	30	$7,000	$43,470,000	30	$1,000	$6,210,000	$49,680,000
35	Government/NP	15	$5,000	$2,625,000	30	$500	$525,000	$3,150,000
Soil Cu Yards	Demolition Cu Yards	Debris Cost	Daily Wage	Wage Days Lost	Wages Lost		Response Costs	Related Costs
319,710	1,065,700	$27,708,200	$112	20,345	$2,278,640		$15,759,936	$45,746,776
							Total Disaster Costs	$313,500,976

Following are detail tables that estimate losses, for each jurisdiction, for two major hazards high wind and a 500-year flood. For High Wind events where a specific geographical location cannot be identified hypothetical locations are assumed. For a High Wind event, an F4 tornado 300 yards wide and 1 mile long was predicted with the center point being the courthouse/administration facility of a jurisdiction

Table 6.22 Belle Plaine Flood and High Wind Hazard Loss								
Flood Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
33	Residential	$7,260,000		40.0%	$3,630,000		20.0%	$3,630,000
11	Commercial/Ind	$4,400,000		30.0%	$1,760,000		15.0%	$1,584,000
7	Government/NP	$24,920,262		30.0%	$7,476,079		23.1%	$9,201,328
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
33	Residential	60	$50	$99,000	60	$200	$396,000	$495,000
11	Commercial/Ind	30	$7,000	$2,310,000	30	$1,000	$330,000	$2,640,000
7	Government/NP	15	$5,000	$525,000	30	$500	$105,000	$630,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**	**Related Costs**
13,446	44,820	$1,165,320		$112	675	$75,600	$1,153,226	$2,394,146
							Total Disaster Costs	**$20,574,474**
High Wind Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
289	Residential	$25,349,500		40.0%	$12,674,750		40.0%	$15,209,700
28	Commercial/Ind	$7,418,700		30.0%	$2,967,480		30.0%	$3,115,854
5	Government/NP	$7,179,500		35.0%	$2,153,850		35.0%	$3,266,673
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
289	Residential	90	$50	$1,300,500	90	$200	$5,202,000	$6,502,500
28	Commercial/Ind	30	$7,000	$5,880,000	45	$1,000	$1,260,000	$7,140,000
5	Government/NP	30	$5,000	$750,000	10	$500	$25,000	$775,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**	**Related Costs**
11,366	227,310	$4,773,510		$112	4,640	$519,680	$1,943,300	$7,236,490
							Total Disaster Costs	**$43,246,217**

Table 6.22 Belle Plaine Twp Flood and High Wind Hazard Loss									
Flood Hazard									
Qty	Structure Type	Structure Value		Loss %	Content Value		Loss%	Struc/Cont Loss	
2	Residential	$223,600		40.0%	$111,800		20.0%	$111,800	
0	Commercial/Ind	$0		30.0%	$0		15.0%	$0	
0	Government/NP	$0		30.0%	$0		23.1%	$0	
Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss	
2	Residential	60	$50	$6,000	60	$200	$24,000	$30,000	
0	Commercial/Ind	30	$7,000	$0	30	$1,000	$0	$0	
0	Government/NP	15	$5,000	$0	30	$500	$0	$0	
Soil Cu Yards	Demolition Cu Yards	Debris Cost	Daily Wage	Wage Days Lost	Wages Lost		Response Costs	Related Costs	
384	1,280	$33,280	$112	30	$3,360		$8,944	$45,584	
							Total Disaster Costs	$187,384	
High Wind Hazard									
Qty	Structure Type	Structure Value		Loss %	Content Value		Loss%	Struc/Cont Loss	
5	Residential	$573,257		40.0%	$286,629		40.0%	$343,954	
0	Commercial/Ind	$0		30.0%	$0		30.0%	$0	
1	Government/NP	$202,443		35.0%	$60,733		35.0%	$92,112	
Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss	
5	Residential	90	$50	$22,500	90	$200	$90,000	$112,500	
0	Commercial/Ind	30	$7,000	$0	45	$1,000	$0	$0	
1	Government/NP	30	$5,000	$150,000	10	$500	$5,000	$155,000	
Soil Cu Yards	Demolition Cu Yards	Debris Cost	Daily Wage	Wage Days Lost	Wages Lost		Response Costs	Related Costs	
248	4,950	$103,950	$112	80	$8,960		$39,246	$152,156	
							Total Disaster Costs	$855,722	

Table 6.22 Blakeley Twp Flood and High Wind Hazard Loss								
Flood Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
7	Residential	$462,900		40.0%	$231,450		20.0%	$231,450
0	Commercial/Ind	$0		30.0%	$0		15.0%	$0
1	Government/NP	$200,000		30.0%	$60,000		23.1%	$73,846
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
7	Residential	60	$50	$21,000	60	$200	$84,000	$105,000
0	Commercial/Ind	30	$7,000	$0	30	$1,000	$0	$0
1	Government/NP	15	$5,000	$75,000	30	$500	$15,000	$90,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**	**Related Costs**
1,794	5,980	$155,480		$112	115	$12,880	$24,424	$192,784
							Total Disaster Costs	**$693,080**
High Wind Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
18	Residential	$473,800		40.0%	$236,900		40.0%	$284,280
1	Commercial/Ind	$219,000		30.0%	$87,600		30.0%	$91,980
1	Government/NP	$200,000		35.0%	$60,000		35.0%	$91,000
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
18	Residential	90	$50	$81,000	90	$200	$324,000	$405,000
1	Commercial/Ind	30	$7,000	$210,000	45	$1,000	$45,000	$255,000
1	Government/NP	30	$5,000	$150,000	10	$500	$5,000	$155,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**	**Related Costs**
724	14,470	$303,870		$112	285	$31,920	$42,053	$377,843
							Total Disaster Costs	**$1,660,103**

Table 6.22 Cedar Lake Twp Flood and High Wind Hazard Loss									
Flood Hazard									
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**	
16	Residential	$2,631,100		40.0%	$1,315,550		20.0%	$1,315,550	
0	Commercial/Ind	$0		30.0%	$0		15.0%	$0	
0	Government/NP	$0		30.0%	$0		23.1%	$0	
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**	
16	Residential	60	$50	$48,000	60	$200	$192,000	$240,000	
0	Commercial/Ind	30	$7,000	$0	30	$1,000	$0	$0	
0	Government/NP	15	$5,000	$0	30	$500	$0	$0	
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**	**Daily Wage**	**Wage Days Lost**	**Wages Lost**		**Response Costs**	**Related Costs**	
3,072	10,240	$266,240	$112	240	$26,880		$105,244	$398,364	
							Total Disaster Costs	**$1,953,914**	
High Wind Hazard									
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**	
22	Residential	$3,300,000		40.0%	$1,650,000		40.0%	$1,980,000	
1	Commercial/Ind	$300,000		30.0%	$120,000		30.0%	$126,000	
2	Government/NP	$1,575,000		35.0%	$472,500		35.0%	$716,625	
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**	
22	Residential	90	$50	$99,000	90	$200	$396,000	$495,000	
1	Commercial/Ind	30	$7,000	$210,000	45	$1,000	$45,000	$255,000	
2	Government/NP	30	$5,000	$300,000	10	$500	$10,000	$310,000	
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**	**Daily Wage**	**Wage Days Lost**	**Wages Lost**		**Response Costs**	**Related Costs**	
939	18,780	$394,380	$112	350	$39,200		$254,036	$687,616	
							Total Disaster Costs	**$4,570,241**	

Table 6.22 Credit River Twp Flood and High Wind Hazard Loss								
Flood Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
0	Residential	$0		40.0%	$0		20.0%	$0
0	Commercial/Ind	$0		30.0%	$0		15.0%	$0
0	Government/NP	$0		30.0%	$0		23.1%	$0
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
0	Residential	60	$50	$0	60	$200	$0	$0
0	Commercial/Ind	30	$7,000	$0	30	$1,000	$0	$0
0	Government/NP	15	$5,000	$0	30	$500	$0	$0
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**	**Related Costs**
0	0	$0		$112	0	$0	$0	$0
							Total Disaster Costs	**$0**
High Wind Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
32	Residential	$12,000,000		40.0%	$6,000,000		40.0%	$7,200,000
3	Commercial/Ind	$2,245,400		30.0%	$898,160		30.0%	$943,068
1	Government/NP	$59,000		35.0%	$17,700		35.0%	$26,845
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
32	Residential	90	$50	$144,000	90	$200	$576,000	$720,000
3	Commercial/Ind	30	$7,000	$630,000	45	$1,000	$135,000	$765,000
1	Government/NP	30	$5,000	$150,000	10	$500	$5,000	$155,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**	**Related Costs**
1,292	25,830	$542,430		$112	515	$57,680	$735,292	$1,335,402
							Total Disaster Costs	**$11,145,315**

Table 6.22 Elko New Market Flood and High Wind Hazard Loss								
Flood Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
0	Residential	$0		40.0%	$0		20.0%	$0
0	Commercial/Ind	$0		30.0%	$0		15.0%	$0
1	Government/NP	$2,400,000		30.0%	$720,000		23.1%	$886,154
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
0	Residential	60	$50	$0	60	$200	$0	$0
0	Commercial/Ind	30	$7,000	$0	30	$1,000	$0	$0
1	Government/NP	15	$5,000	$75,000	30	$500	$15,000	$90,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**	**Daily Wage**	**Wage Days Lost**	**Wages Lost**		**Response Costs**	**Related Costs**
450	1,500	$39,000	$112	10	$1,120		$70,892	$111,012
							Total Disaster Costs	**$1,087,166**
High Wind Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
88	Residential	$9,291,300		40.0%	$4,645,650		40.0%	$5,574,780
4	Commercial/Ind	$1,750,100		30.0%	$700,040		30.0%	$735,042
4	Government/NP	$2,500,000		35.0%	$750,000		35.0%	$1,137,500
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
88	Residential	90	$50	$396,000	90	$200	$1,584,000	$1,980,000
4	Commercial/Ind	30	$7,000	$840,000	45	$1,000	$180,000	$1,020,000
4	Government/NP	30	$5,000	$600,000	10	$500	$20,000	$620,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**	**Daily Wage**	**Wage Days Lost**	**Wages Lost**		**Response Costs**	**Related Costs**
3,406	68,120	$1,430,520	$112	1,380	$154,560		$670,259	$2,255,339
							Total Disaster Costs	**$13,322,661**

Table 6.22 Helena Twp Flood and High Wind Hazard Loss								
Flood Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
25	Residential	$5,722,500		40.0%	$2,861,250		20.0%	$2,861,250
0	Commercial/Ind	$0		30.0%	$0		15.0%	$0
2	Government/NP	$115,000		30.0%	$34,500		23.1%	$42,462
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
25	Residential	60	$50	$75,000	60	$200	$300,000	$375,000
0	Commercial/Ind	30	$7,000	$0	30	$1,000	$0	$0
2	Government/NP	15	$5,000	$150,000	30	$500	$30,000	$180,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**	**Related Costs**
5,700	19,000	$494,000		$112	395	$44,240	$232,297	$770,537
							Total Disaster Costs	**$4,229,248**
High Wind Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
54	Residential	$24,869,500		40.0%	$12,434,750		40.0%	$14,921,700
2	Commercial/Ind	$520,000		30.0%	$208,000		30.0%	$218,400
1	Government/NP	$100,000		35.0%	$30,000		35.0%	$45,500
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
54	Residential	90	$50	$243,000	90	$200	$972,000	$1,215,000
2	Commercial/Ind	30	$7,000	$420,000	45	$1,000	$90,000	$510,000
1	Government/NP	30	$5,000	$150,000	10	$500	$5,000	$155,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**	**Related Costs**
1,936	38,710	$812,910		$112	835	$93,520	$1,366,704	$2,273,134
							Total Disaster Costs	**$19,338,734**

Table 6.22 Jackson Twp Flood and High Wind Hazard Loss									
Flood Hazard									
Qty	**Structure Type**	**Structure Value**		**Loss %**		**Content Value**		**Loss%**	**Struc/Cont Loss**
0	Residential	$0		40.0%		$0		20.0%	$0
1	Commercial/Ind	$154,300		30.0%		$61,720		15.0%	$55,548
0	Government/NP	$0		30.0%		$0		23.1%	$0
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**		**Func/Use Loss**
0	Residential	60	$50	$0	60	$200	$0		$0
1	Commercial/Ind	30	$7,000	$210,000	30	$1,000	$30,000		$240,000
0	Government/NP	15	$5,000	$0	30	$500	$0		$0
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**		**Related Costs**
360	1,200	$31,200		$112	10	$1,120	$4,444		$36,764
								Total Disaster Costs	**$332,312**
High Wind Hazard									
Qty	**Structure Type**	**Structure Value**		**Loss %**		**Content Value**		**Loss%**	**Struc/Cont Loss**
13	Residential	$2,975,100		40.0%		$1,487,550		40.0%	$1,785,060
3	Commercial/Ind	$2,925,200		30.0%		$1,170,080		30.0%	$1,228,584
2	Government/NP	$572,100		35.0%		$171,630		35.0%	$260,306
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**		**Func/Use Loss**
13	Residential	90	$50	$58,500	90	$200	$234,000		$292,500
3	Commercial/Ind	30	$7,000	$630,000	45	$1,000	$135,000		$765,000
2	Government/NP	30	$5,000	$300,000	10	$500	$10,000		$310,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**		**Related Costs**
771	15,420	$323,820		$112	235	$26,320	$294,655		$644,795
								Total Disaster Costs	**$5,286,245**

Table 6.22 Jordan Flood and High Wind Hazard Loss								
Flood Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
215	Residential	$24,692,100		40.0%	$12,346,050		20.0%	$12,346,050
30	Commercial/Ind	$9,761,100		30.0%	$3,904,440		15.0%	$3,513,996
3	Government/NP	$7,163,800		30.0%	$2,149,140		23.1%	$2,645,095
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
215	Residential	60	$50	$645,000	60	$200	$2,580,000	$3,225,000
30	Commercial/Ind	30	$7,000	$6,300,000	30	$1,000	$900,000	$7,200,000
3	Government/NP	15	$5,000	$225,000	30	$500	$45,000	$270,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**	**Related Costs**
53,430	178,100	$4,630,600		$112	3,555	$398,160	$1,480,411	$6,509,171
							Total Disaster Costs	**$35,709,313**
High Wind Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
135	Residential	$11,303,300		40.0%	$5,651,650		40.0%	$6,781,980
33	Commercial/Ind	$7,869,700		30.0%	$3,147,880		30.0%	$3,305,274
3	Government/NP	$3,000,000		35.0%	$900,000		35.0%	$1,365,000
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
135	Residential	90	$50	$607,500	90	$200	$2,430,000	$3,037,500
33	Commercial/Ind	30	$7,000	$6,930,000	45	$1,000	$1,485,000	$8,415,000
3	Government/NP	30	$5,000	$450,000	10	$500	$15,000	$465,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**	**Related Costs**
6,563	131,250	$2,756,250		$112	2,370	$265,440	$1,030,703	$4,052,393
							Total Disaster Costs	**$27,422,147**

Table 6.22 Louisville Twp Flood and High Wind Hazard Loss								
Flood Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
12	Residential	$3,971,600		40.0%	$1,985,800		20.0%	$1,985,800
3	Commercial/Ind	$1,454,900		30.0%	$581,960		15.0%	$523,764
0	Government/NP	$0		30.0%	$0		23.1%	$0
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
12	Residential	60	$50	$36,000	60	$200	$144,000	$180,000
3	Commercial/Ind	30	$7,000	$630,000	30	$1,000	$90,000	$720,000
0	Government/NP	15	$5,000	$0	30	$500	$0	$0
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**	**Daily Wage**	**Wage Days Lost**	**Wages Lost**		**Response Costs**	**Related Costs**
3,384	11,280	$293,280	$112	210	$23,520		$200,765	$517,565
							Total Disaster Costs	**$3,927,129**
High Wind Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
30	Residential	$4,500,000		40.0%	$2,250,000		40.0%	$2,700,000
0	Commercial/Ind	$0		30.0%	$0		30.0%	$0
0	Government/NP	$0		35.0%	$0		35.0%	$0
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
30	Residential	90	$50	$135,000	90	$200	$540,000	$675,000
0	Commercial/Ind	30	$7,000	$0	45	$1,000	$0	$0
0	Government/NP	30	$5,000	$0	10	$500	$0	$0
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**	**Daily Wage**	**Wage Days Lost**	**Wages Lost**		**Response Costs**	**Related Costs**
960	19,200	$403,200	$112	450	$50,400		$243,000	$696,600
							Total Disaster Costs	**$4,071,600**

Table 6.22 Mdewakanton Tribe Flood and High Wind Hazard Loss								
Flood Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
10	Residential	$3,800,000		40.0%	$1,900,000		20.0%	$1,900,000
4	Commercial/Ind	$18,000,000		30.0%	$7,200,000		15.0%	$6,480,000
1	Government/NP	$800,000		30.0%	$240,000		23.1%	$295,385
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
10	Residential	60	$50	$30,000	60	$200	$120,000	$150,000
4	Commercial/Ind	30	$7,000	$840,000	30	$1,000	$120,000	$960,000
1	Government/NP	15	$5,000	$75,000	30	$500	$15,000	$90,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**	**Related Costs**
3,810	12,700	$330,200		$112	200	$22,400	$694,031	$1,046,631
							Total Disaster Costs	**$10,922,015**
High Wind Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
2	Residential	$300,000		40.0%	$150,000		40.0%	$180,000
1	Commercial/Ind	$800,000		30.0%	$320,000		30.0%	$336,000
2	Government/NP	$1,400,000		35.0%	$420,000		35.0%	$637,000
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
2	Residential	90	$50	$9,000	90	$200	$36,000	$45,000
1	Commercial/Ind	30	$7,000	$210,000	45	$1,000	$45,000	$255,000
2	Government/NP	30	$5,000	$300,000	10	$500	$10,000	$310,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**	**Related Costs**
299	5,980	$125,580		$112	50	$5,600	$103,770	$234,950
							Total Disaster Costs	**$1,997,950**

Table 6.22 New Market Twp Flood and High Wind Hazard Loss								
Flood Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
1	Residential	$218,800		40.0%	$109,400		20.0%	$109,400
0	Commercial/Ind	$0		30.0%	$0		15.0%	$0
0	Government/NP	$0		30.0%	$0		23.1%	$0
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
1	Residential	60	$50	$3,000	60	$200	$12,000	$15,000
0	Commercial/Ind	30	$7,000	$0	30	$1,000	$0	$0
0	Government/NP	15	$5,000	$0	30	$500	$0	$0
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**	**Daily Wage**	**Wage Days Lost**	**Wages Lost**		**Response Costs**	**Related Costs**
192	640	$16,640	$112	15	$1,680		$8,752	$27,072
							Total Disaster Costs	**$151,472**
High Wind Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
26	Residential	$2,830,000		40.0%	$1,415,000		40.0%	$1,698,000
5	Commercial/Ind	$3,200,000		30.0%	$1,280,000		30.0%	$1,344,000
1	Government/NP	$1,431,300		35.0%	$429,390		35.0%	$651,242
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
26	Residential	90	$50	$117,000	90	$200	$468,000	$585,000
5	Commercial/Ind	30	$7,000	$1,050,000	45	$1,000	$225,000	$1,275,000
1	Government/NP	30	$5,000	$150,000	10	$500	$5,000	$155,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**	**Daily Wage**	**Wage Days Lost**	**Wages Lost**		**Response Costs**	**Related Costs**
1,220	24,390	$512,190	$112	445	$49,840		$332,392	$894,422
							Total Disaster Costs	**$6,602,663**

Table 6.22 New Prague Flood and High Wind Hazard Loss								
Flood Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
13	Residential	$1,674,000		40.0%	$837,000		20.0%	$837,000
3	Commercial/Ind	$13,445,000		30.0%	$5,378,000		15.0%	$4,840,200
3	Government/NP	$1,084,700		30.0%	$325,410		23.1%	$400,505
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
13	Residential	60	$50	$39,000	60	$200	$156,000	$195,000
3	Commercial/Ind	30	$7,000	$630,000	30	$1,000	$90,000	$720,000
3	Government/NP	15	$5,000	$225,000	30	$500	$45,000	$270,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**	**Related Costs**
4,926	16,420	$426,920		$112	255	$28,560	$486,216	$941,696
							Total Disaster Costs	**$8,204,401**
High Wind Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
178	Residential	$15,063,600		40.0%	$7,531,800		40.0%	$9,038,160
24	Commercial/Ind	$9,666,800		30.0%	$3,866,720		30.0%	$4,060,056
3	Government/NP	$8,590,600		35.0%	$2,577,180		35.0%	$3,908,723
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
178	Residential	90	$50	$801,000	90	$200	$3,204,000	$4,005,000
24	Commercial/Ind	30	$7,000	$5,040,000	45	$1,000	$1,080,000	$6,120,000
3	Government/NP	30	$5,000	$450,000	10	$500	$15,000	$465,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**	**Related Costs**
7,399	147,970	$3,107,370		$112	2,925	$327,600	$1,530,625	$4,965,595
							Total Disaster Costs	**$32,562,534**

Table 6.22 Prior Lake Flood and High Wind Hazard Loss								
Flood Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
570	Residential	$120,698,900		40.0%	$60,349,450		20.0%	$60,349,450
4	Commercial/Ind	$691,000		30.0%	$276,400		15.0%	$248,760
4	Government/NP	$23,000		30.0%	$6,900		23.1%	$8,492
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
570	Residential	60	$50	$1,710,000	60	$200	$6,840,000	$8,550,000
4	Commercial/Ind	30	$7,000	$840,000	30	$1,000	$120,000	$960,000
4	Government/NP	15	$5,000	$300,000	30	$500	$60,000	$360,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**	**Daily Wage**	**Wage Days Lost**	**Wages Lost**		**Response Costs**	**Related Costs**
112,680	375,600	$9,765,600	$112	8,630	$966,560		$4,848,536	$15,580,696
							Total Disaster Costs	**$86,057,398**
High Wind Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
99	Residential	$9,757,000		40.0%	$4,878,500		40.0%	$5,854,200
30	Commercial/Ind	$15,471,700		30.0%	$6,188,680		30.0%	$6,498,114
5	Government/NP	$17,682,300		35.0%	$5,304,690		35.0%	$8,045,447
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
99	Residential	90	$50	$445,500	90	$200	$1,782,000	$2,227,500
30	Commercial/Ind	30	$7,000	$6,300,000	45	$1,000	$1,350,000	$7,650,000
5	Government/NP	30	$5,000	$750,000	10	$500	$25,000	$775,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**	**Daily Wage**	**Wage Days Lost**	**Wages Lost**		**Response Costs**	**Related Costs**
5,406	108,110	$2,270,310	$112	1,810	$202,720		$1,835,798	$4,308,828
							Total Disaster Costs	**$35,359,089**

Table 6.22 St Lawrence Twp Flood and High Wind Hazard Loss								
Flood Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
13	Residential	$1,674,000		40.0%	$837,000		20.0%	$837,000
3	Commercial/Ind	$13,445,000		30.0%	$5,378,000		15.0%	$4,840,200
3	Government/NP	$1,084,700		30.0%	$325,410		23.1%	$400,505
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
13	Residential	60	$50	$39,000	60	$200	$156,000	$195,000
3	Commercial/Ind	30	$7,000	$630,000	30	$1,000	$90,000	$720,000
3	Government/NP	15	$5,000	$225,000	30	$500	$45,000	$270,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**	**Related Costs**
4,926	16,420	$426,920		$112	255	$28,560	$486,216	$941,696
							Total Disaster Costs	**$8,204,401**
High Wind Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
178	Residential	$15,063,600		40.0%	$7,531,800		40.0%	$9,038,160
24	Commercial/Ind	$9,666,800		30.0%	$3,866,720		30.0%	$4,060,056
3	Government/NP	$8,590,600		35.0%	$2,577,180		35.0%	$3,908,723
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
178	Residential	90	$50	$801,000	90	$200	$3,204,000	$4,005,000
24	Commercial/Ind	30	$7,000	$5,040,000	45	$1,000	$1,080,000	$6,120,000
3	Government/NP	30	$5,000	$450,000	10	$500	$15,000	$465,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**	**Related Costs**
7,399	147,970	$3,107,370		$112	2,925	$327,600	$1,530,625	$4,965,595
							Total Disaster Costs	**$32,562,534**

Table 6.22 Sand Creek Twp Flood and High Wind Hazard Loss								
Flood Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
18	Residential	$2,421,100		40.0%	$1,210,550		20.0%	$1,210,550
3	Commercial/Ind	$2,287,300		30.0%	$914,920		15.0%	$823,428
0	Government/NP	$0		30.0%	$0		23.1%	$0
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
18	Residential	60	$50	$54,000	60	$200	$216,000	$270,000
3	Commercial/Ind	30	$7,000	$630,000	30	$1,000	$90,000	$720,000
0	Government/NP	15	$5,000	$0	30	$500	$0	$0
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**	**Daily Wage**	**Wage Days Lost**	**Wages Lost**		**Response Costs**	**Related Costs**
4,536	15,120	$393,120	$112	300	$33,600		$162,718	$589,438
							Total Disaster Costs	**$3,613,416**
High Wind Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
5	Residential	$750,000		40.0%	$375,000		40.0%	$450,000
0	Commercial/Ind	$0		30.0%	$0		30.0%	$0
0	Government/NP	$0		35.0%	$0		35.0%	$0
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
5	Residential	90	$50	$22,500	90	$200	$90,000	$112,500
0	Commercial/Ind	30	$7,000	$0	45	$1,000	$0	$0
0	Government/NP	30	$5,000	$0	10	$500	$0	$0
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**	**Daily Wage**	**Wage Days Lost**	**Wages Lost**		**Response Costs**	**Related Costs**
160	3,200	$67,200	$112	75	$8,400		$40,500	$116,100
							Total Disaster Costs	**$678,600**

Table 6.22 Savage Flood and High Wind Hazard Loss

Flood Hazard

Qty	Structure Type	Structure Value	Loss %	Content Value	Loss%	Struc/Cont Loss
175	Residential	$24,691,800	40.0%	$12,345,900	20.0%	$12,345,900
126	Commercial/Ind	$95,815,100	30.0%	$38,326,040	15.0%	$34,493,436
7	Government/NP	$23,949,800	30.0%	$7,184,940	23.1%	$8,843,003

Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss
175	Residential	60	$50	$525,000	60	$200	$2,100,000	$2,625,000
126	Commercial/Ind	30	$7,000	$26,460,000	30	$1,000	$3,780,000	$30,240,000
7	Government/NP	15	$5,000	$525,000	30	$500	$105,000	$630,000

Soil Cu Yards	Demolition Cu Yards	Debris Cost	Daily Wage	Wage Days Lost	Wages Lost	Response Costs	Related Costs
82,110	273,700	$7,116,200	$112	3,955	$442,960	$4,454,587	$12,013,747
						Total Disaster Costs	**$101,191,086**

High Wind Hazard

Qty	Structure Type	Structure Value	Loss %	Content Value	Loss%	Struc/Cont Loss
123	Residential	$10,698,000	40.0%	$5,349,000	40.0%	$6,418,800
20	Commercial/Ind	$15,000,000	30.0%	$6,000,000	30.0%	$6,300,000
5	Government/NP	$12,376,700	35.0%	$3,713,010	35.0%	$5,631,399

Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss
123	Residential	90	$50	$553,500	90	$200	$2,214,000	$2,767,500
20	Commercial/Ind	30	$7,000	$4,200,000	45	$1,000	$900,000	$5,100,000
5	Government/NP	30	$5,000	$750,000	10	$500	$25,000	$775,000

Soil Cu Yards	Demolition Cu Yards	Debris Cost	Daily Wage	Wage Days Lost	Wages Lost	Response Costs	Related Costs
5,574	111,470	$2,340,870	$112	2,070	$231,840	$1,651,518	$4,224,228
						Total Disaster Costs	**$31,216,926**

Table 6.22 Shakopee Flood and High Wind Hazard Loss								
Flood Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
21	Residential	$3,297,300		40.0%	$1,648,650		20.0%	$1,648,650
19	Commercial/Ind	$22,979,100		30.0%	$9,191,640		15.0%	$8,272,476
3	Government/NP	$1,660,800		30.0%	$498,240		23.1%	$613,218
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
21	Residential	60	$50	$63,000	60	$200	$252,000	$315,000
19	Commercial/Ind	30	$7,000	$3,990,000	30	$1,000	$570,000	$4,560,000
3	Government/NP	15	$5,000	$225,000	30	$500	$45,000	$270,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**	**Daily Wage**	**Wage Days Lost**	**Wages Lost**		**Response Costs**	**Related Costs**
12,222	40,740	$1,059,240	$112	535	$59,920		$842,748	$1,961,908
							Total Disaster Costs	**$17,641,252**
High Wind Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
160	Residential	$15,764,400		40.0%	$7,882,200		40.0%	$9,458,640
46	Commercial/Ind	$22,824,700		30.0%	$9,129,880		30.0%	$9,586,374
9	Government/NP	$64,393,100		35.0%	$19,317,930		35.0%	$29,298,861
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
160	Residential	90	$50	$720,000	90	$200	$2,880,000	$3,600,000
46	Commercial/Ind	30	$7,000	$9,660,000	45	$1,000	$2,070,000	$11,730,000
9	Government/NP	30	$5,000	$1,350,000	10	$500	$45,000	$1,395,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**	**Daily Wage**	**Wage Days Lost**	**Wages Lost**		**Response Costs**	**Related Costs**
8,668	173,350	$3,640,350	$112	2,905	$325,360		$4,350,949	$8,316,659
							Total Disaster Costs	**$73,385,533**

Table 6.22 Spring Lake Twp Flood and High Wind Hazard Loss								
Flood Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
64	Residential	$12,387,100		40.0%	$6,193,550		20.0%	$6,193,550
0	Commercial/Ind	$0		30.0%	$0		15.0%	$0
0	Government/NP	$0		30.0%	$0		23.1%	$0
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
64	Residential	60	$50	$192,000	60	$200	$768,000	$960,000
0	Commercial/Ind	30	$7,000	$0	30	$1,000	$0	$0
0	Government/NP	15	$5,000	$0	30	$500	$0	$0
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**	**Related Costs**
12,288	40,960	$1,064,960		$112	960	$107,520	$495,484	$1,667,964
							Total Disaster Costs	**$8,821,514**
High Wind Hazard								
Qty	**Structure Type**	**Structure Value**		**Loss %**	**Content Value**		**Loss%**	**Struc/Cont Loss**
19	Residential	$1,911,900		40.0%	$955,950		40.0%	$1,147,140
2	Commercial/Ind	$1,561,000		30.0%	$624,400		30.0%	$655,620
1	Government/NP	$1,200,000		35.0%	$360,000		35.0%	$546,000
Qty	**Structure Type**	**Days Down**	**Daily Budget**	**Function Loss**	**Days Disp**	**Daily Cost**	**Usage Loss**	**Func/Use Loss**
19	Residential	90	$50	$85,500	90	$200	$342,000	$427,500
2	Commercial/Ind	30	$7,000	$420,000	45	$1,000	$90,000	$510,000
1	Government/NP	30	$5,000	$150,000	10	$500	$5,000	$155,000
Soil Cu Yards	**Demolition Cu Yards**	**Debris Cost**		**Daily Wage**	**Wage Days Lost**	**Wages Lost**	**Response Costs**	**Related Costs**
816	16,310	$342,510		$112	310	$34,720	$211,388	$588,618
							Total Disaster Costs	**$4,029,878**

6.4.2 Vulnerability Loss Estimates For Secondary Hazards

This section of the plan update describes the Scott County estimated vulnerability loss that may be incurred by hazards that may impact the entire planning area equally. These hazards are Drought, Earthquake, Extreme Temperatures, Hail, Lightning and Ice/Snow. The manmade hazards identified in this plan (hazardous material, pandemic, terrorism and urban fire) would also impact the entire planning area equally. The loss percentage for each of these hazards were derived by the 2009 Hazard Mitigation committee based on both historic losses and local knowledge. Function and Use loss was calculated using a factor that was developed from historic events, local knowledge, and other sources. The factor was multiplied against the total estimated loss.

Drought can affect structures primarily through land subsidence (sinkholes) that may impact buildings as well as infrastructure anywhere within the county. Drought may also impact population through the lack of potable water or locally produced food items. However, the larger impact of drought within the county can be the lack of water for public and private landscaping resulting in replacement costs for landscape products. The largest loss from a drought would probably be in the agriculture area. Function and use loss would be negligible, as buildings would remain operational. Loss of life and injuries do occur but are minimal. The table below estimates the losses from a severe drought event

Table 6.22 Scott County Drought Hazard Loss

Qty	Structure Type	Structure Value	Loss %	Content Value	Loss%	Struc/Cont Loss
36,155	Residential	$8,719,381,907	0.10%	$4,359,690,954	0.0%	$8,719,382
2,631	Commercial/Ind	$1,101,908,900	0.10%	$440,763,560	0.0%	$1,101,909
150	Government/NP	$810,715,455	0.10%	$243,214,637	0.0%	$810,715
	Crop Loss					$5,000,000

Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss
36,155	Residential	0	$50	$0	0	$200	$0	$0
2,631	Commercial/Ind	0	$7,000	$0	0	$1,000	$0	$0
150	Government/NP	0	$5,000	$0	0	$500	$0	$0

Soil Cu Yards	Demolition Cu Yards	Debris Cost	Daily Wage	Wage Days Lost	Wages Lost	Response Costs	Related Costs
0	0	$0	$64	26,310	$1,683,840	$850,561	$2,534,401
						Total Disaster Costs	$18,166,407

Earthquake occurrences of the magnitude predicted in the county would impact the entire county and could result in some cracking of concrete structures and some movement of wood structures off foundations. Brick from buildings could crack and fall. The shaking could result in electrical and water infrastructure to suffer damage. The county loss would include infrastructure loss. Function and use loss could be moderate as structures could be damaged to the extent that some repairs are needed making them unusable for short period of time. Because of the lack of warning it can be expected that there may be a few injuries from an earthquake event The table below estimates the loss from a 6.5 magnitude earthquake.

Table 6.22 Scott County Earthquake Hazard Loss								
Qty	Structure Type	Structure Value		Loss %	Content Value		Loss%	Struc/Cont Loss
36,155	Residential	$8,719,381,907		0.2%	$4,359,690,954		0.1%	$21,798,455
2,631	Commercial/Ind	$1,101,908,900		0.3%	$440,763,560		0.1%	$3,746,490
150	Government/NP	$810,715,455		0.3%	$243,214,637		0.1%	$2,675,361
Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss
36,155	Residential	1	$50	$1,807,750	1	$200	$7,231,000	$9,038,750
2,631	Commercial/Ind	1	$7,000	$18,417,000	0	$1,000	$0	$18,417,000
150	Government/NP	1	$5,000	$750,000	0	$500	$0	$750,000
Soil Cu Yards	Demolition Cu Yards	Debris Cost	Daily Wage	Wage Days Lost	Wages Lost		Response Costs	Related Costs
1,495	149,518	$3,020,264	$112	75,091	$8,410,192		$2,257,624	$13,688,080
							Total Disaster Costs	$70,114,136

Extreme Temperatures can affect concrete structures and infrastructures anywhere in the county. Extremely high temperatures and low can cause cracking and buckling of concrete structures and roadways and failure of electrical and mechanical components and equipment. Failure of air-conditioning/heating systems and/or direct outdoor exposure of populations can result in severe illness. The Table below estimates the cost of an Extreme Temperatures event.

Table 6.22 Scott County Extreme Temperature Hazard Loss								
Qty	Structure Type	Structure Value		Loss %	Content Value		Loss%	Struc/Cont Loss
36,155	Residential	$8,719,381,907		0.01%	$4,359,690,954		0.0%	$871,938
2,631	Commercial/Ind	$1,101,908,900		0.01%	$440,763,560		0.0%	$110,191
150	Government/NP	$810,715,455		0.01%	$243,214,637		0.0%	$81,072
Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss
36,155	Residential	0.1	$50	$180,775	0	$200	$0	$180,775
2,631	Commercial/Ind	0.1	$7,000	$1,841,700	0	$1,000	$0	$1,841,700
150	Government/NP	0.1	$5,000	$75,000	0	$500	$0	$75,000
Soil Cu Yards	Demolition Cu Yards	Debris Cost	Daily Wage	Wage Days Lost	Wages Lost		Response Costs	Related Costs
69	138	$4,147	$112	6,397	$716,408		$85,056	$805,611
							Total Disaster Costs	$3,966,287

Hail has the capacity to impact primarily mobile homes and structures with siding material such as aluminum and vinyl. Hail can impact housing roofing and break windows in almost any structure or automobile. Hail can also destroy many landscaping and agricultural crops. Function and use loss would be negligible, as buildings would remain operational. Loss of life and injuries do occur but are minimal.

Table 6.22 Scott County Hail Hazard Loss								
Qty	Structure Type	Structure Value		Loss %	Content Value		Loss%	Struc/Cont Loss
36,155	Residential	$8,719,381,907		0.03%	$4,359,690,954		0.0%	$2,615,815
2,631	Commercial/Ind	$1,101,908,900		0.01%	$440,763,560		0.0%	$110,191
150	Government/NP	$810,715,455		0.01%	$243,214,637		0.0%	$81,072
Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss
36,155	Residential	0.2	$50	$361,550	0.2	$200	$1,446,200	$1,807,750
2,631	Commercial/Ind	0.01	$7,000	$184,170	0	$1,000	$0	$184,170
150	Government/NP	0.01	$5,000	$7,500	0	$500	$0	$7,500
Soil Cu Yards	Demolition Cu Yards	Debris Cost	Daily Wage	Wage Days Lost	Wages Lost		Response Costs	Related Costs
185	370	$11,089	$112	39	$4,361		$224,566	$240,016
							Total Disaster Costs	$5,046,513

Ice/Snow is most destructive against wood built homes and any structure with a roof that is not designed for an ice or snow load. Ice has the capability to fall large tree limbs, which can damage structures. Ice is especially damaging to electrical lines forcing power outages, which can result in secondary damage to structures. There may be some function and use loss as repairs may make the structures unusable for a few days on the average. There may be some loss of life and injuries due to primarily secondary effects (i.e. accidents, exposure, fires from heaters).

Table 6.22 Scott County Ice/Snow Hazard Loss								
Qty	Structure Type	Structure Value		Loss %	Content Value		Loss%	Struc/Cont Loss
36,155	Residential	$8,719,381,907		0.09%	$4,359,690,954		0.0%	$7,847,444
2,631	Commercial/Ind	$1,101,908,900		0.02%	$440,763,560		0.0%	$220,382
150	Government/NP	$810,715,455		0.02%	$243,214,637		0.0%	$162,143
Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss
36,155	Residential	1	$50	$1,807,750	0.2	$200	$1,446,200	$3,253,950
2,631	Commercial/Ind	0.5	$7,000	$9,208,500	0	$1,000	$0	$9,208,500
150	Government/NP	1	$5,000	$750,000	0	$500	$0	$750,000
Soil Cu Yards	Demolition Cu Yards	Debris Cost	Daily Wage	Wage Days Lost	Wages Lost		Response Costs	Related Costs
543	1,086	$32,591	$112	38,936	$4,360,832		$658,397	$5,051,820
							Total Disaster Costs	$26,494,239

The topography and geology of Scott County is susceptible to the effects of landslides and especially mudslides, according to the Geological Survey of Minnesota. The northern and western part of the county has a moderate risk of landslides. Mudslides/land slides have not been a significant risk in Scott County. The effects of landslides are often misrepresented as being the result of the landslide trigger event, such as a flood. The impact from a landslide or Mudslide can include loss of life, damage to buildings, lost productivity, disruption in utilities and transportation systems, and reduced property values. Some structures in Scott County are built

close to riverbanks and are susceptible to mudslides. The Table below estimates the loss resulting from a mudslide or landslide involving riverbank structures

Table 6.22 Scott County Landslide/Mudslide Hazard Loss								
Qty	Structure Type	Structure Value		Loss %	Content Value		Loss%	Struc/Cont Loss
36,155	Residential	$8,719,381,907		0.01%	$4,359,690,954		0.1%	$5,231,629
2,631	Commercial/Ind	$1,101,908,900		0.02%	$440,763,560		0.1%	$661,145
150	Government/NP	$810,715,455		0.00%	$243,214,637		0.0%	$0
Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss
36,155	Residential	0.01	$50	$18,078	0.01	$200	$72,310	$90,388
2,631	Commercial/Ind	0.001	$7,000	$18,417	0	$1,000	$2,631	$21,048
150	Government/NP	0	$5,000	$0	0	$500	$0	$0
Soil Cu Yards	Demolition Cu Yards	Debris Cost	Daily Wage	Wage Days Lost	Wages Lost		Response Costs	Related Costs
79	158	$4,734	$112	39	$4,344		$471,422	$480,500
							Total Disaster Costs	$6,484,710

Scott County is susceptible to land subsidence in the form of sinkholes. The future probability of an event is low and the vulnerability is low. As population and structure density increases the vulnerability may increase. There are no reported instances of Land Subsidence or sinkholes in Scott County

Table 6.22 Scott County Land Subsidence Hazard Loss								
Qty	Structure Type	Structure Value		Loss %	Content Value		Loss%	Struc/Cont Loss
36,155	Residential	$8,719,381,907		0.01%	$4,359,690,954		0.0%	$871,938
2,631	Commercial/Ind	$1,101,908,900		0.00%	$440,763,560		0.0%	$11,019
150	Government/NP	$810,715,455		0.00%	$243,214,637		0.0%	$0
Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss
36,155	Residential	0.01	$50	$18,078	0.01	$200	$72,310	$90,388
2,631	Commercial/Ind	0.001	$7,000	$18,417	0	$1,000	$2,631	$21,048
150	Government/NP	0	$5,000	$0	0	$500	$0	$0
Soil Cu Yards	Demolition Cu Yards	Debris Cost	Daily Wage	Wage Days Lost	Wages Lost		Response Costs	Related Costs
59	118	$3,534	$112	4	$434		$70,637	$74,605
							Total Disaster Costs	$1,068,998

Lightning can damage a structure of any type but is most damaging when a fire is started in a wooden structure or to, a lesser extent, commercial or public structures. Electrical infrastructure is also subject to significant damage from a lightning strike. There could also be some amount of function and use loss as some structures would be un-useable due to repairs. Loss of life may occur directly as a result of a lightning strike or from a secondary effect such as fires.

Table 6.22 Scott County Lightning Hazard Loss								
Qty	Structure Type	Structure Value		Loss %	Content Value		Loss%	Struc/Cont Loss
36,155	Residential	$8,719,381,907		0.01%	$4,359,690,954		0.0%	$871,938
2,631	Commercial/Ind	$1,101,908,900		0.01%	$440,763,560		0.0%	$110,191
150	Government/NP	$810,715,455		0.01%	$243,214,637		0.0%	$81,072
Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss
36,155	Residential	1	$50	$1,807,750	0.2	$200	$1,446,200	$3,253,950
2,631	Commercial/Ind	0	$7,000	$0	0	$1,000	$0	$0
150	Government/NP	0	$5,000	$0	0	$500	$0	$0
Soil Cu Yards	Demolition Cu Yards	Debris Cost		Daily Wage	Wage Days Lost	Wages Lost	Response Costs	Related Costs
69	138	$4,147		$112	389	$43,608	$85,056	$132,812
							Total Disaster Costs	$4,449,962

Wildland Fires are most destructive against wooden structures or brick structures with wood cores. However concrete structures can be severely damaged should the fire burn the roof or the heat breaks windows allowing the flames to enter a normally "fire resistant" structure. Wildland fires can also damage electrical infrastructure by causing tress to fall across power lines. Because the Wildland fires location would be in an "urban interface area", which would be on the perimeter of the city, a significantly smaller number of structures would be impacted. There may be some function and use loss as a wild fire would probably damage or destroy some structures making them unusable during repairs or rebuilding. Loss of life and injuries could also occur among citizens and firefighters.

Table 6.22 Scott County Wildfire Hazard Loss								
Qty	Structure Type	Structure Value		Loss %	Content Value		Loss%	Struc/Cont Loss
36,155	Residential	$8,719,381,907		0.05%	$4,359,690,954		0.0%	$4,359,691
2,631	Commercial/Ind	$1,101,908,900		0.01%	$440,763,560		0.0%	$110,191
150	Government/NP	$810,715,455		0.01%	$243,214,637		0.0%	$81,072
Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss
36,155	Residential	1	$50	$1,807,750	0.3	$200	$2,169,300	$3,977,050
2,631	Commercial/Ind	0	$7,000	$0	0	$1,000	$0	$0
150	Government/NP	0	$5,000	$0	0	$500	$0	$0
Soil Cu Yards	Demolition Cu Yards	Debris Cost		Daily Wage	Wage Days Lost	Wages Lost	Response Costs	Related Costs
301	15,026	$306,524		$112	389	$43,608	$2,275,477	$2,625,609
							Total Disaster Costs	$11,153,613

Illegal Meth Labs has been identified by law enforcement as the number one drug threat in Minnesota The cooking process itself and the waste that results from the manufacture of meth pose significant public health and safety risks. Methamphetamine recipes rely on the use of volatile organic compounds, explosives, acids, bases, metals, solvents, and salts. These ingredients have the potential for explosions. The cooking process distributes these toxic

chemicals throughout a structure resulting contamination that may require demolition of the structure

Table 6.22 Scott County Illegal Drug Lab Hazard Loss								
Qty	Structure Type	Structure Value		Loss %	Content Value		Loss%	Struc/Cont Loss
36,155	Residential	$8,719,381,907		0.01%	$4,359,690,954		0.0%	$871,938
2,631	Commercial/Ind	$1,101,908,900		0.00%	$440,763,560		0.0%	$0
150	Government/NP	$810,715,455		0.00%	$243,214,637		0.0%	$0
Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss
36,155	Residential	0	$50	$0	0	$200	$0	$0
2,631	Commercial/Ind	0	$7,000	$0	0	$1,000	$0	$0
150	Government/NP	0	$5,000	$0	0	$500	$0	$0
Soil Cu Yards	Demolition Cu Yards	Debris Cost	Daily Wage	Wage Days Lost	Wages Lost		Response Costs	Related Costs
58	116	$3,471	$112	0	$0		$17,439	$20,910
							Total Disaster Costs	$892,848

HAZMAT events can be one of the most significant hazard event that can impact a community. Depending on the chemical and/or radiological instrument and the amount released or spilled the affect could be loss of thousands of lives and direct property loss from an associated explosion or indirect property loss from contamination. An event from a fixed facility could impact many communities and a transportation (roadway or railway) event could impact any community equally in the county.

Table 6.22 Scott County Hazmat Hazard Loss								
Qty	Structure Type	Structure Value		Loss %	Content Value		Loss%	Struc/Cont Loss
36,155	Residential	$8,719,381,907		1.00%	$4,359,690,954		0.2%	$95,913,201
2,631	Commercial/Ind	$1,101,908,900		1.00%	$440,763,560		0.2%	$11,900,616
150	Government/NP	$810,715,455		1.00%	$243,214,637		0.2%	$8,593,584
Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss
36,155	Residential	1	$50	$1,807,750	1	$200	$7,231,000	$9,038,750
2,631	Commercial/Ind	1	$7,000	$18,417,000	0	$1,000	$0	$18,417,000
150	Government/NP	1	$5,000	$750,000	0	$500	$0	$750,000
Soil Cu Yards	Demolition Cu Yards	Debris Cost	Daily Wage	Wage Days Lost	Wages Lost		Response Costs	Related Costs
6,912	345,610	$7,050,444	$112	38,936	$4,360,832		$10,476,666	$21,887,942
							Total Disaster Costs	$166,501,093

Pandemic events can result in the loss of thousands of lives and have a long lasting economic impact to all communities in the planning area. There would be little impact to structures. The exception may be an increase in damage from structure fires resulting from fewer fire service resources.

Table 6.22 Scott County Pandemic Hazard Loss								
Qty	Structure Type	Structure Value		Loss %	Content Value		Loss%	Struc/Cont Loss
36,155	Residential	$8,719,381,907		0.05%	$4,359,690,954		0.1%	$8,719,382
2,631	Commercial/Ind	$1,101,908,900		0.05%	$440,763,560		0.1%	$991,718
150	Government/NP	$810,715,455		0.05%	$243,214,637		0.1%	$648,572
Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss
36,155	Residential	0	$50	$0	0	$200	$0	$0
2,631	Commercial/Ind	1	$7,000	$18,417,000	0	$1,000	$0	$18,417,000
150	Government/NP	1	$5,000	$750,000	0	$500	$0	$750,000
Soil Cu Yards	Demolition Cu Yards	Debris Cost	Daily Wage	Wage Days Lost	Wages Lost		Response Costs	Related Costs
1,728	17,281	$380,171	$112	100,120	$11,213,440		$9,323,705	$20,917,316
							Total Disaster Costs	$50,443,988

Terrorism events can result in significant loss of life and damage to structures in any community in the planning area. Major or complete damage of a single structure could result from a terrorist bomb (domestic or International) with some collateral damage to structures nearby. Structure usability could result from chemical or radiological contamination.

Table 6.22 Scott County Terrorism Hazard Loss								
Qty	Structure Type	Structure Value		Loss %	Content Value		Loss%	Struc/Cont Loss
36,155	Residential	$8,719,381,907		0.00%	$4,359,690,954		0.0%	$0
2,631	Commercial/Ind	$1,101,908,900		0.00%	$440,763,560		0.0%	$0
150	Government/NP	$810,715,455		1.00%	$243,214,637		0.5%	$9,323,228
Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss
36,155	Residential	0	$50	$0	0	$200	$0	$0
2,631	Commercial/Ind	0	$7,000	$0	0	$1,000	$0	$0
150	Government/NP	10	$5,000	$7,500,000	180	$500	$13,500,000	$21,000,000
Soil Cu Yards	Demolition Cu Yards	Debris Cost	Daily Wage	Wage Days Lost	Wages Lost		Response Costs	Related Costs
375	7,500	$157,500	$112	1,500	$168,000		$932,323	$1,257,823
							Total Disaster Costs	$31,581,051

Urban Fire events may result in some loss of life and significant or complete damage to a structure or a group of structures in close proximity. The table below estimates the loss of a large business in a community.

Table 6.22 Scott County Urban Fire Hazard Loss								
Qty	Structure Type	Structure Value		Loss %	Content Value		Loss%	Struc/Cont Loss
36,155	Residential	$8,719,381,907		0.00%	$4,359,690,954		0.0%	$0
2,631	Commercial/Ind	$1,101,908,900		0.70%	$440,763,560		0.5%	$9,917,180
150	Government/NP	$810,715,455		0.00%	$243,214,637		0.0%	$0
Qty	Structure Type	Days Down	Daily Budget	Function Loss	Days Disp	Daily Cost	Usage Loss	Func/Use Loss
36,155	Residential	0	$50	$0	0	$200	$0	$0
2,631	Commercial/Ind	10	$7,000	$184,170,000	60	$1,000	$157,860,000	$342,030,000
150	Government/NP		$5,000	$0	0	$500	$0	$0
Soil Cu Yards	Demolition Cu Yards	Debris Cost		Daily Wage	Wage Days Lost	Wages Lost	Response Costs	Related Costs
737	7,367	$162,070		$112	157,860	$17,680,320	$991,718	$18,834,108
							Total Disaster Costs	$370,781,288

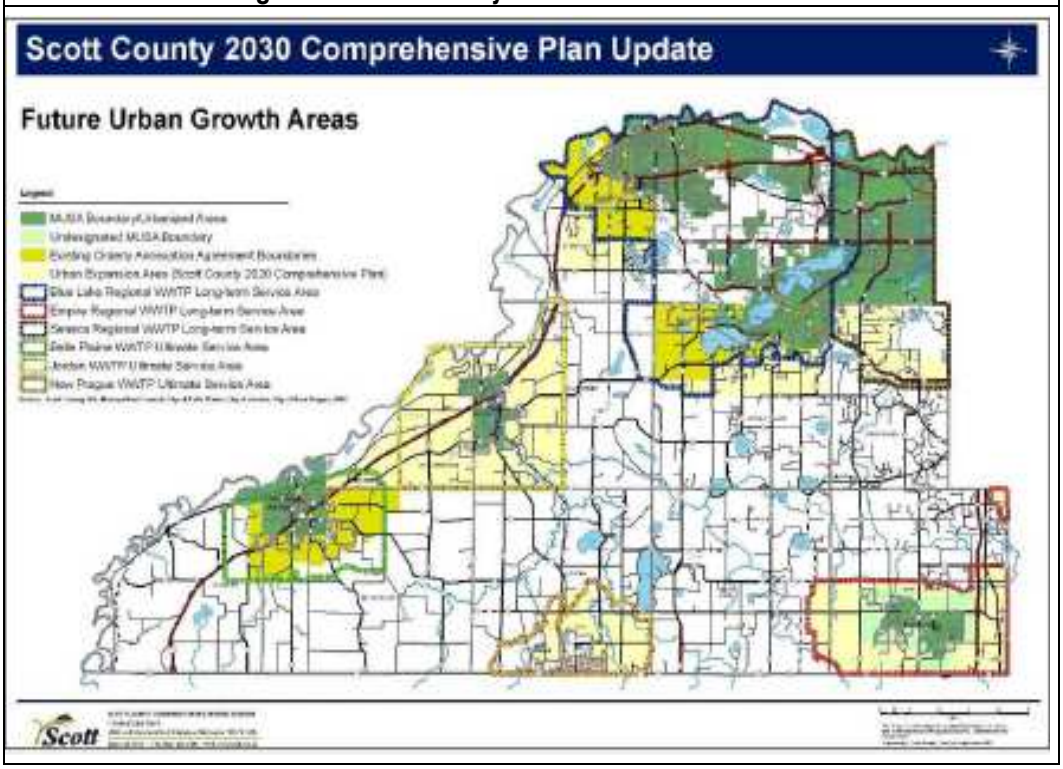
6.5 ASSESSING VULNERABILITY: ANALYZING DEVELOPMENT TRENDS

Requirement §201.6(c)(2)(ii)(C): The plan should describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.
A. Does the new or updated plan describe land uses and development trends?

CRS Step 5: Assess the Problem: The CRS gives credit for a description of the development, redevelopment, and population trends as well as a discussion of what the future brings for development in the community. This is optional.

In residential development trends, Scott County experienced a housing boom in the early 2000s. From May 2001 (when the development moratorium was lifted in the eleven townships) through 2006, the County approved nearly 1,000 lots and issued 1,200 building permits for new homes in the unincorporated area. The County absorbed the bulk of this recent growth, with most new lots or homes created in Credit River, Cedar Lake, and New Market townships. New residential development remained steady in the cities, with Shakopee and Prior Lake seeing most of the new growth. In 2003 and 2004, these two cities were among the fastest growing communities in the Twin Cities metropolitan area. In late 2006 and 2007, residential development slowed with the downturn in the housing market. Since 2001, the County has encouraged cluster developments in designated rural residential and urban expansion areas to preserve future development options for larger outlots or parcels.

Figure 6.4 Scott County Future Urban Growth Areas



For Non-Residential Development Trends, over a 10-year period (May 1995 to May 2005), the County issued 227 conditional use permits

(CUPs) and 39 interim use permits (IUPs), primarily for non-residential land uses. Of the 227 CUPs, 38 permits were issued for home extended businesses such as cabinet shops, food catering, and small engine repair. Most of the IUPs were issued for gravel mining operations.

According to a 2005 inventory of commercially zoned property in the eleven townships, there are approximately 450 acres zoned C-1 for general commercial uses; 2,820 acres zoned I-1 for rural industrial uses; and nearly 1,600 acres zoned UBR (Urban Business Reserve) intended for future commercial development connected to and served by urban services. Most of the commercially zoned properties are located along the TH 169 corridor in Sand Creek, Louisville, and Jackson townships. Spring Lake and New Market townships also have areas of commercially zoned properties at major roadway intersections.

The cities of Shakopee and Prior Lake are expected to see the greatest demand for commercial land development during this time frame. The eleven townships (particularly Jackson, Louisville, Sand Creek, Spring Lake, and New Market) have abundant supplies of commercial land. There is a demand for commercial development in the unincorporated areas, especially along TH 169 (Jackson and Louisville) and Interstate 35 (New Market), due to the lower cost of land and limited infrastructure costs in the unincorporated areas. However, much of the demand for commercial and industrial land in the townships may be related to the future demands of nearby cities as their boundaries and utilities are extended.

The primary sector of the county's industrial market (including all cities) is warehouse/bulk distribution/showroom space. The office market in Scott County is not particularly established compared to other metro counties.

FUTURE LAND USE

To guide future land use development decisions, as well as provide the standards and principles for updating the County's zoning ordinance and other official development controls. Land Use identifies four broad designations agricultural, urban, rural, and commercial—with nine planned land use sub-categories along with lakes, rivers and streams, roads, public lands, hamlet/town centers, and municipalities. The following is a definition of each major planned land use category and a description of the corresponding zoning district(s) that can implement each category.

Figure 6.5 Scott County Agriculture Planning

Agricultural Planning Designation

The agricultural designation includes a two-tiered approach to mapping and identifying areas for long-term farming and agricultural uses. Tier 1 (Agricultural Preservation Area) is guided for long-term farming activities. Tier 2 (Agricultural Transition Area) is guided for interim agricultural uses prior to urban densities beyond the 2030-planning horizon. Both tiers allow for low-density residential development, but require the majority of land be preserved for long-term farmland or future urban development.

Agricultural Preservation Area

The purpose of this planning category is to protect and preserve agricultural uses and the economic viability of farming operations by limiting residential development to very low densities.

Typical Uses include larger-scale farms and related agricultural uses including feedlots and livestock raising; small-parcel farms for local food production; single-family detached dwellings; institutional uses; and limited recreational open space uses (golf courses, public parks, conservation areas, natural preserves, stables and riding academies). The existing County zoning districts most compatible with this plan category include Agricultural Preservation (A-1) and Agricultural Preservation Density (A-3).

Agricultural Transition Area

The purpose of this planning category is to protect agricultural uses as an interim land use before eventual urbanization occurs beyond the 2030-planning horizon. Typical Uses include larger-scale farms and related agricultural uses including feedlots and livestock raising; small-parcel farms for local food production; single-family detached dwellings; institutional uses; and limited recreational open space uses (golf courses, public parks, conservation areas, natural preserves, stables and riding academies). The existing County zoning districts compatible with this plan category include Agricultural Preservation (A-1) and Agricultural Preservation Density (A-3).

Urban Planning Designation

The urban designation includes a two-tiered approach to mapping and identifying future urban growth areas. Tier 1 (Urban Expansion Area) is guided for eventual urban densities and mapped consistent with each city's long- range sanitary sewer service area. Tier 2 (Urban Transition Area) is guided for interim agricultural and rural uses prior to urban densities beyond the 2030-planning horizon and mapped within the long-range sanitary sewer service area for a future regional wastewater treatment plant to serve western and central Scott County. Both tiers allow for interim residential development prior to urbanization, but require the majority of land be preserved for future urban development.

Figure 6.6 Scott County Urban Planning

Urban Expansion Area

The purpose of this planning category is to preserve areas around cities for future urban expansion and development. The boundaries of the urban expansion areas reflect each city's long-range sanitary sewer service plans based on known capacities of existing regional or local treatment facilities. Typical Uses include larger-scale farms and related agricultural uses; small-parcel farms for local food production; single-family detached dwellings; cluster residential developments; institutional uses; and limited recreational open space uses (golf courses, public parks, conservation areas, natural preserves, stables and riding academies). The existing County zoning districts most compatible with this plan category include Urban Expansion Reserve (UER), Urban Expansion Reserve Cluster (UERC), Agricultural Preservation (A-1), and

Agricultural Preservation Density (A-3). Other existing zoning districts, such as Rural Residential Single Family (RR-2) and Rural Residential Suburban Single Family (RR-3), could be applied on a limited basis in this plan category but only for existing conditions.

Urban Transition Area

The purpose of this planning category is to reserve areas for future urban development beyond the 2030-planning horizon when planned regional sanitary sewer service capacity is increased to serve western and central Scott County. The boundaries of the urban transition area reflect the long-range sanitary sewer service area for the future regional wastewater treatment plant. Typical uses include larger-scale farms and related agricultural uses; small-parcel farms for local food production; single-family detached dwellings; cluster residential developments; institutional uses; and limited recreational open space uses (golf courses, public parks, conservation areas, natural preserves, stables and riding academies) A new zoning district that reflects the recommended base and cluster density options, lot sizes, and typical uses is needed to implement this plan category. Other existing zoning districts, such as Agricultural Preservation (A-1), Agricultural Woodlands (A- 2), Agricultural Preservation Density (A-3), Rural Residential Reserve (RR-1), Rural Residential Single Family (RR-2), and Rural Residential Suburban Single Family (RR-3) could be applied on a limited basis in this plan category but only for existing conditions.

Rural Planning Designation

The rural designation includes a two-tiered approach to mapping and identifying areas for long-term rural uses that are not planned to be served by regional or municipal public sanitary sewer service. Tier 1 (Rural Residential Growth Area) is guided for long-term rural residential densities and lot sizes at 2½-acres or smaller. The Rural Residential Growth Staged Area will be guided for these densities after the completion of a detailed planning study. Tier 2 (Rural Residential Reserve Area) is guided for long-term rural residential densities and lot sizes ranging up to 10 acres in size. Both tiers provide a range of residential densities, housing opportunities, lot sizes, and related compatible uses in areas that are not planned for urban services.

Rural Residential Reserve Area

The purpose of this planning category is to reserve land for additional rural residential development when the necessary infrastructure has been planned and, in some cases, developed. Typical Uses include Single-family detached dwellings; small-parcel farms for local food production; cluster residential developments; institutional uses; limited recreational open space uses (golf courses, public parks, conservation areas, natural preserves, stables and riding academies); and smaller-scale agricultural and related uses. The existing County zoning districts most compatible with this plan category are Rural Residential Reserve (RR-1) and Rural Residential Reserve Cluster (RR-1C). Other existing zoning districts, such as Rural Residential Single Family (RR-2) and Rural Residential Suburban Single Family (RR-3), could be applied on a limited basis in this plan category but only for existing conditions.

Rural Residential Growth Area

The purpose of this planning category is to promote reasonable residential growth in those areas where infrastructure and similar growth patterns exist. This area will likely never be served by a regional or municipal sanitary sewer system. Therefore, policies in this category encourage the use of individual or community sewer and water supply systems and the tight cluster concept to encourage the sense of rural community. Typical Uses include Single-family detached dwellings;

cluster residential developments; institutional uses; limited recreational open space uses (golf courses, public parks, conservation areas, natural preserves, stables and riding academies). The existing County zoning district most compatible with this plan category is Rural Residential Single Family (RR-2). Other existing zoning districts, such as Rural Residential Suburban Single Family (RR-3), could be applied on a limited basis in this plan category but only for existing conditions.

Commercial Planning Designation

The commercial designation provides land use categories for commercial and industrial development, as well as areas to be reserved for future commercial development.

Figure 6.7 Scott County Commercial Planning

Commercial/Industrial Area

The purpose of this planning category is to provide areas for commercial and industrial development in the unincorporated areas to expand the local tax base and allow for economic development. This category is intended to provide land for uses with limited traffic and water usage, outdoor storage, and other uses that may not be appropriate in the urbanized areas. New development will be allowed provided all necessary infrastructure (septic, storm water treatment, interconnected road system, public safety, etc.) is available. Typical Uses include general commercial and retail uses; contractor yards; warehousing; offices; manufacturing and processing; outdoor sales and display uses; agricultural and related uses. The existing County zoning districts most compatible with this plan category include the General Commercial (C-1) and Rural Industrial (I-1) districts. New zoning districts may be needed to implement this category if more detailed commercial corridor studies identify a need for customized use and/or performance standards.

Commercial/Industrial Reserve Area

The purpose of this planning category is to reserve land for future commercial and/or industrial development with urban services. The land will be limited to residential development at a very low density until urban services are provided. Typical Uses include agricultural and related uses; single family detached dwellings. The existing County zoning district most compatible with this plan category is Urban Business Reserve (UBR).

ROADWAYS

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. The County highways resemble a grid pattern throughout the county connecting the cities to one another. The Minnesota River is a barrier between neighboring counties with limited access across it. Because of the transportation constraints caused by the Minnesota River, river crossings are a significant component of the highway system for Scott County.

Roadway Planned and Programmed Improvements

State Highways

The Metro District of the Minnesota Department of Transportation (Mn/DOT) oversees the maintenance and construction of state-owned roadways in Scott County, with the exception of TH 19, which is managed by Mn/DOT Districts 6 and 7. There are no current construction plans for projects on any existing State Highways within Scott County in Mn/DOT's 2008-2030 Transportation System Plan.

County Highways

Every year, the Scott County Board of Commissioners approves a Transportation Improvement Program (TIP) for the construction of new roadways and the improvement of existing roads on the County system.

WATER RESOURCE INVENTORY

It is essential to understand the location of environmentally sensitive areas to make responsible land use-, transportation-, and utility-related decisions. This will prevent severe developmental and environmental problems that may be difficult and costly to correct in the future. The following goals and policies are largely paraphrased from the goals and policies in Scott County's approved Water Resources Plan, as adopted May 2006 and amended December 2007.

Goal #VIII-1 Manage the quantity and improve the quality of Stormwater runoff from new development entering rivers, streams, lakes, wetlands, and groundwater within the unincorporated areas of Scott County.

- Each development or land disturbing activity shall be responsible for managing its Stormwater effectively, either on- or off-site.
- Promote and encourage a reduction in runoff rates, encourage infiltration, and promote increased groundwater recharge.
- Stormwater will be managed to minimize erosion, with an emphasis on stabilizing flow rates and velocities and prioritizing critical areas based on the landscape setting and existing vegetation.
- Promote development strategies, land use practices, and water management activities that decrease and desynchronize peak flows, lengthen the watershed time of concentration, and raise base flow levels.

Goal #VIII-6 Protect human life, property, and surface water systems that could be damaged by flood events.

- Manage local floodplain areas to maintain critical 100-year flood storage volumes.
- Ensure that on-site or downstream detention basins are designed adequately and prevent runoff from developed areas from negatively impacting new or existing detention basins.
- Update floodplain zoning regulations to maintain consistency with the Scott WMO's and other Watershed Organization's Comprehensive Water Resource Management Plans.
- Require that new structures (i.e., buildings and other structures that could be flow obstructions) be constructed above the flood-prone areas to avoid causing an increase in the critical flood levels that could affect both the new construction and nearby structures.
- Support enhanced data sources, including updated Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM).

6.6 MULTI-JURISDICTIONAL RISK ASSESSMENT

This multi-jurisdictional plan presents information for the general planning area as a whole. However, some hazards and associated losses occur in only part of the county. In some instances individual municipalities in Scott County have specific vulnerabilities to hazards that differ from the countywide vulnerabilities. This differentiation exists due to factors such as geographic location, topography, geologic differences, and proximity to hazards.

In addition to this summary section, within the discussion of each hazard in the profiles section, there is narrative identifying the specific municipalities or areas of the county that have been affected by hazards, the extent of impact and the probability of future occurrence in Scott County. The table below summarizes each jurisdiction's specific vulnerability to each identified hazard.

Requirement §201.6(c)(2)(iii): For multi-jurisdictional plans, the risk assessment must assess each jurisdiction's risks where they vary from the risks facing the entire planning area.
A. Does the new or updated plan include a risk assessment for each participating jurisdiction as needed to reflect unique or varied risks?

CRS Step 4. Assess the Hazard & Step 5: Assess the Problem: For multi-jurisdictional plans, the risk assessment must assess each jurisdiction's risks where they vary from the risks facing the entire planning area

Table 6.28 Likelihood Of Potential Hazard Incident Occurring

	Drought	Earthquake	Extreme Temperature	Flooding	Hail	High Winds	Ice/Snow	Landslides Mudslides	Land Subsidence	Lightning	Wildfires	Hazmat	Pandemic	Terrorism	Urban Fire	Likelihood
Scott County	1	1	3	3	3	3	3	1	1	3	2	3	1	1	3	**32**
Belle Plaine	1	1	3	3	3	3	3	2	1	3	1	3	1	2	3	**33**
Belle Plaine Twp	1	1	3	2	3	3	3	1	1	3	2	2	1	1	2	**29**
Blakeley Twp	1	1	3	3	3	3	3	2	1	3	2	2	1	1	1	**30**
Cedar Lake Twp	1	1	3	2	3	3	3	1	1	3	2	1	1	1	1	**27**
Credit River Twp	1	1	3	2	3	3	3	2	1	3	2	1	1	1	1	**28**
Elko-New Market	1	1	3	2	3	3	3	1	1	3	1	2	1	1	3	**29**
Helena Twp	1	1	3	2	3	3	3	1	1	3	2	2	1	1	1	**28**
Jackson Twp	1	1	3	3	3	3	3	2	1	3	1	2	1	1	1	**29**
Jordan	1	1	3	3	3	3	3	2	1	3	1	2	1	2	3	**32**
Louisville Twp	1	1	3	3	3	3	3	2	1	3	1	2	1	1	1	**29**
M Sioux Tribe	1	1	3	3	3	3	3	1	1	3	1	1	1	2	2	**29**
New Market Twp	1	1	3	1	3	3	3	1	1	3	2	1	1	1	3	**28**
New Prague	1	1	3	2	3	3	3	1	1	3	2	2	1	2	3	**31**
Prior Lake	1	1	3	2	3	3	1	1	1	3	1	2	1	2	3	**28**
St Lawrence Twp	1	1	3	3	3	3	3	2	1	3	2	1	1	1	1	**29**
Sand Creek Twp	1	1	3	2	3	3	3	1	1	3	2	1	1	1	1	**27**
Savage	1	1	3	3	3	3	3	2	1	3	1	2	1	2	3	**32**
Shakopee	1	1	3	3	3	3	3	2	1	3	1	2	1	2	3	**32**
Spring Lake Twp	1	1	3	1	3	3	3	1	1	3	2	1	1	1	1	**26**

Likelihood of occurrence in any single year. Very Likely=3, Likely=2, Possible=1, 32-45 total likelihood of hazard occurrence is high, 17-31 total likelihood of hazard occurrence is medium, 0-16 total likelihood of hazard occurrence is low

In addition to differing levels of vulnerability to identified hazards; individual municipalities can also suffer significant differences in losses resulting from the impact and extent of a disaster. Generally these losses are a direct result of population density, commercial development, or housing density and/or value. Within the discussion of each hazard profile, the narrative identifies those municipalities and specific areas of the county that have increased vulnerability and impact to that hazard and notes the factors contributing to an increased impact or vulnerability. The table below depicts the differing aspects of estimated losses by jurisdiction.

Table 6.29 Impact Of Potential Hazard Incident

	Drought	Earthquake	Extreme Temperature	Flooding	Hail	High Winds	Ice/Snow	Landslides Mudslides	Land Subsidence	Lightning	Wildfires	Hazmat	Pandemic	Terrorism	Urban Fire	Likelihood
Scott County	2	1	1	2	1	3	2	1	1	1	2	2	2	2	2	**25**
Belle Plaine	1	2	1	3	1	3	2	1	1	2	1	3	3	3	3	**30**
Belle Plaine Twp	1	1	1	2	1	2	1	1	1	1	1	2	2	2	2	**21**
Blakeley Twp	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	**16**
Cedar Lake Twp	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	**17**
Credit River Twp	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	**17**
Elko-New Market	1	2	1	1	1	2	2	1	1	1	2	2	2	2	2	**23**
Helena Twp	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	**17**
Jackson Twp	1	1	1	2	1	1	1	1	1	1	1	2	1	1	2	**18**
Jordan	1	2	1	3	1	3	2	1	1	2	1	2	2	3	3	**28**
Louisville Twp	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	**16**
M Sioux Tribe	1	2	1	3	1	3	3	1	1	2	1	2	2	3	3	**29**
New Market Twp	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	**17**
New Prague	1	2	1	2	1	3	2	1	1	2	2	2	3	3	3	**29**
Prior Lake	1	2	1	2	1	3	3	1	1	2	1	2	3	3	3	**29**
St Lawrence Twp	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	**17**
Sand Creek Twp	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	**17**
Savage	1	2	1	3	1	3	3	1	1	2	1	3	3	3	3	**31**
Shakopee	1	2	1	3	1	3	3	1	1	2	1	3	3	3	3	**31**
Spring Lake Twp	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	**17**

3 = High – Significant and lasting destructive effect on lives or property
2 = Medium – Moderate destructive effect on lives or property; recovery is takes time and is moderately expensive
1 = Low -Lower magnitude of destructive effect on lives or property; recovery is accomplished in a reasonable period of time and is low cost
32-45-Impact of all hazards is high, 18-31impact of all hazards is medium, 0-18-Impact of all hazards is low

SECTION 7
CAPABILITY AND HAZARD MITIGATION STRATEGY

7.1 JURISDICTION CAPABILITIES

This section of the Plan discusses the capability of Scott County and the participating local jurisdictions to implement hazard mitigation actions.

7.1.1 Capability Assessment Overview

The purpose of conducting a capability assessment is to determine the ability of a local jurisdiction to implement a comprehensive mitigation strategy, and to identify potential opportunities for establishing or enhancing specific mitigation policies, programs, or projects. It is important to establish goals, objectives and actions that are feasible, based on an understanding of the organizational capacity of those agencies or departments tasked with their implementation. A capability assessment helps determine which mitigation actions are practical and likely to be implemented given a local government's regulatory framework, level of administrative and technical support, and fiscal resources.

A capability assessment has two primary components: an inventory of a local jurisdiction's relevant plans, ordinances, or programs already in place, and an analysis of its capacity to carry them out. A capability assessment also highlights the positive mitigation measures already in place or being implemented at the local level, which should continue to be supported and enhanced through future mitigation efforts. The capability assessment completed for Scott County and its jurisdictions serves as a critical planning step and is an integral part of the foundation for designing an effective multi-jurisdictional hazard mitigation strategy. Coupled with the Risk Assessment, the Capability Assessment helps identify and target meaningful mitigation actions for incorporation in the Mitigation Strategy section of the Hazard Mitigation Plan. It not only helps establish the goals and objectives for Scott County, but also ensures that those goals and objectives are realistically achievable under given local conditions.

7.1.2 Conducting the Capability Assessment

In order to facilitate the inventory and analysis of local government capabilities throughout Scott County, a Capability Assessment Survey was distributed to Scott County and its municipalities. The survey was completed by appropriate local government officials and requested information on a variety of "capability indicators" such as existing local plans, policies, programs, or ordinances that contribute to the community's ability to implement hazard mitigation actions. Other indicators requested included information related to each jurisdiction's fiscal, administrative, and technical capabilities, such as access to local budgetary and personnel resources for mitigation purposes. At a minimum, survey results provide an extensive inventory of existing local plans, ordinances, programs, and resources in place or under development. The survey instrument not only helps to accurately assess each jurisdiction's degree of local capability, but also serves as a good source of introspection for those jurisdictions wishing to improve their capability as identified gaps, weaknesses, or conflicts can be viewed as opportunities for specific actions to be proposed as part of the community's mitigation strategy.

7.1.3 Capability Assessment

On the following pages are three worksheets for each participating jurisdiction hazard mitigation-planning representative to complete. This information is necessary in order to evaluate proposed mitigation actions versus what is feasible in terms of jurisdictional legal, administrative, fiscal, and technical capabilities. The worksheet for Scott County is included in this section. The worksheets for each municipality are included in the individual Mitigation Action Plans for each municipality.

Worksheet 1: Legal and Regulatory Capability

This worksheet documents authorities available to the jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The following planning and land management tools are typically used by states and local and tribal jurisdictions to implement hazard mitigation activities. If the jurisdiction does not have this capability or authority, does another entity/jurisdiction have this authority at a higher level of government (county, parish, or regional political entity), or does the state prohibit the local jurisdictions from having this authority?

Building codes regulate construction standards. In many communities, permits and inspections are required for new construction. Decisions regarding the adoption of building codes (that account for hazard risk), the type of permitting process required both before and after a disaster, and the enforcement of inspections all affect the level of hazard risk faced by a community.

Capital Improvements Plans (CIP) guides the scheduling of spending on public improvements. A CIP can serve as an important mechanism to guide future development away from identified hazard areas. Limiting public spending in hazardous areas is one of the most effective long-term mitigation actions available to local governments.

Comprehensive Plans incorporates all aspects of the various tactical plans and programs into a strategic county plan that guides the county and its jurisdictions to successfully improve and enhance the quality of life for all citizens.

COOP/COG Plans Are Continuity of Operations Plans/ Continuity of Government Plans that define jurisdiction succession and recovery from disasters. The plan identifies alternate sites, critical processes, records, personnel, tools etc. that are required to re-establish critical services to the community within 12 hours and be sustained for a minimum of 30 days

Economic Development Plans provides for development of existing business in the county and a strategy to attract new business to locate in the county. A successful Economic Development Plan provides long-term, attractive employment opportunity to communities and increases the tax base.

EMAP Certification is certification by the Emergency Management Accreditation Program that certifies that the jurisdiction meets all the NIMS and NFPA-1600 requirements.

Emergency Response Plans are part of an Emergency Operations Plan (EOP) that outlines responsibilities and the means by which resources are deployed following an emergency incident or disaster.

Flood Management Plans (or a flood mitigation plan) provides a framework for action regarding the corrective and preventative measures in place to reduce flood-related impacts. Typical flood control activities include: structural flood control works (such as bank stabilization, levees, and drainage channels), acquisition of flood-prone land, flood insurance programs and studies, river

and basin management plans, public education programs, and flood warning and emergency preparedness activities.

National Flood Insurance Program (NFIP) contains specific regulatory measures that enable government officials to determine where and how growth occurs relative to flood hazards. Participation in the NFIP is voluntary for local governments. The program is promoted by FEMA as a basic first step for implementing and sustaining an effective hazard mitigation program. It is used as a key indicator for measuring local capability as part of this assessment. In order for a county or municipality to join the NFIP, it must adopt a local flood damage prevention ordinance that requires jurisdictions to follow established minimum building standards in the floodplain.

Community Rating System (CRS) is an incentive-based program that encourages counties and municipalities to undertake defined flood mitigation activities that go beyond the minimum requirements of the NFIP, by adding extra measures to provide protection from flooding. All of the 18 creditable CRS mitigation activities are assigned a range of point values. This rating can reduce the cost of flood insurance for the community.

Growth Control Ordinances are primarily used by local governments to encourage growth in an orderly manner in the areas covered by the ordinance. The purpose of most growth control ordinances is to preserve residential housing values, protect historic areas, and insure that local governments can provide appropriate services to citizens.

Hazard Setback and Hillside Ordinances or Regulations are usually part of a comprehensive land use plan. Typically a comprehensive plan is comprised of demographics, land use, transportation elements, and community facilities. Given the nature of the plan and its regulatory standing, the integration of hazard mitigation measures into the comprehensive plan enhances the likelihood of achieving risk reduction goals, objectives, and actions.

Historic Ordinances Identify and protect historic assets, structures or areas through the use of zoning and building regulations

Post Disaster Ordinances provides for the protection of lives and property and enhances the recovery from disasters. The ordinance is used to control price gouging, and allows local governments to facilitate the purchase and deployment of equipment and resources to speed disaster recovery.

A Post Disaster Recovery Plan provides the framework to establish assistance to victims of disaster, assess the long-term economic effects of disaster on the community, facilitate post-disaster recovery, and assist the community with redevelopment plans.

Real Estate Disclosure facilitates real estate transactions and ensures that both buyers and sellers fully understand any mitigating circumstances associated with properties.

Site Plans/Subdivision Ordinance is intended to regulate the development of residential, commercial, industrial, or other uses, including public infrastructure, as land is subdivided into lots for future development. Subdivision design that accounts for natural hazards can dramatically reduce the exposure of future development.

Wildfire Ordinances are a means to control the potential of wildfire occurrence by requiring burn permits and the reduction of fuel for wildfires in both urban interfaces and forests in general.

Zoning Ordinances are the means to control land use by local governments. As part of a community's police power, zoning ordinances are used to protect the public health, safety and

welfare of its citizens. Since zoning regulations enable local jurisdictions to limit the type and density of development, it can serve as a powerful tool when applied in identified hazard areas.

The Legal and Regulatory Capability table documents authorities available to the jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states and local and tribal jurisdictions to implement hazard mitigation activities. If the jurisdiction does not have this capability or authority, another entity/jurisdiction may have this authority at a higher level of government (county, parish, or regional political entity), or the state may prohibit the local jurisdictions from having this authority.

Table 7.1 Scott County Legal And Regulatory Capability

Regulatory Tools/Plans	Regulatory Type: Ordinance, Resolution, Codes, Plans Etc.	Date Adopted	Local Authority	State Prohibited	Higher Authority	Electronic copy included
Building Codes	International Building Codes	2007	Y	N	Y	N
Capital Improvements Plan	Annual Budget	Annually	Y	N	N	Y
Comprehensive Plan	County Comprehensive Plan	2008	Y	N	N	N
Continuity of Operations Plan	No		N	N	Y	N
Community Rating System (Flood)	NO		N	N	Y	N
Economic Development Plan	County Comprehensive Plan	2008	Y	N	N	Y
Emergency Management Accredited	NO		N	N	Y	N
Emergency Response Plan	County Emergency Operations Plan	2005	Y	N	Y	Y
Flood Management, Plan	County Flood Management Plan	2002	Y	N	Y	N
Growth Control Ordinance	County Comprehensive Plan	2008	Y	N	N	Y
Hazard Mitigation Plan	County All Hazards Mitigation Plan	2010	Y	N	Y	Y
Hazard Setback Regulations	County Ordinance	208	Y	N	N	N
Hillside Ordinance Erosion Control	County Ordinance	2008	Y	N	N	N
Historic Ordinance	NO		N	N	N	N
NFIP Participant	County Flood Management Plan	2002	Y	N	Y	N
Post-disaster Ordinance	NO		N	N	N	N
Post-disaster Recovery Plan	County Emergency Operations Plan	2005	Y	N	N	Y
Real Estate Disclosure	State Real Estate Commission	1999	N	N	Y	N
Site Plan Requirements	County Ordinance	2008	Y	N	N	N
Subdivision Regulations	County Ordinance	2008	Y	N	N	N
Wildfire Ordinance	None	2008	N	N	N	N
Zoning Ordinances	County Ordinance	2008	Y	N	N	N

The Administrative and Technical Capacity table documents personnel employed by a jurisdiction and the public and private sector resources that may be accessed to mitigate hazards in the community. For smaller jurisdictions with limited capacities, no local staff resources may be available for many of the categories. If so resources at the next higher level of government are identified that may be able to provide technical assistance to the community.

For some hazard mitigation actions, consider federal agencies that provide technical assistance, such as the U.S. Department of Agriculture (USDA) Cooperative Extension Service, which has offices in most counties. The planning team in rural communities must be creative in identifying outside resources to augment limited local capabilities. This information will be used when evaluating alternative mitigation actions and when preparing your mitigation.

Table 7.2 Scott County Administrative And Technical Capabilities

Position	Staff/Personnel Resources	C=County Provides #, S=State Provides #, F=Federal Provides Department/Agency	Number Fully Trained	Number Fully Equipped	Total Personnel
Agriculture Resource	Agent	County Extension Svc.	2	2	2
Building Inspector	Professional	Zoning and Inspections	1	1	1
Emergency Communications	911 specialists	E-911	18	18	18
Emergency Manager	Certified Professional	Emergency Management	1	1	1
Emergency Staff	Professional(s)	Emergency Management	1	1	1
EMT First Responders	Certified	Fire/Rescue Service	0	0	0
Fire Personnel	Professional(s)	Fire Department	0	0	0
Floodplain Manager	Engineer(s)	Engineering/Public Works	1	1	1
GIS Specialist	Professional(s)	Info Technology	3	3	3
Government Elected	Elected Officials	Sheriff/County Attorney/Commissioners	7	7	7
Government Administration	Employees	Jurisdiction Total	7	7	7
Grant writer	Professional(s)	Jurisdiction	0	0	0
Hazards Analysis Mgr.	Certified	Emergency Management	0	0	0
Hazmat Team	Certified	Fire/Sheriff Department	25	25	25
Information Systems	Professional	Information Technology	12	12	12
Land Use/Management	Engineer(s)/Planners	State/Local Planning	5	5	5
Law Enforcement	Sheriff Deputies	Sheriff Office	35	35	35
Medical Practioners	Doctor-Medical Consultant	Medical Facilities	1	1	1
Public Health	Professionals	Public Health	19	19	19
Public Works	Engineers/Staff	Public Works	2	2	2
Public Utilities	Professionals	Public Utilities	0	0	0
Surveyor	Professional	Employed/Contracted	1	1	1
Total Jurisdiction Employees				141	

The Fiscal Capability survey identifies whether the jurisdiction has access to or is eligible to use certain financial resources for hazard mitigation.

Table 7.3 Scott County Fiscal Capabilities

Financial Resources	Description	Status			
		Yes	No	TBD	Used
Community Grants	Community Development Block Grants (CDBG)	X			Y
	Hazard Mitigation Planning Grants (HMPG) – disaster related	X			Y
	PDM for Disaster Resistant Universities		X		N
	PDM Grants for communities		X		Y
	Department of Health Grants	X			N
	Department of Justice Grants	X			Y
	Department of Agriculture Grants	X			Y
	Department of Energy Grants	X			N
	Department of Education Grants	X			N
	Fire Department Grants		X		N
	Flood Management Grants (FMA)	X			N
	Homeland Security Grant Program (HSGP)	X			Y
	Repetitive Flood Claims Grants (RFC)	X			N
	Severe Repetitive Loss Grants (SRL)	X			N
	Private foundation grants	X			N
	Private business/industry grants	X			N
Debt Procurement	Incur debt based on special tax/revenue bonds	X			N
Dept Procurement	Incur debt through private activity bonds (private/jurisdiction bonds)			X	N
Impact Fees	Charge developer fees for new developments (impact fees)	X			N
Jurisdiction Bonds	Incur debt via general obligation bonds (no guaranteed repayment source)	X			N
Project Funding	Capital improvement budget	X			Y
Spending Restrictions	Able to withhold spending in hazard-prone areas (permits)			X	N
Special Taxes	Authority to levy taxes for specific purposes (i.e. sales tax)	X			Y
Utility Fees	Collect fees for water, sewer, gas, cable or electric service		X		N
Annual Revenue	Annual Budget		Sales Tax Revenue		
Public Structures	Number / Total Value		Total Sq. Ft.		
Private Facilities	Number of Business		Number of Industries		

7.1.4 Participating Jurisdictions Capability Assessment Findings

The findings of the capability assessment are summarized in this section to provide insight into relevant capability of Scott County's jurisdictions to implement hazard mitigation activities. The summary is based upon the responses provided by local government officials to the Capability Assessment Survey and during meetings throughout the planning process.

The information provided by participating jurisdictions was scored using a simple scoring methodology to rank each jurisdiction's overall capability. A total score and general capability rating of "High," "Medium" or "Low" was then determined for each jurisdiction according to the

total number of points. The result of this multi-jurisdictional capability assessment provides critical information for developing an effective and meaningful mitigation strategy.

Planning and Regulatory Capability

Planning and regulatory capability is based on the implementation of existing plans, ordinances, and programs by a local government. These measures can help demonstrate a local jurisdiction's commitment to guiding and managing growth, development, and redevelopment in a responsible manner while maintaining the general welfare of the community. Such measures include emergency response and mitigation planning, comprehensive land use planning, and transportation planning, in addition to the enforcement of zoning or subdivision ordinances and building codes that regulate how land is developed and structures are built. This information will help identify opportunities to address existing gaps, weaknesses, or conflicts with other initiatives, in addition to integrating this Plan with existing planning mechanisms.

Table 7.4 Planning and Regulatory Capability Summary

Regulatory Control in place Yes=1 No=0 0-7=Low 8-14=Medium 15-21=High Jurisdiction	Building Codes	Capital Improvement Plan	Comprehensive Plan	COOP/COG Plan	Community Rating System	Economic Development Plan	EMAP Certified	Emergency Response Plan	Flood Management Plan	Growth Control Ordinance	Hazard Setback Ordinance	Hillside Ordinance	Historic Ordinance	Post Disaster Ordinance	Post Disaster Recovery Plan	Real Estate Disclosure	Shoreline Ordinance	Site Plan Requirements	Subdivision Regulations	Wildfire Ordinance	Zoning Regulations	Score	CAPABILITY
Scott County	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
Belle Plaine	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
Belle Plaine Township	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
Blakeley Township	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
Cedar Lake Township	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
Credit River Township	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
Elko-New Market	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
Helena Township	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
Jackson Township	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
Jordan	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
Louisville Township	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
M Sioux Tribal Area	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
New Market Township	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
New Prague	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
Prior Lake	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
St Lawrence Township	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
Sand Creek Township	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
Savage	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
Shakopee	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**
Spring Lake Township	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	14	**M**

7.1.4.1 Administrative and Technical Capability

The ability of a local government to develop and implement mitigation projects, policies, and programs is directly tied to its ability to direct staff time and resources for that purpose. Administrative capability is evaluated by determining how mitigation activities are assigned to local departments and the personnel resources available to implement the activities. Key Resources to respond to and mitigate disaster include the following:

Table 7.5 Administrative and Technical Capability Summary

Resources in place Yes=2 Other Authority=1 No=0 30-42=High 17-29=Medium 0-17=Low Jurisdiction	Agriculture Risk Assessor	Building Inspector	Emergency Manager	Emergency Staff	Emt's Certified	Fire Service	Flood Plain Manager	GIS	Government Administrative	Government Elected	Grant Writer	Hazard Risk Assessor	HAZMAT Team	Information Systems	Land Use Management	Law Enforcement	Medical Personnel	Public Works	Public Communications	Public Utilities	Surveyor	Score	CAPABILITY
Scott County	1	2	2	2	2	1	2	2	2	2	2	1	1	2	2	2	2	2	2	2	1	37	**H**
Belle Plaine	1	2	1	1	2	2	2	2	2	2	2	1	2	2	2	2	2	2	1	2	1	36	**H**
Belle Plaine Township	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	2	1	1	1	1	24	**M**
Blakeley Township	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	2	1	1	1	1	24	**M**
Cedar Lake Township	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	23	**M**
Credit River Township	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	23	**M**
Elko-New Market	1	2	1	1	2	2	1	2	2	2	1	1	1	2	2	2	2	2	1	2	1	33	**H**
Helena Township	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	2	1	1	1	1	24	**M**
Jackson Township	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	2	1	1	1	1	24	**M**
Jordan	1	2	1	1	2	2	2	2	2	2	2	1	2	2	2	2	2	2	1	2	1	36	**H**
Louisville Township	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	2	1	1	1	1	24	**M**
M Sioux Tribal Area	1	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	1	2	1	38	**H**
New Market Township	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	23	**M**
New Prague	1	2	1	1	2	2	1	2	2	2	1	1	1	2	2	2	2	2	1	2	1	33	**H**
Prior Lake	1	2	1	1	2	2	2	2	2	2	2	1	2	2	2	2	2	2	1	2	1	36	**H**
St Lawrence Township	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	23	**M**
Sand Creek Township	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	23	**M**
Savage	1	2	1	1	2	2	2	2	2	2	2	1	2	2	2	2	2	2	1	2	1	36	**H**
Shakopee	1	2	1	1	2	2	2	2	2	2	2	1	2	2	2	2	2	2	1	2	1	36	**H**
Spring Lake Township	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	23	**M**

7.1.4.2 Fiscal Capability

The ability of a local government to take action is closely associated with the amount of money available to implement policies and projects. This may take the form of outside grants or local-based revenue and financing. The costs associated with mitigation policy and project implementation vary widely. In some cases, policies are tied primarily to staff or administrative costs. In other cases, direct expenses are linked to an actual project such as the acquisition of

flood prone homes, which can require a substantial commitment from local, state, and federal funding sources. The Capability Assessment Survey was used to capture information on each jurisdiction's fiscal capability through the identification of locally available financial resources.

The survey identifies whether the jurisdiction does or does not have the capability and scores overall fiscal capability.

Table 7.6 Fiscal Capability Summary

Fiscal Capability Yes=1 No=0 0-7=Low 8-14=Medium 15-21=High Jurisdiction	CDBG Grants	HMPG Grants	Education PDM Grant	Community PDM	DOH Grants	DOJ Grants	DOA Grants	DOE Grants	DOED Grants	Fire Dept Grant	FMA	HSGP	RPL	SRL	Private Grants	Tax Bonds	Private Bonds	Developer Fees	General Bonds	Capital Budget	Hazard Spending	Tax Levies	Utility Fees	Score	CAPABILITY
Scott County	1	1	0	1	1	1	1	1	0	0	1	1	1	1	1	1	1	0	1	1	0	1	0	17	**H**
Belle Plaine	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	20	**H**
Belle Plaine Township	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	5	**L**
Blakeley Township	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	4	**L**
Cedar Lake Township	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	5	**L**
Credit River Township	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	5	**L**
Elko-New Market	1	1	0	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	19	**H**
Helena Township	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	5	**L**
Jackson Township	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	4	**L**
Jordan	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	20	**H**
Louisville Township	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	4	**L**
M Sioux Tribal Area	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	20	**H**
New Market Township	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	5	**L**
New Prague	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	20	**H**
Prior Lake	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	20	**H**
St Lawrence Township	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	5	**L**
Sand Creek Township	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	5	**L**
Savage	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	20	**H**
Shakopee	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	20	**H**
Spring Lake Township	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	5	**L**

7.1.4.3 External Resources Capabilities

The table below lists the resources available to Scott County and its municipalities.

Table 7.7 Scott County Mitigation Capability Assessment					
Agency/Department Name and Function	Contact Name and email	Contact Telephone	Effect on Loss Reduction		
			Support	Facilitate	Hinder
Scott County Emergency Management	Chris Weldon	952-496-8381	X	X	
Scott County Sheriff's Communications	Jeff Swedin	952-496-8300	X	X	
Scott County Fire Chiefs Association	Rick Colman	952-445-6921	X	X	
Property Tax Revenue & Records Manager	Cynthia Geis	952-496-8167	X	X	
Scott County Highway Department	Lezlie Vermillion	952-496-8346	X	X	
Scott County Parks Department	Mark Themig	952-496-8783	X	X	
Scott County Emergency Medical Service Providers	Jeff Lanenberg	952-894-5492	X	X	
Twin Cities Chapter American Red Cross	Gretchen Hurr	612-460-3699	X	X	
Scott County Police Chiefs Association	Kevin Studnicka	952-496-8300	X	X	
Scott County Public Health	Jennifer Deschaine	952-496-8270	X	X	
FEDERAL AND STATE MITIGATION CAPABILITY ASSESSMENT					
Agency/Department Name and Function	Contact Name and email	Contact Telephone	Effect on Loss Reduction		
			Support	Facilitate	Hinder
Federal Emergency Management Agency	Nancy Ward	800-621-3362	X	X	
U .S. Department of Homeland Security	Janet Napolitano	202-282-8000	X	X	
National Flood Insurance Program	Rich Slevin	708-326-3072	X	X	
Assistance to Firefighters Grant Program	Vikki Hanson	312-480-5327	X	X	
Minnesota Department of Homeland Security and Emergency Management	Gary Peterson	612-384-5219	X	X	
Minnesota Department of Public Safety	Michael Campion	651-201-7000	X	X	
National Weather Service-Chanhassen	Todd Krause	952-361-6670	X	X	
Minnesota Department of Human Services	Cal Ludeman	651-431-2709	X	X	
Minnesota Department of	Dr. Sanne Magnan	651-201-5000	X	X	

Table 7.7 Scott County Mitigation Capability Assessment					
Agency/Department Name and Function	Contact Name and email	Contact Telephone	Effect on Loss Reduction		
			Support	Facilitate	Hinder
Health					
Minnesota State Fire Marshal/Office of Pipeline Safety	Jerry Rosendahl	651-201-7201	X	X	
Minnesota Department of Natural Resources	Mark Holsten	651-259-5555	X	X	
Minnesota Department of Transportation	Thomas Sorel	651-366-4800	X	X	

7.1.4.4 Shelter Capability

Scott County and its participating jurisdictions have several shelters. There are designated Red Cross shelters and other facilities that are designated as shelters by municipalities and Scott County. Below is a table that identifies the shelters and their characteristics.

Table 7.8 Scott County Shelters									
Location	Capacity	Sleeping Capacity	Kitchen Facilities	Commodities On site	Emergency Generator	Heat/AC	Communications	Safety Rating	Comments
This information available upon request At your Emergency Management Agency.									

7.2 LINKING CAPABILITY, RISK ASSESSMENT AND MITIGATION

The findings of the Capability Assessment and Risk Assessment serve as the foundation for a meaningful hazard mitigation strategy. During the process of identifying the goals, objectives and mitigation actions, each jurisdiction must consider not only its level of hazard risk but also its existing capability to minimize or eliminate that risk.

In jurisdictions where the overall hazard risk is considered to be HIGH, and local capability is considered LOW, specific mitigation actions that account for these conditions should be considered. This may include less costly actions such as minor ordinance revisions or public awareness activities. Also, specific capabilities may need to be improved in order to address recurring threats.

In cases where the hazard vulnerability is LOW and overall capability is HIGH, more emphasis can be placed on actions that may impact future vulnerability such as guiding development away from known hazard areas.

7.2.1 Repetitive Flooding Mitigation

This section describes the source of repetitive flooding problems and identifies the number and type (residential, commercial or governmental) of repetitive loss properties in the jurisdiction.

Additional information on repetitive loss properties can be found in Section 6

The table below identifies the repetitive flooding sources structures and mitigation measures taken to reduce future incidents.

Table 7.9 Repetitive Flooding Mitigation

Number of Structures	Structure Type Residential Commercial Government Critical Facility Etc.	Flood Type Storm Water Out Of Banks Low Lying Maintenance	Location	Number of events	Mitigation Action Structure Buy Out Levee Built Drainage Improvement Etc.
1	Residential	Out of Banks	Scott County	2	Drainage Improvement
3	Commercial	Out of Banks	Shakopee	7	Drainage Improvement
2	Residential	Out of Banks	Prior Lake	4	Drainage Improvement

7.3 MITIGATION STRATEGY

The intent of the Mitigation Strategy is to provide Scott County and its municipal jurisdictions with goals that will guide future mitigation policy and project administration, along with a list of proposed actions deemed necessary to meet those goals and reduce the impact of natural and manmade hazards. It is designed to be comprehensive and strategic in nature.

Mitigation Strategy §201.6(c)(3): The plan shall include a mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.

Development of the comprehensive strategy included a thorough review of all natural and selected manmade hazards, and identification of policies and projects to reduce the future impacts of hazards and assist the county and municipalities to achieve compatible economic, environmental, and social goals. The strategy ensures that all policies and projects are linked to established priorities and assigned to specific departments or individuals responsible for their implementation with target implementation deadlines. When applicable, funding sources are identified that can be used to assist in project implementation.

The first step in designing the Mitigation Strategy includes a review of existing mitigation measures and the identification of countywide Mitigation Goals. Mitigation Goals represent broad statements that are achieved through the implementation of more specific, action-oriented objectives listed in the county's Mitigation Action Plan. These actions include both hazard mitigation policies (such as the regulation of land in known hazard areas through a local ordinance), and hazard mitigation projects that seek to address specifically targeted hazard risks (such as the mitigation of an area prone to repetitive flooding).

The second step involves the identification and analysis of available mitigation measures to help achieve the identified mitigation goals. This is a long-term, continuous process sustained through the development and maintenance of this Plan. Alternative mitigation measures will continue to

be considered as future mitigation opportunities become identified, as data and technology improve, as mitigation funding becomes available, and as this Plan is maintained.

The third and last step in designing the Mitigation Strategy is the creation of the local Mitigation Action Plans (MAPs); The MAPs represent unambiguous plans for action, and are considered to be the most essential outcome of the mitigation planning process. They include a prioritized listing of proposed hazard mitigation actions (policies and projects) for each of Scott County's jurisdictions, along with accompanying information regarding those agencies or individuals assigned responsibility for their implementation, potential funding sources and an estimated target date for implementation. The MAPs provide those individuals or agencies responsible for implementing mitigation actions with a clear roadmap that also serves as an important tool for monitoring progress over time.

7.3.1 Mitigation Goals and Objectives

Requirement §201.6(c)(3)(i): The hazard mitigation strategy shall include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.
A: Does the new or updated plan include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards?

CRS Step 6: Set Goals: Credit is based on a statement of goals to reduce or avoid long-term vulnerability to the identified hazards.

The hazard mitigation planning process has brought together a group of dedicated representatives from the jurisdictions comprising Scott County. An early suggestion from several members of the planning committee that the group continue to meet on a regular schedule after Plan approval speaks for the cooperation and sense of community each jurisdiction brings to the planning effort, and instills confidence that the jurisdictions will unite in mitigation and other efforts.

It is the vision of Scott County and its municipalities to promote citizen and governmental responsibility for hazard awareness and preparedness, and to foster cooperative planning among the jurisdictions to reduce the impact of natural and manmade hazards on public and private assets, and on the safety and welfare of all citizens.

The goals and objectives of the Scott County Multi-Jurisdictional Hazard Mitigation Plan were crafted early in the planning process through a facilitated discussion and brainstorming session with the Mitigation Steering Committee. Both State and local risk assessment findings were used as the bases of goal and objective setting. At each step of the planning process the goals and objectives were reviewed and modified, if necessary, based on any new information that was gathered and assimilated into the Plan. The goals and objectives established address each profiled hazard. The Mitigation Committee believes that all of the following goals and objectives are necessary to begin to address hazard issues in Scott County. The following goal and objective statements represent a broad target for Scott County and its municipalities to achieve through the implementation of their own specific Mitigation Action Plans before the next Plan update.

Table 7.10 Countywide Community Goals and Objectives	
Goals	Objectives
Goal 1: Improve Scott County and participating jurisdiction capability to minimize or eliminate loss of life and property from profiled hazard events	Objective 1.1: Improve Scott county's and participating jurisdictions information distribution and alert and warning capabilities for minimize or eliminate citizens loss of life and property from all profiled hazards Objective 1.2: Improve Scott County's and participating jurisdictions 1st responder capabilities to prepare for and respond to all profiled hazards to reduce or eliminate citizens loss of life and property from all profiled hazards
Goal 2: Improve Scott County and participating jurisdiction capability to minimize or eliminate loss of Public property from profiled hazards	Objective 2.1: Improve Scott County's and participating jurisdictions 1st responder capabilities to prepare for and respond to all profiled hazards to reduce or eliminate damage to public property from profiled hazards Objective 2.2: Improve Scott County's and participating jurisdictions capability to prepare for and respond to all profiled hazards to reduce or eliminate public property loss from profiled hazards
Goal 3: Improve Scott County and participating jurisdiction capability to recover from loss of life and all property damage caused by profiled hazards	Objective 3.1: Improve Scott County's and participating jurisdictions citizen's to recover from profiled hazards impact to life and property from profiled hazards Objective 3.2: Improve Scott County's and participating jurisdictions businesses to recover from the impact of all profiled hazards Objective 3.3 Improve Scott County's and participating jurisdictions public infrastructure to recover from the impact of profiled hazards
Specific Jurisdiction Objectives	Improve Scott County's capability to handle debris management Improve Scott County's ability to minimize the impact of drought on water supplies Improve groundwater quality in Scott County Develop an education and awareness program on the hazards of the river and boating safety. Address issues with Commercial and Recreational Navigation on Minnesota River Improve Scott County's ability to response to non-native invasive agriculture species Mitigate the impact of all hazards on Scott County by using volunteers

7.3.2 Local and State Goal Continuity

The State of Minnesota Hazard Mitigation Plan establishes for goals:

- GOAL 1. Maintain and enhance the Minnesota Division of Homeland Security and Emergency Management's capacity to continuously make Minnesota less vulnerable to all hazards
- GOAL 2. Build and support local capacity and commitment to continuously become less vulnerable to natural hazards.
- GOAL 3. Improve coordination and communication with other relevant entities.
- GOAL 4. Increase public understanding, support, and demand for hazard mitigation.

The mitigation goals, objectives and actions of the Scott County Multi-jurisdictional, All Hazards Mitigation Plan are congruent with the State goals.

7.3.3 Identification of Mitigation Actions

In formulating Scott County's Mitigation Strategy, a wide range of actions were considered in order to help achieve countywide and jurisdiction goals and objectives. All actions considered by the Mitigation Steering Committee can be classified under one of the following six broad categories of mitigation techniques:

Prevention activities are intended to keep hazard problems from getting worse, and are typically administered through government programs or regulatory actions that influence the way land is developed and buildings are constructed. They are particularly effective in reducing a community's vulnerability, in areas where development is limited or capital improvements have not been substantial. Examples of preventative activities include:

- Planning and zoning
- Building codes
- Hazard mapping
- Open space preservation
- Floodplain regulations
- Storm water management regulations
- Drainage system maintenance
- Capital improvements programming
- Shoreline/riverine/fault zone setbacks
- Site planning and landscape design

Requirement §201.6(c)(3)(ii): The mitigation strategy shall include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure. A. Does the new or updated plan identify and analyze a comprehensive range of specific mitigation actions and projects for each hazard?

CRS Step 7. Review Possible Activities: Credit is based on a comprehensive evaluation of hazard mitigation measures reviewed in the plan. The review must include a description of why certain activities were recommended and why others were not.

Property Protection measures involve the modification of existing buildings and structures to help them better withstand the forces of a hazard, or removal of the structures from hazardous locations. Examples include:

- Acquisition
- Relocation
- Building elevation
- Critical facilities protection
- Retrofitting (e.g., wind proofing, flood proofing, seismic design techniques, etc.)
- Safe rooms, shutters, shatter-resistant glass
- Insurance

Natural Resource Protection reduces the impact of natural hazards by preserving or restoring natural areas and their protective functions. Such areas include floodplains, wetlands, steep slopes, and sand dunes. Parks, recreation, or conservation organizations often implement these protective measures. Examples include:

- Floodplain protection
- Watershed management
- Riparian buffers
- Forest and vegetation management (e.g., fire resistant landscaping, fuel breaks, etc.)

- Erosion and sediment control
- Wetland preservation and restoration
- Habitat preservation
- Slope stabilization

Structural Mitigation Projects are intended to lessen the impact of a hazard by modifying the environmental natural progression of the hazard event through construction. They are usually designed by engineers and managed or maintained by public works staff. Examples include:

- Reservoirs
- Dams/levees/dikes/floodwalls
- Diversions/detention/retention
- Channel modification
- Storm sewers

Emergency Services emergency service measures minimize the impact of a hazard event on people and property. These commonly are actions taken immediately prior to, during, or in response to a hazard event. Examples include:

- Warning systems
- Evacuation planning and management
- Emergency response training and exercises
- Sandbagging for flood protection

Public Education and Awareness are used to alert residents, elected officials, business owners, property buyers, and visitors about hazards, hazardous areas, and mitigation techniques they can use to protect themselves and their property. Examples of measures to educate and inform the public include:

- Outreach projects
- Speaker series/demonstration events
- Hazard map information
- Real estate disclosure
- Library materials
- Education programs for school children

7.3.4 Selection of Mitigation Actions

In order to determine the most appropriate mitigation techniques for Scott County and its municipal jurisdictions, local government officials reviewed and considered the findings of the Capability Assessment and Risk Assessment. Other considerations included each mitigation action's effect on overall risk to life and property, its ease of implementation, its degree of political and community support, its general cost-effectiveness, and funding availability (if necessary). The following table of alternative mitigation actions was the basis for developing the mitigation actions.

Table 7.11 Alternative Mitigation Actions

HAZARDS> Alternative Mitigation Actions that can affect the adjacent hazards	Drought	Earthquake	Extreme Temp	Flooding	Hail	High Winds	Ice/Snow	Landslides etc	Land Subsidence	Lightning	Wildfire	Hazmat	Illegal Meth Labs	Pandemic	Terrorism	Urban Fire
Building codes		X		X	X	X	X	X	X	X	X	X			X	X
Density regulations			X	X		X			X	X	X	X		X		X
Easements				X				X	X		X	X			X	X
Development regulations		X		X		X	X	X	X	X	X	X				X
Wildfire fuel reduction	X										X					X
Hillside regulations		X					X	X								
Performance standards	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Setback regulations		X		X				X	X		X	X				
Special use permits				X							X	X		X		
Storm water controls				X												
Rights transfer controls				X		X	X				X	X	X	X		X
Zoning		X		X				X			X	X				X
Acquire in-hazard assets				X								X				
Facility hazard barriers				X											X	
Structure elevation				X												
Acquisition & Buyouts/Relocation of structures				X				X	X							
Structure retrofits		X		X		X	X	X	X	X	X	X			X	X
Dams monitoring		X		X			X	X	X						X	
Levee mgt		X		X		X	X	X	X							
Real estate disclosure				X		X		X	X		X	X				
Forest management	X			X		X				X	X			X		
Erosion controls				X												
Waterway management	X			X			X	X								
Landscape management	X			X	X	X	X	X							X	X
Wetlands regulations				X			X									
Vital facilities protection		X		X	X	X	X	X	X	X	X	X			X	X
COOP/COG Plan		X		X		X	X				X	X		X	X	X
Emergency Ops. Plan	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hazard/threat recognition	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hazard warning systems	X	X	X	X	X	X	X		X	X	X	X		X	X	X
Health/safety information		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Pre-disaster mitigation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Post disaster mitigation	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Safe rooms and shelters				X	X	X	X			X	X	X				X
Public education	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

7.3.5 Reducing Hazard Impact on New Buildings and Infrastructure

Some of the mitigation actions and projects included in this plan include:

- Adopting and/or enforcing comprehensive building codes
- Requiring emergency generator pigtails on new government and special needs structures
- Providing builders information on hazard areas and associated restrictions
- Restrictions on building structures in hazard areas
- Developing and or enforcing a comprehensive land use plan.
- Encouraging new power lines to be buried to reduce power outages.
- Extend water lines and hydrants to combat fires.

7.3.6 Reducing Hazards Impact on Existing Buildings and Infrastructure

Some of the mitigation actions in this plan that reduce impact on existing buildings and infrastructure include:

- Potential buyout of structures in hazard areas.
- Elevating structures to reduce flood loss
- Retrofitting structures to reduce high wind loss
- Improving drainage capacity of canals and ditches
- Installing emergency generators on critical government and special needs structures
- Clearing "right of ways" of pubic utility power lines

7.3.7 National Flood Insurance Program (NFIP) Compliance

Requirement: §201.6(c)(3)(ii): The mitigation strategy] must also address the jurisdiction's participation in the National Flood Insurance Program (NFIP), and continued compliance with NFIP requirements, as appropriate.
A. Does the new or updated plan describe each jurisdiction's participation in the NFIP?
B. Does the mitigation strategy identify, analyze and prioritize actions related to continued compliance with the NFIP?

CRS Step 8: Action Plan: CRS credits regulations that go above and beyond the minimum of the NFIP.

Participation in the NFIP is based on an agreement between communities and FEMA. The NFIP has three basic aspects:

- Floodplain identification and mapping
- Floodplain management
- Flood insurance

First, NFIP participation requires community adoption of flood maps. Mapping flood hazards creates broad-based awareness of the flood hazards and provides the data needed to administer floodplain management programs and to actuarially rate new construction for flood insurance. Second, to be a participant, the NFIP requires communities to adopt and enforce minimum floodplain management regulations that help mitigate the effects of flooding on new and improved structures. Third, community participation in the NFIP enables property owners to purchase insurance as a protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages.

Scott County and its municipalities have fully complied with the above NFIP requirements with the exception of Elko-New Market. In addition to the above all jurisdictions have comprehensive plans that identify flood management issues, goals and objectives. The comprehensive plans address wetlands and storm water management activities. Most of the jurisdictions have implemented ordinances that apply to wetlands and Stormwater runoff.

The table below identifies Scott County and its municipalities NFIP Status

Table 7.12 NFIP Status

NFIP #	Community	Initial Firm Identified	Current Effective Map Date	Reg-Emer Date	Initial FHBM
270429#	BELLE Plaine City of	3/8/1974	12/18/1986	12/18/1986	12/18/1986
	Elko-New Market	Not Mapped			
270430#	JORDAN City Of	3/8/1974	1/6/1982	1/6/1982	1/6/1982
270249#	NEW Prague City Of	5/10/1974	11/1/1978	7/21/1999	11/1/1978
270432#	PRIOR Lake City of	7/26/1974	9/29/1978	11/19/1997	9/29/1978
270433#	SAVAGE City Of	3/29/1974	6/18/1980	5/16/1994	6/18/1980
270428#	SCOTT County	12/20/1974	4/11/1980	2/19/1987	4/3/1978
270434#	SHAKOPEE City Of	6/7/1974	9/29/1978	9/29/1978	9/29/1978

7.3.8 Analyzing and Prioritizing NFIP Compliance Actions

All Local Mitigation Plans approved by FEMA after October 1, 2008 must describe each jurisdiction's participation in the NFIP and must identify, analyze and prioritize actions related to continued compliance with the NFIP. Simply stating an action such as, "The community will continue to comply with NFIP," will not meet this requirement. Basic compliance NFIP actions could include, but are not limited to:

1 - Adoption and enforcement of floodplain management requirements, including regulating all and substantially improved construction in Special Flood Hazard Areas (SFHAs)

2 - Floodplain identification and mapping, including any local requests for map updates, if needed

3 - Description of community assistance and monitoring activities.

The table below identifies NFIP related actions that are included in the jurisdictions Mitigation Action Plans

Table 7.13 NFIP Mitigation Action Items									
		Jurisdictions participating							
Action Item	Action Description	Scott County	Belle Plaine	Elko-New Market	Jordan	New Prague	Prior Lake	Savage	Shakopee
FL3c	Adopt/enforce an NFIP flood plain Mgnt plan	X	X	X	X	X	X	X	X
FL3d	Adopt/enforce floodplain legislation requiring new structures be elevated above the BSE	X	X	X	X	X	X	X	X
FL3e	Obtain and maintain NFIP FIRMS to identify community flood plains	X	X	X	X	X	X	X	X
FL3f	Obtain funding to retrofit, elevate or relocate repetitive flooding structures in flood plains	X	X	X	X	X	X	X	X
FL3g	Adopt/enforce flood plain wetlands and watershed land use zoning	X	X	X	X	X	X	X	X
FL3l	Update Land Use Plans to identify areas where development should be restrictive	X	X	X	X	X	X	X	X
FL3m	Perform a study of the feasibility of community waterways flood control	X	X	X	X	X	X	X	X
FL3n	Obtain equipment to build water flow and water retention areas to mitigate flooding	X	X	X	X	X	X	X	X
FL4b	Complete flood damage study for downtown Jordan	X			X				
FL4c	Complete updated floodplain maps for staff and public use	X	X	X	X	X	X	X	X
FL4e	Assist each local government to Adopt Elevation standards legislation for new structures	X	X	X	X	X	X	X	X
FL4h	Require floodplain and shoreline ordinances to comply with MN DNR requirements	X	X	X	X	X	X	X	X
FL4o	Work with local units of government to insure completion of local flooding risk projects.	X	X	X	X	X	X	X	X
FL4y	Use digital terrain modeling to identify potential flooding areas.	X	X	X	X	X	X	X	X
FL4a	Require city engineer to inspect and make recommendations regarding flood control measures on an annual basis.		X	X					
FL4b	Develop a drainage master plan for the entire community		X						
FL4a	Improve dike along Sand Creek			X					
FL4b	Install floodwall along First Street			X					
FL4a	Construct elevated drainage pipes in order to divert flood water out of a residential area							X	
FL4a	Work with engineering and public works department to ensure parks and city land is properly drained and graded.								X
FL4b	Regularly check water levels on river.								X
FL4c	Mitigate with planning/engineering on future projects developing flood plains								X

7.3.9 Analyzing and Prioritizing Mitigation Actions

Requirement: §201.6(c)(3)(iii): The mitigation strategy section shall include] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.
Does the new or updated mitigation strategy include how the actions are prioritized? (For example, is there a discussion of the process and criteria used?
Does the new or updated mitigation strategy address how the actions will be implemented and administered? (For example, does the action plan identify the responsible department, existing and potential resources, and timeframe?
Does the new or updated prioritization process include an emphasis on the use of a cost-benefit review to maximize benefits?
D. Does the updated plan identify the completed, deleted or deferred actions from the previously approved mitigation plan?

CRS Step 8: Action Plan: Credit is based on an action plan that identifies who does what, when it will be done, and how it will be financed. The actions must benefits of the proposed projects and their associated costs.

FEMA guidance for meeting planning requirements of the Disaster Mitigation Act of 2002 (DMAK2) specifies that governments prioritize their mitigation actions based on the level of risk a hazard poses to the lives and property of a given jurisdiction. In response to this requirement, the Scott County Mitigation Steering Committee completed a Mitigation Technique Matrix to make certain they addressed, at a minimum, those hazards posing the greatest threat. The matrix provides the committee with the opportunity to cross-reference each of the priority hazards with the comprehensive range of available mitigation techniques, including prevention; property protection; natural resource protection; structural projects; emergency services; and public education and awareness.

Despite the diligence of the Mitigation Committee in completing the STAPLEE Criteria form, scores for many goal actions were identical, and provided little help in assigning priority. This form did allow the committee a thorough dissection of each goal's action, and prompted the elimination of some goals. Regardless of numerical priority ranking, early implementation dates are assigned to those actions needed to serve as a foundation upon which to build other actions. Also assigned early implementation dates are those actions leading to maintaining eligibility for current grant funding, as well as those which will promote acquisition of new funding sources.

Each participating jurisdiction prioritized its selected mitigation items individually. The "STAPLEE" evaluation and prioritization is included in each individual MAP in the Annex. A weighting factor of 3 is used for loss of life and a weighting factor of 2 is used for Property Loss and Economic impact of the hazard event.

Table 7.14 STAPLEE Mitigation Action Priority Process

Issue	1	2	3
Social Community Acceptance	Potential objection from public and/or very expensive	Unknown if objectionable, or costs may be significant	Not objectionable and low/no costs
Effect on saving lives	Life saving impact is negligible	Life saving impact is moderate	Life saving impact is significant
Effect on reducing property loss	Effect on reducing property loss is negligible	Effect on reducing property loss is moderate	Effect on reducing property loss is significant

Table 7.14 STAPLEE Mitigation Action Priority Process			
Issue	**1**	**2**	**3**
Effect on reducing economic loss	Effect on reducing economic loss is negligible	Effect on reducing economic loss is moderate	Effect on reducing economic loss is significant
Technical Technical Feasibility	Technology not currently existing	Emerging or untested technology or unknown	Technology readily available
Long-Term Solution	No, is not effective in helping reduce losses in the long term	Potentially or unknown	Yes, is effective in helping reduce losses in the long term
Secondary Impacts	Yes, likely to create secondary problems	Potentially or unknown	No, unlikely to create secondary problems
Administrative Staffing	Need to hire a permanent employee(s)	Potentially need to hire a temporary employee(s) or unknown.	Do not have to hire
Funding Potential	No obvious source of funding available and action has significant cost impact	Limited or unknown funding available	Little or no funding required or funding can be readily obtained
Maintenance/Operations	The action is likely to require high level of ongoing maintenance	Unknown or action has the potential for moderate ongoing maintenance	Action requires limited or no ongoing maintenance
Political Political Support	Local Elected Official likely to be contentious	Local Elected Official may be controversial	Local Elected Official likely to be supportive
Local Champion	Unlikely there is a Local Elected Official to support	Uncertain if there is a Local Elected Official to champion	A Local Elected Official is likely to support and champion
Public Support	Public Political support is unlikely	Public Political support is uncertain	Public Political support is likely
Legal State Authority Exists	No legal state authority exists	Legal state authority is unclear, uncertain or adoption is in progress	Legal state authority exists
Local Authority Exists	No legal authority exists	Legal authority is unclear, uncertain or adoption is in progress	Legal authority exists
Potential Legal Challenge	High likelihood of legal challenge by stakeholders	Moderate likelihood of legal challenge by stakeholders	Low likelihood of legal challenge by stakeholders
Economic Action Benefit	Low benefit to the jurisdiction from the action	Moderate benefit to the jurisdiction from the action	High benefit to the jurisdiction from the action
Action Cost	High cost to implement action	Moderate cost to implement action	Low cost to implement action
Economic Contribution	Low contribution to other community economic goals	Moderate contribution to other community economic goals	High contribution to other community economic goals
Outside Funding Required	Likely for action to be delayed pending outside sources of funding	Possible for action to be delayed pending outside sources of funding	Unlikely for action to be delayed pending outside sources of funding
Environmental Land/Water Effect	High likelihood of negative consequences to land/water	Moderate likelihood of negative consequences to land/water	Low likelihood of negative consequences to land/water
Endangered Species Effect	High likelihood of potential negative consequences to endangered species	Moderate likelihood of negative consequences to endangered species	Low likelihood of negative consequences to endangered species
Hazmat Waste Site affect	High likelihood of potential affect on hazardous materials and waste sites	Moderate likelihood of affect on hazardous materials and waste sites	Low likelihood of affect on hazardous materials and waste sites

Table 7.14 STAPLEE Mitigation Action Priority Process			
Issue	**1**	**2**	**3**
Environmental Effect	No, project is not consistent with jurisdiction environmental goals	Possible, project is consistent with jurisdiction environmental goals	Yes, project is consistent with jurisdiction environmental goals
Federal Law Compliant	No	Uncertain	Yes
Prioritizing mitigation actions for each jurisdiction was based on the "STAPLEE" process. "STAPLEE" uses multiple factors under the categories of Social, Technical, Administration, Legal, Economic and Environment			

The Table prioritizing Scott County mitigation actions is at the end of this section and the prioritization of Individual jurisdictions mitigation actions is included in the Individual Mitigation Action Plans (IMAP) in the IMAP Annex.

7.3.10 Mitigation Actions Implementation

The success of this Plan hinges on two major action items;

1. Emergency Management staff must pursue all grant opportunities to assist with funding of mitigation actions. Staff must receive necessary grant writing training and evaluation of grant criteria. Without grant funding, Scott County cannot afford to begin many of the more expensive mitigation actions described in this plan.
2. Scott County Emergency Management is tasked with Plan oversight, to include project tracking, progress reports, and reconvening the Steering Committee as needed for Plan review and revision

It was the intent of the committee to establish realistic, attainable actions that can be implemented within the present fiscal capabilities of the participating jurisdictions and accepted by the citizens of the county. All members of the Planning Committee agreed that starting with small steps, accomplishing the stated goals, and publicizing the success of the county's mitigation efforts will open the community to accept larger, more costly, projects in the future. Specific mitigation actions were identified to prevent future losses; however, current funding is not identified for all of these actions at present. The County has limited resources to take on new responsibilities or projects. The implementation of these mitigation actions is dependent on the approval of the local elected governing body and the ability of the community to obtain funding from local or outside sources. Where such actions are high priorities, the community will work with MEMA, FEMA and other Federal, State and County agencies to secure funds.

In addition to the assignment of a local lead department or agency, an implementation time period or a specific implementation date has been assigned in order to assess whether actions are being implemented in a timely fashion.

Many of the actions are interrelated (e.g. providing various categories of preparedness and awareness information to citizens at community events); these will be accomplished under a single, ongoing project. Many of the actions can be accomplished within existing department budgets, costing only the time of employees already on staff. While "time is money" and hours have been estimated in dollars for each action item, there will be no requirement for additional funds to be budgeted to accomplish many of the action items. In general, mitigation actions ranked as high priorities will be addressed first. However, medium or even low priority mitigation actions will be considered for concurrent implementation. Therefore, the ranking

levels should be considered as a first-cut, preliminary ranking and will evolve based on input from the County departments and representatives, the public, MEMA, and FEMA as the Plan is implemented.

7.3.11 Mitigation Action Benefit/Cost Review

Section 201.6.c.3iii of 44CFR requires the prioritization of the action plan to emphasize the extent to which benefits are maximized according to a cost/benefit review of the proposed projects and their associated costs. The County utilized the economic criteria in the following "STAPLEE" evaluation. This benefit/cost review is qualitative; that is, it does not include the level of detail required by FEMA for project grant eligibility under the Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation (PDM) grant program. This qualitative approach was used because projects may not be implemented for up to 10 years, and the associated costs and benefits could change dramatically in that time. Each project was assessed by assigning the subjective ratings (high, medium, and low) to its costs as described in the Economic "STAPLEE" section.

7.3.12 Previously Implemented Mitigation Measures

The success of future mitigation efforts in a community can be gauged to some extent by its ongoing or past efforts. Previously implemented mitigation measures indicate that there is, or has been, a desire to reduce the effects of natural hazards, and the success of these projects can be influential in building local government support for new mitigation efforts. Scott County's previous mitigation efforts and programs include the following:

- Each jurisdiction in Scott County supports a public works department and many provide water and wastewater treatment facilities.
- All Fire Departments provide EMT's emergency medical service throughout the county.
- Law enforcement is provided for each municipality, either by the municipal law enforcement agencies, or by the Scott County Sheriffs Office.
- Fire Protection and fire medical / rescue services are provided for each municipality by fire departments, with either all paid, a combination of paid and volunteer, or all volunteer firefighters.
- Scott County and the municipalities within, participate in the National Flood Insurance Program.
- Minnesota health officials helped to develop a mass clinic plan.
- Scott County is responsible for planning a mass vaccination process should this be necessary due to contagious disease outbreak. Locations for mass dispensing sites have been identified, and a process for administering medicines is being refined and tested.
- Practice exercises are conducted between HSEM, NWS, FBI, Scott County Emergency Medical Services, city first responders and Scott County Emergency Management to assure preparedness.
- All facilities involved with hazardous materials provide annual TIER II reports.
- Cities throughout Scott County continue to add outdoor warning sirens to improve warning effectiveness, and to maintain existing sirens to insure proper operation.

- The American Red Cross has multiple designated emergency shelters.
- Scott County is part of the North Metro Drug Task Force, which is active in Methamphetamine and other drug enforcement, effectively reducing the number of clandestine labs in the county.
- Multiple Scott County communities have been active in the Firewise program, which works with the state Department of Natural Resources to remove potential fuel sources that may be involved in wild land fires. This mitigation effort limits the spread of wild land fires, and helps to protect homes.
- Scott County participates in the Joint Terrorism Task Force.

State mitigation efforts and programs that are significant to Scott County include the following:

State of Minnesota Pipeline Safety Plan: The state of Minnesota, along with gas and oil pipeline providers, maintains a pipeline safety plan. Pipeline providers are required to schedule meetings with local officials to facilitate discussions about mitigation and response to pipeline disasters.

The State Emergency Response Commission is responsible for implementing federal Emergency Planning and Community Right-to-Know Act (EPCRA) provisions in Minnesota and serving as a technical advisor and information clearinghouse for state and federal hazardous materials programs. The Minnesota Homeland Security and Emergency Management Agency is the lead agency responsible for implementing EPCRA.

Minnesota Emergency Operations Plan (MEOP): The Minnesota Emergency Operations Plan (MEOP) is the document that provides the foundation for all disaster and emergency response operations conducted within the state of Minnesota. Minnesota state law requires HSEM to develop this plan and update it on a periodic basis.

Each county in Minnesota has its own Local Emergency Management Director that serve at the direction of the respective County Boards. Because disasters occur at the local government level, the Local Director is the key to comprehensive community emergency management. Some local Emergency Management programs receive federal funding assistance through HSEM. Such programs must meet minimum mutually agreed upon criteria. These counties are called Emergency Management Performance Grant (EMPG) counties. The HSEM Regional Offices are responsible for ensuring EMPG counties meet or exceed the minimum EMPG criteria. Scott County is an EMPG county.

The Domestic Preparedness Program is a partnership of federal, state and local agencies with the goal of insuring that, as a nation, we are prepared to respond to a terrorist attack involving nuclear, biological or chemical weapons - weapons of mass destruction (WMD). Today, the term "Homeland Security" is used to denote the concept of preparing for these kinds of events.

7.3.13 Multi-Jurisdictional Mitigation Actions

The Mitigation Actions proposed by each of Scott County's local governing bodies participating under this Plan are in the Individual Mitigation Action Plans (MAP's) Annex. Each MAP has been designed to address the jurisdiction description, capabilities and the multi-jurisdictional goals, objectives and actions of the overall Hazard Mitigation Plan. Some Action items in the below table and the Individual Mitigation Action Plans address specific hazards, others are general action items that address multiple hazards. Actions identified are general community wide actions and specific jurisdiction actions (highlighted in green). The action items detailed in the mitigation actions table's address;

1. Both current and future buildings (i.e. building codes, zoning)
2. Current and future infrastructure
3. Each profiled hazard (minimum of 2)
4. Each participating jurisdiction (minimum of 2)

Requirement §201.6(c)(3)(iv): For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.
A. Does the **new or updated** plan include identifiable **action items** for each jurisdiction requesting FEMA approval of the plan?

CRS Step 8: Draft an Action Plan: For CRS credit, when a multi-jurisdictional plan is prepared, it must have action items from at least two of the six categories that directly benefit each community seeking CRS credit.

The cohesive collection of actions listed in each jurisdiction's Mitigation Action Plan also can serve as an easily understood menu of mitigation policies and projects for local decision-makers who want to quickly review their jurisdiction's respective element of the countywide Plan. In preparing the individual MAP's, each jurisdiction considered their overall hazard risk and capability to mitigate identified hazards as recorded through the risk and capability assessment process and to meet the countywide mitigation goals and the unique needs of their community.

Each jurisdiction participating in this Plan is responsible for implementing specific mitigation actions as prescribed in the adopted Mitigation Action Plan. In each Mitigation Action Plan, every proposed action is assigned to a specific local department or agency in order to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their unique mitigation strategy as needed without altering the broader focus of the countywide Plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for monitoring and implementing the actions of other jurisdictions involved in the planning process. The cost/benefit estimates are based on previous and/or expected expenditures and estimated cost avoidance or reduction in the loss of life or property damage. The estimated completion dates is an estimate of the completion year and crosses two budget years. In many cases the action item is completed annually or is on going.

The following Table identifies the hazard and action item identifier.

Table 7.15 Action Identifier Table

	All Hazards	Drought	Earthquake	Extreme Temp	Flooding	Hail	High Wind	Ice/Snow	Land/Mudslide	Land Subsidence	Lightning	Wildfire	Pandemic	HAZMAT	Illegal Drugs	Terrorism	Transportation	Urban Fire	Utility Power	Utility Water
Action Identifier and Application	AH	DR	EX	ET	FL	HA	HW	IS	LM	LS	LG	WF	PD	HM	IL	TR	TN	UF	UP	UW
	1				2				3				4				a-z			
	Public Populations				1st Responder				Jurisdiction General				Jurisdiction Specific				Sequence Character			

Table 7.16 Scott County Mitigation Actions

Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost/ Benefit	Completion Date	Priority
AH1a	Obtain and/or expand audible warning units to all uncovered community areas	EMA, Cnty Commission	Cnty/City/Twp Budget, Grants	260,000 1,000,000	2012 2013	69
AH1b	Distribute safe room/shelter in place information to schools, special needs and all community populations	1st Responder Agencies, EMA, BOE, Red Cross	Cnty/City/Twp Budget	2,000 20,000	Annually	67
AH1c	Assist citizens to develop emergency preparedness, response and recovery plans.	EMA, Fire Depts Sheriffs office	Cnty/City/Twp Budget	2,000 20,000	Ongoing	85
AH1d	Obtain/install an automated community wide rapid notification system.	EMA, Cnty IT Cnty Commission	Cnty/City/Twp Budget, Grants	150,000 1,000,000	2014 2015	72
AH1e	Develop a media warning program to warn the community of a potential hazard event	EMA, Media NWS 1st Responder Agencies	Cnty Budget Grants	4,000 120,000	2010	80
AH1h	Add hazard preparedness and response Information to a community web site	EMA, Cnty IT Cnty Commission	Cnty Budget	2,000 20,000	2010	82
AH2a	Obtain/distribute interoperable radios for all 1st responders	EMA, 1st Responder Depts Cnty Commission	Cnty/City/Twp Budget, Grants	82,000 200,000	2012 2013	70
AH2b	Train and equip 1st responders for search and rescue missions	Police/Fire Depts, EMA	Cnty/City/Twp Budget, Grants	50,000 150,000	2011	60
AH2c	Train and equip 1st responders to respond to Mass causality events and exercise response	1st Responder Agencies, EMA Public Health	Cnty/City/Twp Public Health Budget, Grants	50,000 150,000	2010	62
AH2e	Recruit/train and equip volunteers for CERT, a Medical Reserve Corps, SAFCOM, etc	1st Responder Agencies, EMA	Cnty/City/Twp Budget, Grants	5,000 100,000	2010	71
AH2f	Train 1st responders and community officials on the National Incident Mgnt System	1 st responder Agencies, EMA,	Cnty/City/Twp Budget	2,000 20,000	Ongoing	73
AH2g	Train 1st responders and community officials on EOC Operations and the EOP	1st Responder Agencies, EMA	Cnty/City/Twp Budget	2,000 20,000	Annually	73

Table 7.16 Scott County Mitigation Actions						
Hazard & Action	**Action/Project Description**	**Responsibility**	**Funding Source**	**Estimated Cost/ Benefit**	**Completion Date**	**Priority**
AH3b	Obtain and continually update 911 technology and capabilities	911, Fire/Police, Cnty Commission	Cnty/City/Twp 911 Budget, Grants	100,000 1,000,000	2013 2014	77
AH3c	Obtain Crisis Mgnt Software and Equipment for primary and secondary EOC's	EMA, Cnty Commission	Cnty/City/Twp Budget, Grants	150,000 1,000,000	2013 2014	65
AH3d	Obtain/install emergency generators or "pigtails" for critical government facilities and fuel depots.	EMA, Cnty Commission	Cnty/City/Twp Budget, Grants	500,000 2,000,000	2012 2014	54
AH3e	Assist non-governmental critical facilities to obtain emergency generators and/or pigtails	EMA, Cnty Commission	Cnty/City/Twp Budget, Grants	500,000 2,000,000	2013 2015	53
AH3f	Develop EOP ESF's/annexes for all hazards that may impact the community	EMA, Cnty Commission	Cnty/Dept Budget	1,000 10,000	2011	70
AH3g	Review/revise the Emergency Operations Plan annually and after each disaster	EMA, Cnty Commission	Cnty Budget, Grants	2,000 20,000	Annually	70
AH3h	Obtain funding to add disaster shelters as necessary	EMA, Red Cross Cnty Commission	Cnty/City/Twp Budget, Grants	400,000 2,000,000	2010 2015	58
AH3i	Coordinate a shelter program with the Red Cross and volunteers	EMA, Red Cross Volunteer Groups	Cnty Red Cross Budget, Grants	2,000 20,000	Ongoing	66
AH3j	Assist schools to implement a disaster phone line	EMA Board of Education	Cnty/Education Budget, Grants	2,000 20,000	2010	84
AH3l	Assist utilities in developing restoration and mitigation plans	Utilities EMA	Cnty Utility Budget, Grants	2,000 200,000	2011	66
AH3m	Assist businesses, schools, special needs and public facilities to post evacuation routes	Law Enforcement EMA, Public Works	Cnty Budget, Grants	2,000 20,000	Ongoing	66
AH3n	Obtain signage to direct the public evacuation during hazard events	EMA, Public Works	Cnty Budget, Grants	12,000 50,000	2012	63
AH3o	Develop/implement/maintain the community's Mitigation Action Plan	1st responder agencies, EMA	Cnty Budget, Grants	20,000 2,000,000	Annually	81
AH3p	Develop a process to ensure that all damages resulting from a disaster event is reported to the National Weather Service	1st Responder Agencies, EMA	Cnty NWS Budget, Grants	2,000 20,000	2010	62
AH3q	Obtain funds for critical government departments to develop Continuity of Operations Plans	EMA, Cnty Commission	Cnty Budget, Grants	52,000 2,000,000	2011 2012	69
AH3r	Assist businesses to develop Business Continuity Plans	EMA, Cnty Commission	Cnty/Business Budget, Grants	2,000 20,000	Ongoing	67
AH3s	Assist communities in developing strategies to prevent loss of public records	EMA, Cnty Commission	Cnty/City/Twp Budget	12,000 200,000	Ongoing	65
AH3t	Annually review and update hazard related legislation	EMA, Cnty Commission	Cnty/City/Twp Budget	2,000 20,000	Annually	65

Table 7.16 Scott County Mitigation Actions						
Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost/ Benefit	Completion Date	Priority
AH3u	Ensure mutual aid, shelter, response, mass casualty & recovery agreements are current	1st Responder Agencies, EMA Cnty Commission	Cnty/City/Twp Budget	2,000 80,000	Annually	72
AH3v	Assist critical sites to develop and provide to EMA an emergency plan	EMA,	Cnty/City Budget, Grants	12,000 200,000	Ongoing	74
AH3w	Insure building code compliance Inspections are conducted on construction projects	Cnty Commission Inspections	Cnty/City/Twp Budget	12,000 200,000	Ongoing	64
AH4a	Identify/deliver CPR, First Aid, Search and Rescue, NIMS, etc. disaster training to volunteers	1st Responder Agencies, EMA	Cnty/City/Twp Budget, Grants	15,000 50,000	2011	71
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 3,000,000	2011 2012	66
AH4c	Develop plan to trim and clear trees in county owned parkland.	EMA Public Works Community Development	Cnty Budget, Grants	50,000 500,000	2010	56
AH4d	Identify/reserve county land as a staging area to store and process storm debris.	EMA Public Works Community Development	Cnty Budget, Grants	2,000 100,000	2011	43
AH4e	Identify/obtain resources needed to process storm debris. (i.e., chippers, backhoes, etc.)	EMA Public Works Community Development	Cnty Budget, Grants	2,000 500,000	2011	48
AH4f	Modify zoning ordinances allowing temporary debris staging areas	EMA Public Works Community Development	Cnty Budget, Grants	5,000 500,000	2010	51
DR1a	Distribute drought awareness and response to the public	Agriculture, EMA	Cnty/City/Twp Budget	2,000 20,000	Annually	65
DR4a	Support the DNR's rules for water use conservation for all cities applying for new high-capacity municipal wells.	Community Development	Cnty Budget, Grants	5,000 2,000,000	Ongoing	58
EQ1a	Distribute earthquake preparedness and response information to special needs, schools and the community	1st Responder Agencies, EMA	Cnty/City/Twp Budget	2,000 200,000	Annually	70
ET1a	Distribute Extreme Temperature preparation/response information to school, special needs and the community	EMA, Red Cross BOE, Business	Cnty/Dept Budget	2,000 20,000	Annually	64
ET3a	Identify citizens subject to suffering from extreme temperatures	1st Responder Agencies, EMA	Cnty/Dept Budget	2,000 50,000	2010	65
FL1a	Distribute flood preparedness and response information to schools, special needs and all community populations	1st Responder Agencies, EMA	Cnty/Dept Budget	2,000 200,000	Annually	82
FL2a	Train and equip 1st responders to respond to flood events and exercise response	1st Responder Agencies, EMA	Cnty/City Budget Grants	22,000 200,000	Ongoing	75
FL2b	Train and equip a swift water rescue team	1st Responder Agencies, EMA	Cnty/City Budget Grants	200,000 500,000	2012 2013	55

Table 7.16 Scott County Mitigation Actions						
Hazard & Action	**Action/Project Description**	**Responsibility**	**Funding Source**	**Estimated Cost/ Benefit**	**Completion Date**	**Priority**
FL3c	Adopt/enforce an NFIP flood plain Mgnt 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 2,000,000	Ongoing	67
FL3d	Adopt/enforce floodplain legislation requiring new structures be elevated above the BSE	EMA, EMA, Scott Cnty, Belle Plaine, Elko-New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee	Cnty Budget	2,000 2,000,000	Ongoing	70
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 20,000	Annually	72
FL3f	Obtain funding to retrofit, elevate or relocate repetitive flooding structures in flood plains	EMA, EMA, Scott Cnty, Belle Plaine, Elko-New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee	Cnty/City Budget Grants	2,000,000 5,000,000	2011 2015	65
FL3g	Adopt/enforce flood plain wetlands and watershed land use zoning	EMA, EMA, Scott Cnty, Belle Plaine, Elko-New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee	Cnty Budget	2,000 200,000	Ongoing	68
FL3h	Assist in developing storm water Mgnt plans for the communities	EMA, EMA, Scott Cnty, Belle Plaine, Elko-New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee	Cnty/Dept Budget	22,000 200,000	Ongoing	66
FL3i	Install/replace/maintain culverts and bridges to reduce flooding	Public Works Cnty Commission	Cnty/City Budget Grants	502,000 1,200,000	2011 2014	61

Table 7.16 Scott County Mitigation Actions						
Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost/ Benefit	Completion Date	Priority
FL3j	Obtain equipment to mitigate street bridge, culverts, and road flooding	Public Works Cnty Commission	Cnty/City Budget Grants	200,000 500,000	2011 2014	62
FL3l	Update Land Use Plans to identify areas where development should be restrictive	EMA, EMA, Scott Cnty, Belle Plaine, Elko-New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee	Cnty/Dept Budget	12,000 50,000	2010	63
FL3m	Perform a study of the feasibility of community waterways flood control	EMA, EMA, Scott Cnty, Belle Plaine, Elko-New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee	Cnty Budget Grants	5,000 200,000	2011	67
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 2,000,000	2012 2013	63
FL3o	Develop a Dam/Levee hazard identification and inspection program with DNR	EMA, DNR	Cnty/City/State Budget Grants	12,000 200,000	2011	74
FL3p	Identify the communities vulnerability to a Dam/Levee failure	EMA, DNR	Cnty/Dept Budget	2,000 20,000	2011	78
FL4a	Coordinate between Scott Watershed Mgnt Organization and Local Governments storm water discharges to ensure sufficient downstream capacity	Scott Watershed Mgnt Organization	Cnty Budget, Grants	$10,000 100,000	2012	66
FL4b	Complete flood damage study for downtown Jordan	Community Development	Cnty, City Budget, Grants	500,000 2,000,000	2010	73
FL4c	Complete updated floodplain maps for staff and public use	IT Department /Community Development, EMA, Scott Cnty, Belle Plaine, Elko-New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee	Cnty Budget, Grants	$25,000 2,000,000	2010	64

Table 7.16 Scott County Mitigation Actions						
Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost/ Benefit	Completion Date	Priority
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 50,000	2010	63
FL4e	Assist each local government to Adopt Elevation standards legislation for new structures	Scott Watershed Mgnt Organization, EMA, Scott Cnty, Belle Plaine, Elko-New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee	Cnty Budget, Grants	$5,000 100,000	2011	63
FL4f	Obtain grant funding to study for Markley Lake and O'Dowd Lake outlet improvements	Community Development	Cnty Budget, Grants	$200,000 2,000,000	2012	61
FL4g	Promote disconnected storm water Mgnt and low impact development.	Scott Watershed Mgnt Organization	Cnty Budget, Grants	$10,000 100,000	Ongoing	62
FL4h	Require floodplain and shoreline ordinances to comply with MN DNR requirements	Scott Watershed Mgnt Organization EMA, Scott Cnty, Belle Plaine, Elko-New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee	Cnty Budget, Grants	$5,000 50,000	2010	61
FL4i	Require peak runoff rate control standards for new developments.	Scott Watershed Mgnt Organization	Cnty Budget, Grants	$5,000 100,000	2011	61
FL4j	Require analysis for major drainage alterations.	Scott Watershed Mgnt Organization	Cnty Budget, Grants	$50,000 100,000	2012	61
FL4k	Acquire/prepare property to increase storm water storage capacity for Spring Lake TWP	Prior Lake Soil and Water District	Cnty Budget, Grants	2,000,000 5,000,000	2013	58
FL4l	Require an analysis of landlocked areas prior to the installation of outlets	Scott Watershed Mgnt Organization	Cnty Budget, Grants	$25,000 100,000	2012	58
FL4m	Conduct a feasibility study on the need for a new outlet on O'Dowd/Thole lake.	Scott Watershed Mgnt Organization	Cnty Budget, Grants	$25,000 100,000	2010	58
FL4n	Work with the City of Jordan on flood damage reduction efforts.	Scott Watershed Mgnt Organization	Cnty Budget, Grants	$25,000 100,000	2012	58

Table 7.16 Scott County Mitigation Actions						
Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost/ Benefit	Completion Date	Priority
FL4o	Work with local units of government to insure completion of local flooding risk projects.	Scott Watershed Mgnt Organization EMA, Scott Cnty, Belle Plaine, Elko-New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee	Cnty Budget, Grants	$10,000 100,000	Ongoing	58
FL4p	Obtain additional temporary road closure supplies (i.e. signs, cones barrels, and concrete barriers.	Scott County Public Works	Cnty, City Budget, Grants	$100,000 500,000	2011	57
FL4q	Develop solutions If hillside erosion studies has a cost/benefit and achievable methods	Scott County Public Works	Cnty Budget, Grants	500,000 1,000,000	2011	56
FL4r	Reconstruct outlet structure on Prior Lake	Prior Lake Soil and Water District	Cnty Budget, Grants	$500,000 3,000,000	2012	55
FL4s	Work with Scott County Public Works to plan and discuss future public ditch operations.	Scott Watershed Mgnt Organization	Cnty Budget, Grants	$5,000 50,000	2011	60
FL4t	Coordinate with other local units of government with maintenance of outlet structures.	Scott Watershed Mgnt Organization	Cnty Budget, Grants	$10,000 50,000	2010	60
FL4u	Coordinate with Municipal Separate Storm Sewer Systems permit requirements.	Scott Watershed Mgnt Organization	Cnty Budget, Grants	$5,000 50,000	Ongoing	60
FL4v	Promote and facilitate regional storm water Mgnt.	Scott Watershed Mgnt Organization	Cnty Budget, Grants	$5,000 50,000	Ongoing	60
FL4w	Work on a Hwy 169 area drainage feasibility assessment in Louisville Township.	Scott Watershed Mgnt Organization	Cnty Budget, Grants	$25,000 100,000	2011	60
FL4x	Communicate with local governments to understand local flooding risks.	Scott Watershed Mgnt Organization	Cnty Budget, Grants	$10,000 100,000	Ongoing	60
FL4y	Use digital terrain modeling to identify potential flooding areas.	Scott Watershed Mgnt Organization, EMA, EMA, Scott Cnty, Belle Plaine, Elko-New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee	Cnty Budget, Grants	$15,000 150,000	2012	65
FL4z	Require a floodplain capacity standard.	Scott Watershed Mgnt Organization	Cnty Budget, Grants	$5,000 100,000	2011	63
FL4za	Clean out drainage channel from Prior Lake to Minnesota River.	Prior Lake Soil and Water District	Cnty, City Budget, Grants	$250,000 3,000,000	2011	59

Table 7.16 Scott County Mitigation Actions

Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost/ Benefit	Completion Date	Priority
HM1a	Distribute Hazard Materials event preparedness and response information to schools, special needs and the community	1st Responder Agencies, EMA, BOE,	Cnty/Dept Budget	2,000 200,000	Annually	67
HM1b	Educate the public on common hazardous materials in home	1st Responder Agencies, EMA	Cnty/Dept Budget	2,000 120,000	Annually	66
HM1c	Educate schools special needs, and the community on chemical hazards in the area and evacuation routes.	1st Responder Agencies, EMA	Cnty/Dept Budget	2,000 200,000	Annually	70
HM2a	Train and equip 1st responders to respond to hazmat incidents and exercise response	1st Responder Agencies, EMA	Cnty/City Budget Grants	52,000 200,000	Ongoing	59
HM2b	Maintain inventories of Mark I packs to respond to chemical agents	1st Responder Agencies, EMA	Cnty/City Budget Grants	20,000 80,000	Annually	64
HM2d	Obtain and equip a hazardous materials response vehicle	Fire/Hazmat Agencies, EMA	Cnty/City Budget Grants	102,000 200,000	2011 2012	59
HM3a	Develop evacuation perimeters and routes for high risk hazmat sites	Police/Fire Depts EMA	Cnty/Dept Budget	2,000 20,000	2011	63
HM3b	Maintain and annually update an inventory of hazmat sites.	1st Responder Agencies, EMA	Cnty/Dept Budget	2,000 20,000	Annually	66
HM3c	Develop/maintain a countywide hazard materials response plan	1st Responder Agencies, EMA	Cnty/Dept Budget	12,000 200,000	Annually	65
HM3d	Obtain monitoring equipment for high risk hazmat sites	1st Responder Agencies, EMA	Cnty/City Budget Grants	29,000 80,000	2012 2013	54
HM3e	Obtain hazmat containment equipment for water, roads/railroads	1st Responder Agencies, EMA	Cnty/City/Dept Budget Grants	20,000 200,000	2012 2013	56
HM3f	Enforce SARA. Title III/Tier II facility hazardous materials reporting.	EMA Fire Svcs	Cnty/Dept Budget	2,000 20,000	Ongoing	65
HM3j	Adopt/enforce hazardous materials site building setback legislation	Cnty Commission	Cnty Budget	2,000 20,000	2013	57
HW1a	Obtain NOAA weather radios for schools, government and special needs facilities	EMA BOE Cnty Commission	Cnty/City/BOE Budget Grants	20,000 200,000	2011 2012	69
HW1b	Distribute High Wind preparedness and response information to special needs, schools and the community	1st Responder Agencies, EMA	Cnty/Dept Budget	2,000 200,000	Annually	80
HW2b	Train/equip 1st responders to respond to High Wind events and exercise response	1st Responder Agencies, EMA	Cnty/City Budget Grants	12,000 90,000	Ongoing	58
HW3a	Adopt/enforce comprehensive Building Code legislation	Cnty Commission	Cnty Budget	2,000 20,000	Ongoing	73
HW3b	Develop a debris clearance program that can be utilized countywide	Public Works Cnty Commission	Cnty/Dept Budget	8,000 50,000	2010	59
HW3c	Obtain funding to build mobile home community storm shelters	EMA Cnty Commission	Cnty/City Budget Grants	500,000 2,000,000	2011 2014	58
HW3d	Adopt/enforce mobile home tie down and skirting legislation	Cnty Commission	Cnty Budget	2,000 200,000	Ongoing	68

Table 7.16 Scott County Mitigation Actions						
Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost/ Benefit	Completion Date	Priority
HW4a	Identify storm shelters in the development of master plans for county parks	EMA Community Development	Cnty Budget, Grants	5,000 500,000	2011	58
HW4b	Research the feasibility of requiring the burying of power lines in all new rural cluster subdivisions.	Community Development	Cnty/Utility Budget, Grants	20,000 1,000,000	2010	58
IL1a	Distribute Meth Lab awareness information to schools and the community	Law Enforcement Agencies, EMA	Cnty/Dept Budget	2,000 20,000	Annually	68
IL2a	Train/equip 1st responders to respond to Meth Lab incidents	1st Responder Agencies, EMA	Cnty/City Budget Grants	22,000 200,000	Ongoing	58
IL3a	Join/participate in local state and federal drug task forces	Police/Sheriff Dept Cnty Commission	Cnty/Dept Budget	2,000 20,000	Ongoing	69
IS13b	Establish with the media and NWS an Ice and snow community alert system	EMA, Media NWS Cnty Commission	Cnty/Dept Budget	2,000 120,000	2010	72
IS1a	Distribute Ice/Snow preparedness and response information to schools, special needs and the community	1st Responder Agencies, EMA	Cnty/Dept Budget	2,000 100,000	Annually	75
IS2a	Train and equip 1st responders to respond to an Ice/Snow event and exercise response	Public Works, EMA	Cnty/City Budget Grants	12,000 50,000	Ongoing	55
IS3b	Assist communities to establish an Ice/snow removal program for roadways	EMA, Public Works Cnty Commission	Cnty/City Budget Grants	2,000 200,000	Ongoing	63
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 2,000,000	2012 2013	56
LM1a	Distribute to the community information on areas of potential landslides or mudslides	Public Works DOT Cnty Commission	Cnty/City Budget	2,000 20,000	Annually	60
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 20,000	2010	60
LM2a	Assist in obtaining equipment to respond to landslide/mudslide events	Public Works DOT Cnty Commission	Cnty/City Budget Grants	200,000 500,000	2012 2013	50
LM3a	Develop a map of potential landslide and mudslide areas	EMA, Cnty Commission	Cnty/City Budget	2,000 20,000	2010	53
LM3b	Adopt/enforce landslide/mudslide legislation to restrict development in hazard areas	EMA, Cnty Commission	Cnty Budget	2,000 20,000	2011	58
LS1a	Distribute land subsidence (sinkhole) awareness information to the public	1st Responder Agencies, EMA	Cnty/City Budget, DOT	2,000 20,000	Annually	58
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 20,000	2010	57

Table 7.16 Scott County Mitigation Actions

Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost/ Benefit	Completion Date	Priority
LS3a	Assist in obtaining equipment to respond to Land subsidence events	EMA, Public Works Cnty Commission	Cnty/City Budget Grants	200,000 400,000	2014 2015	48
LT1a	Distribute lightning awareness information to the public	Fire Agencies, EMA	Cnty/Dept Budget	2,000 20,000	Annually	62
LT1b	Develop with media and the NWS a lightning alerting process for the public	EMA, Media NWS Cnty Commission	Cnty/City Budget	2,000 20,000	2010	62
PD1a	Distribute Pandemic awareness and response information schools, special needs and the community	EMA Public Health	Cnty/City Public Health Budget Grants	2,000 20,000	Annually	70
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 20,000	2010	70
PD2a	Train/equip 1st responders to respond to a Pandemic/Epidemic event and exercise response	Public Health Cnty Commission, 1st Responders EMA	Cnty/City Public Health Budget Grants	32,000 200,000	2010 2011	55
PD2c	Assist in developing a 1st responder infectious disease early vaccination program	Public Health Cnty Commission, 1st Responders EMA	Cnty/City Public Health Budget Grants	2,000 40,000	Ongoing	63
PD2f	Train/equip 1st responders on agriculture and vector disease and infection response	DOA, DNR, EMA	Cnty/City Public Health Budget Grants	32,000 1,000,000	Annually	56
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 20,000	2010	59
PD3c	Adopt/enforce Pandemic Flu legislation to cancel large public and private events	EMA, Cnty Commission	Cnty/City Budget	2,000 20,000	2010	67
PD3d	Assist in developing procedures to prevent an outbreak of agriculture related hazards	EMA Dept Of Agriculture DNR	Cnty/DOA/DNR Budget	2,000 200,000	Ongoing	54
PD4a	Identify resources to combat the Emerald Ash Borer.	Public Works EMA Community Development	Cnty/State Budget, Grants	2,000 10,000	2010	57
PD4a	Obtain equipment for control and removal of infestation (i.e. chain saws, chippers, PPE, trucks.	Public Works EMA Community Development	Cnty/State Budget, Grants	500,000 1,000,000	2011 2012	55
PD4b	Identify and plan for other agriculture infestation located in Scott County.	Public Works EMA Community Development	Cnty/State Budget, Grants	25,000 200,000	Ongoing	54
TN4a	Develop a program for the hazards and boating safety of river usage. (To include all types of river flow from high to low.)	Lower Minnesota River Watershed District	Cnty/State Budget, Grants	5,000 50,000	2011	55

Table 7.16 Scott County Mitigation Actions						
Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost/ Benefit	Completion Date	Priority
TN4b	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).	Lower Minnesota River Watershed District	Cnty/State Budget, Grants	500,000 3,000,000	2011	51
TN4c	Develop a plan to provide for the safe coexistence of Commercial and Recreational Navigation.	Lower Minnesota River Watershed District	Cnty/State Budget, Grants	25,000 150,000	2011	54
TR1a	Distribute to schools and the public terrorism preparedness and awareness information	Police/Sheriff Dept EMA BOE	Cnty/Dept/BOE Budget	2,000 200,000	Annually	66
TR1b	Educate government officials, special needs and schools on procedures for handling suspicious mail	1st Responder Agencies, EMA Post Office	Cnty/Dept Budget	2,000 200,000	Annually	67
TR1c	Post terrorism and bomb identification information in buildings and schools	EMA Education Officials Law Enforcement	Cnty/Dept Budget	2,000 20,000	Ongoing	67
TR1d	Identify/distribute to appropriate officials potential terrorism targets information	EMA, Police Dept Cnty Commission	Cnty/Dept Budget	2,000 20,000	Ongoing	66
TR2a	Train/equip all terrorism 1st responders in terrorism attack techniques	1st Responder Agencies, EMA	Cnty/City Budget Grants	22,000 200,000	2011 2012	59
TR2b	Train/equip 1st responders on CBRNE agents, responding to a CBRNE event and exercise response	1st Responder Agencies, EMA	Cnty/Dept Budget Grants	12,000 50,000	2011 2012	61
TR2d	Fund/maintain a trained bomb dog and handler to serve the entire county	Law Enforcement Agencies, EMA	Cnty/City Budget Grants	102,000 200,000	2010 2015	58
TR3a	Assist schools in developing terrorism preparedness and response plans	EMA, BOE Police Dept/Sheriff	Cnty/City/BOE Budget Grants	2,000 20,000	Ongoing	70
TR3c	Develop evacuation plans for identified terrorism targets	Police/Sheriff Dept EMA, Public Works	Cnty/Dept Budget	2,000 200,000	2011	65
UF1a	Distribute to schools, special needs and the public fire safety and response information	Fire Svcs, BOE	Cnty/Dept/BOE Budget	2,000 200,000	Annually	74
UF1b	Educate school, special needs and citizens on fire extinguisher use	Fire Departments	Cnty/City/Dept Budget	2,000 200,000	Annually	75
UF1c	Assist in obtaining a fire education-training trailer for the jurisdiction.	Fire Svcs, Cnty Commission	Cnty/Dept Budget Grants	52,000 200,000	2012	61
UF2a	Train/equip 1st responders to respond to fire incidents and exercise response	Fire Svcs, Cnty Commission	Cnty/Dept Budget Grants	22,000 100,000	Ongoing	71
UF2b	Obtain/maintain fire fighting supplies at all fire departments	Fire Svcs, Cnty Commission	Cnty/Dept Budget Grants	25,000 100,000	Annually	72
UF2c	Obtain fire equipment to combat fires in high rise buildings	Fire Agencies, Cnty Commission	Cnty/Dept Budget Grants	500,000 2,000,000	2012 2013	66
UF2d	Train fire 1st responders to at least the "Awareness and Operations level"	Fire Svcs	Cnty/Dept Budget	20,000 80,000	Ongoing	71

Table 7.16 Scott County Mitigation Actions						
Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost/ Benefit	Completion Date	Priority
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 20,000	Ongoing	74
UF3b	Develop fire plans for all major businesses and critical facilities	Fire Departments	Cnty/City/Dept Budget	25,000 500,000	Ongoing	75
UF3c	Adopt/enforce sprinkler and smoke alarm legislation for all facilities	Cnty Commission	Cnty/Dept Budget	2,000 100,000	Ongoing	71
UF3d	Obtain fire equipment to combat fires where water hydrants are non-existent	Fire Agencies, Cnty Commission	Cnty/Dept Budget Grants	300,000 500,000	2012 2014	66
UF3e	Acquire and install six inch water mains and hydrants community wide	Fire Agencies, Public Works Cnty Commission	Cnty/Dept Budget Grants	2,000,000 5,000,000	2012 2014	62
UF3f	Adopt/enforce housing code legislation to limit number of citizens in housing	Cnty Commission	Cnty Budget	2,000 20,000	2010	68
UP1a	Assist power utilities in implementing a power outage public alerting program	Utilities, EMA	Cnty/Utility Budget	2,000 20,000	2010	65
UP2a	Train 1st responders on dealing with downed power lines during a response	1st Responder Agencies, EMA, Utilities	Cnty/Utility Budget Grants	12,000 200,000	Annually	64
UP3a	Identify special needs populations that rely on electricity for medical equipment	1st Responder Agencies, EMA	Cnty/Dept Budget	2,000 20,000	2010	65
UW1a	Develop with the water utilities a process to alert the public of water contamination	Utility Agencies, EMA	Cnty/Dept Budget	2,000 20,000	2010	66
UW2a	Train/equip utility workers with water testing and monitoring processes and equipment	Utility Agencies, Cnty Commission	Cnty/Dept Budget Grants	28,000 200,000	2010 2011	58
UW3a	Develop a wellhead protection program to upgrade wells in the 100-year flood plain.	Utility Agencies, Cnty Commission	Cnty/Dept Budget	12,000 200,000	2012	60
UW4a	Continue well decommissioning through cost sharing incentive programs.	Lower Mn. River Watershed District	Cnty/State Budget, Grants	$500,000 300,000	Ongoing	64
UW4b	Promote conservation and wise use of groundwater through education and public information.	Lower Mn. River Watershed District	Cnty/State Budget, Grants	$10,000 50,000	Ongoing	63
UW4c	Support county area planning by using the Metro Councils model to assess ground water impact of continued development.	Lower Mn River Watershed District	Cnty/State Budget, Grants	$100,000 200,000	2011	59
UW4d	Establish Stormwater infiltration criteria to protect the quality of groundwater.	Lower Mn. River Watershed District	Cnty/State Budget, Grants	$10,000 50,000	2011	60
UW4e	Analyze data to document trends on issues such as water usage, contamination, quality, and availability.	Lower Minnesota River Watershed District	Cnty/State Budget, Grants	$100,000 200,000	2011	57
UW4f	Determine fen and trout stream recharge areas.	Lower Mn. River Watershed District	Cnty/State Budget, Grants	$50,000 150,000	2012	57

Table 7.16 Scott County Mitigation Actions

Hazard & Action	Action/Project Description	Responsibility	Funding Source	Estimated Cost/ Benefit	Completion Date	Priority
UW4g	Develop a channel lobby for funding to assess unregulated discharges in the MN River Basin.	Lower Minnesota River Watershed District	Cnty/State Budget, Grants	25,000 300,000	2012	57
UW4h	Work with the State and stakeholders to establish a Mn. River basin commission to coordinate Mgnt, implement projects and programs of common benefit, and monitor performance of local water Mgnt entities	Lower Minnesota River Watershed District	Cnty/State Budget, Grants	100,000 1,000,000	Ongoing	57
UW4i	Adopt infiltration standards within the watershed district based on Pepin Total Maximum Daily Load	Lower Minnesota River Watershed District	Cnty/State Budget, Grants	$5000 50,000	2011	56
UW4j	Improve groundwater monitoring in the Watershed Mgnt Organization.	Lower Mn. River Watershed District	Cnty/State Budget, Grants	$200,000 600,000	2011	52
UW4k	Work with the Metropolitan Council to complete a model of the metro region.	Lower Mn River Watershed District	Cnty/State Budget, Grants	$200,000 400,000	Ongoing	60
UW4l	Support wellhead protection efforts by providing staff time and technical assistance.	Lower Mn. River Watershed District	Cnty/State Budget, Grants	$50,000 200,000	Ongoing	61
UW4m	Adopt minimum, consistent runoff peak standards within the watershed district.	Lower Mn. River Watershed District	Cnty/State Budget, Grants	$5000 60,000	2011	52
UW4n	Reduce/stop groundwater contamination of fens and trout streams (Eagle Creek and Savage Fen) by identifying sources and limiting/stopping contaminant release.	Lower Minnesota River Watershed District	Cnty/State Budget, Grants	$50,00 150,0000	2010 2012	52
UW4o	Identify ways to maintain supply of groundwater to fens and trout streams with the watershed district.	Lower Minnesota River Watershed District	Cnty/State Budget, Grants	$25,000 100,000	2011	50
WF1a	Distribute Wildfire awareness, preparedness information to schools and the public	Fire Agencies, EMA, BOE	Cnty/Dept Budget	2,000 200,000	Annually	70
WF1b	Assist DNR in distributing USFS fuels reduction information (Firewise.)	Fire Svc Agencies, EMA	Cnty/Dept/DNR Budget	2,000 200,000	Annually	69
WF1c	Publish outdoor burn ban info in area newspapers during Wild-land fire seasons.	EMA, Cnty Commission	Cnty/Dept Budget	2,000 50,000	Annually	72
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 50,000	2010	72
WF2a	Train/equip 1st responders on techniques to respond to wild-land fire events.	Fire Agencies, EMA	Cnty/Dept Budget Grants	92,000 200,000	Annually	58
WF2b	Obtain specialized equipment to combat wildfires.(4-wheel drive brush fire truck)	Fire Agencies, Cnty Commission	Cnty/Dept Budget Grants	202,000 2,000,000	2014	60
WF2c	Exercise fire response regularly for residences, businesses and industry	Fire Agencies, EMA	Cnty/Dept Budget Grants	24,000 200,000	Ongoing	63
WF2d	Identify Private contractors to assist in wild-land fire response	1st Responder Agencies, EMA	Cnty/Dept Budget	2,000 20,000	Ongoing	66
WF3a	Adopt/enforce wildfire legislation that includes burning bans	EMA, Cnty Commission	Cnty Budget	2,000 120,000	2010	66

Table 7.17 "STAPLEE" Mitigation Actions Prioritization Table

Action/Project Description	High Community Acceptance	High effect on Loss of Life-WF=3	High Effect on Property Loss WF=2	High Effect on Economic Loss WF=2	Is Technical Feasibility	Is a Long-Term Solution	No Secondary Impacts	Little Staffing required	Funding Potential is High	Low Maintenance/Operations	High Political Support	Has a Local Champion	Has Public Support	State Authorized	Local Authority Exists	Potential Legal Challenge is High	Action Benefit is High	Action Cost is Low WF	High Economic Goal Contribution	Outside Funding Not Required	Land/Water Effect is Low	Low Endangered Species Effect	HAZMAT Waste Site Effect is Low	Environmental Effect is low	Federal law Compliant is High	Total Priority Score
Obtain and/or expand audible warning units to all uncovered community areas	3	9	2	2	3	3	2	2	3	2	3	3	3	3	3	2	3	2	3	1	2	2	3	2	3	69
Distribute safe room/shelter in place information to schools, special needs and community populations	3	9	0	2	3	3	2	2	2	2	3	3	3	3	3	3	3	3	1	1	2	2	3	3	3	67
Assist citizens to develop emergency preparedness, response and recovery plans.	3	9	6	6	3	3	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	85
Obtain/install an automated community wide rapid notification system.	3	9	6	6	3	3	2	2	1	1	2	2	2	3	3	3	3	1	2	1	3	2	3	3	3	72
Develop a media warning program to warn the community of a potential hazard event	3	9	4	4	3	3	3	2	3	2	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	80
Add hazard preparedness and response Information to a community web site	3	9	6	6	3	3	3	2	3	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	82
Obtain/distribute interoperable radios for all 1st responders	2	6	4	4	3	3	3	3	1	3	2	3	2	3	3	3	3	1	2	1	3	3	3	3	3	70
Train and equip 1st responders for search and rescue missions	2	6	0	0	3	3	3	1	2	1	2	3	2	3	3	3	2	2	2	2	3	3	3	3	3	60
Train and equip 1st responders to respond to Mass causality events and exercise response	2	9	0	2	3	3	3	1	2	1	2	3	2	3	3	3	2	1	1	1	3	3	3	3	3	62
Recruit/train and equip volunteers for CERT, a Medical Reserve Corps, SAFCOM, etc	2	6	4	4	3	3	3	2	2	2	2	3	3	3	3	2	3	2	2	2	3	3	3	3	3	71
Train 1st responders and community officials on the National Incident Management System	2	6	4	4	3	3	2	2	3	2	2	3	2	3	3	3	3	3	2	3	3	3	3	3	3	73
Train 1st responders and community officials on EOC Operations and the EOP	2	6	4	4	3	3	2	2	3	2	2	3	2	3	3	3	3	3	2	3	3	3	3	3	3	73
Obtain and continually update 911 technology and capabilities	3	9	6	6	3	3	3	1	1	1	2	3	2	3	3	3	3	3	3	1	3	3	3	3	3	77
Obtain Crisis Management Software and Equipment for primary and secondary EOC's	2	6	4	4	3	3	3	1	1	1	1	3	2	3	3	3	2	2	2	1	3	3	3	3	3	65
Obtain/install emergency generators or "pigtails" for critical government facilities and fuel depots.	2	0	0	4	3	3	2	1	2	2	2	2	2	3	3	3	2	2	2	1	2	2	3	3	3	54

Table 7.17 "STAPLEE" Mitigation Actions Prioritization Table

Action/Project Description	High Community Acceptance	High effect on Loss of Life-WF=3	High Effect on Property Loss WF=2	High Effect on Economic Loss WF=2	Is Technical Feasibility	Is a Long-Term Solution	No Secondary Impacts	Little Staffing required	Funding Potential is High	Low Maintenance/Operations	High Political Support	Has a Local Champion	Has Public Support	State Authorized	Local Authority Exists	Potential Legal Challenge is High	Action Benefit is High	Action Cost is Low WF	High Economic Goal Contribution	Outside Funding Not Required	Land/Water Effect is Low	Low Endangered Species Effect	HAZMAT Waste Site Effect is Low	Environmental Effect is low	Federal law Compliant is High	Total Priority Score
Assist non-governmental critical facilities to obtain emergency generators and/or pigtails	2	3	0	4	3	3	2	2	1	2	1	2	1	3	3	2	2	2	1	1	2	2	3	3	3	53
Develop EOP ESF's/annexes for all hazards that may impact the community	1	6	4	4	3	3	3	2	3	2	2	3	2	3	3	3	3	2	2	1	3	3	3	3	3	70
Review/revise the Emergency Operations Plan annually and after each disaster	1	6	4	4	3	3	3	2	3	2	2	3	2	3	3	3	3	2	2	1	3	3	3	3	3	70
Obtain funding to add disaster shelters as necessary	3	6	0	0	3	3	2	2	1	2	3	3	3	3	3	2	3	1	1	1	2	2	3	3	3	58
Coordinate a shelter program with the Red Cross and volunteers	3	6	0	0	3	3	2	2	3	3	3	3	3	3	3	2	3	3	2	3	2	2	3	3	3	66
Assist schools to implement a disaster phone line	3	9	6	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	84
Assist utilities in developing restoration and mitigation plans	2	4	0	4	3	3	3	2	2	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	66
Assist businesses, schools, special needs and public facilities to post evacuation routes	3	4	0	2	3	3	3	2	3	3	3	2	3	3	3	2	3	3	1	3	2	3	3	3	3	66
Obtain signage to direct the public evacuation during hazard events	2	4	0	2	3	3	3	2	3	2	2	2	2	3	3	3	3	3	1	3	2	3	3	3	3	63
Develop/implement/maintain the community's Mitigation Action Plan	2	9	6	6	3	3	3	2	2	2	2	3	2	3	3	3	3	3	3	3	3	3	3	3	3	81
Develop a process to ensure that all damages resulting from a disaster event is reported to the National Weather Service	1	0	2	2	3	3	3	2	2	2	2	3	2	3	3	3	3	3	3	2	3	3	3	3	3	62
Obtain funds for critical government departments to develop Continuity of Operations Plans	2	3	4	4	3	3	3	2	1	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	69
Assist businesses to develop Business Continuity Plans	1	3	4	6	3	3	3	2	1	2	2	2	1	3	3	3	3	3	3	1	3	3	3	3	3	67
Assist communities in developing strategies to prevent loss of public records	2	0	4	4	3	3	3	2	2	2	2	2	2	3	3	3	3	3	2	2	3	3	3	3	3	65
Annually review and update hazard related legislation	2	3	4	4	3	3	3	2	3	2	3	3	2	3	3	3	2	2	2	3	2	2	2	2	2	65
Ensure mutual aid, shelter, response, mass casualty & recovery agreements are current	2	6	6	6	3	3	3	2	3	2	3	3	2	3	3	3	2	2	2	3	2	2	2	2	2	72

Table 7.17 "STAPLEE" Mitigation Actions Prioritization Table

Action/Project Description	High Community Acceptance	High effect on Loss of Life-WF=3	High Effect on Property Loss WF=2	High Effect on Economic Loss WF=2	Is Technical Feasibility	Is a Long-Term Solution	No Secondary Impacts	Little Staffing required	Funding Potential is High	Low Maintenance/Operations	High Political Support	Has a Local Champion	Has Public Support	State Authorized	Local Authority Exists	Potential Legal Challenge is High	Action Benefit is High	Action Cost is Low WF	High Economic Goal Contribution	Outside Funding Not Required	Land/Water Effect is Low	Low Endangered Species Effect	HAZMAT Waste Site Effect is Low	Environmental Effect is low	Federal law Compliant is High	Total Priority Score
Assist critical sites to develop and provide to EMA an emergency plan	2	6	4	4	3	3	3	3	2	3	2	2	2	3	3	3	3	3	3	2	3	3	3	3	3	74
Insure building code compliance Inspections are conducted on construction projects	2	3	4	4	3	3	2	2	3	2	2	2	2	3	3	2	3	3	2	3	2	2	2	2	3	64
Identify/deliver CPR, First Aid, Search and Rescue, NIMS, etc. disaster training to volunteers	2	6	4	4	3	3	2	2	2	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	71
Improve/upgrade training facilities & equip at the Scott County Regional Training Facility	2	6	4	4	3	3	2	2	2	2	2	3	2	3	3	3	2	1	2	1	2	3	3	3	3	66
Identify/reserve county land as a staging area to store and process storm debris.	2	0	0	2	3	3	1	2	2	2	2	2	2	2	1	2	2	1	1	1	2	2	2	2	2	43
Identify/obtain resources needed to process storm debris. (I.e., chippers, backhoes, etc.)	2	0	0	2	3	3	3	2	1	2	2	2	2	3	3	3	1	1	1	1	2	2	2	2	3	48
Develop plan to trim and clear trees in county owned parkland.	2	0	2	2	3	3	2	2	2	2	2	2	2	3	3	2	3	3	2	3	2	2	2	2	3	56
Modify zoning ordinances allowing temporary debris staging areas	2	0	0	2	3	3	2	2	3	3	2	2	2	2	1	2	2	3	1	3	2	2	2	2	3	51
Distribute drought awareness and response to the public	2	0	2	2	3	3	3	2	3	2	3	3	2	3	3	3	3	3	2	3	3	3	3	3	3	65
Support the DNR's pending rules for water use conservation plans for all cities applying for new high-capacity municipal wells.	2	0	0	2	3	3	2	2	3	2	2	2	2	3	3	2	3	3	3	3	2	2	3	3	3	58
Distribute earthquake preparedness and response information to special needs, schools and the community	2	3	4	4	3	3	3	2	3	3	2	2	2	3	3	3	2	3	2	3	3	3	3	3	3	70
Distribute Extreme Temperature preparation/response information to school, special needs and the community	2	3	0	2	3	3	3	2	3	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	64
Identify citizens subject to suffering from extreme temperatures	3	3	0	0	3	3	3	2	3	2	3	3	3	3	3	3	3	3	1	3	3	3	3	3	3	65
Distribute flood preparedness and response information to schools, special needs and the community	3	6	6	6	3	3	3	2	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	82

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Train and equip 1st responders to respond to flood events and exercise response	3	6	6	6	3	3	2	2	3	2	3	3	3	3	3	3	2	1	3	1	3	2	3	3	3	75
Train and equip a swift water rescue team	2	6	0	2	3	3	2	1	1	1	2	2	2	3	3	3	2	1	1	1	2	3	3	3	3	55
Adopt/enforce an NFIP flood plain management plan	2	3	4	4	3	3	2	2	3	2	2	2	2	3	3	2	3	3	3	3	2	2	3	3	3	67
Adopt/enforce floodplain legislation requiring new structures be elevated above the BSE	2	3	6	4	3	3	2	2	3	3	2	2	2	3	3	2	3	3	3	3	2	2	3	3	3	70
Obtain and maintain NFIP FIRMS to identify community flood plains	2	3	6	6	3	3	3	2	3	2	2	2	2	3	3	2	3	3	3	2	2	3	3	3	3	72
Obtain funding to retrofit, elevate or relocate repetitive flooding structures in flood plains	2	3	6	6	3	3	2	2	1	2	2	2	2	3	3	2	3	1	2	1	2	3	3	3	3	65
Adopt/enforce flood plain wetlands and watershed land use zoning	2	3	4	4	3	3	2	3	3	3	2	2	2	3	3	2	3	3	2	3	2	2	3	3	3	68
Assist in developing storm water management plans for the communities	2	3	4	4	3	3	2	2	3	2	2	2	2	3	3	2	3	3	2	3	2	2	3	3	3	66
Install/replace/maintain culverts and bridges to reduce flooding	2	3	4	4	3	3	2	2	1	2	3	3	2	3	3	2	2	1	2	1	2	2	3	3	3	61
Obtain equipment to mitigate street bridge, culverts, and road flooding	2	3	4	4	3	3	3	2	1	2	2	2	2	3	3	3	1	1	2	1	3	3	3	3	3	62
Update Land Use Plans to identify areas where development should be restrictive	1	3	4	4	3	3	3	2	3	2	2	1	1	3	3	2	2	3	3	3	2	2	3	2	3	63
Perform a study of the feasibility of community waterways flood control	2	3	4	4	3	3	3	2	3	2	2	2	2	3	3	2	3	3	3	3	2	2	3	2	3	67
Obtain equipment to build water flow and water retention areas to mitigate flooding	2	3	4	4	3	3	3	2	1	2	2	2	2	3	3	3	2	1	2	1	3	3	3	3	3	63
Develop a Dam/Levee hazard identification and inspection program with DNR	2	6	6	4	3	3	2	2	3	2	2	2	2	3	3	2	3	3	3	3	3	3	3	3	3	74
Identify the communities vulnerability to a Dam/Levee failure	2	9	6	6	3	3	3	2	2	2	2	2	2	3	3	3	3	3	2	3	2	3	3	3	3	78
Complete flood damage study for downtown Jordan	2	6	4	4	3	3	3	2	2	2	3	3	3	3	3	2	3	3	2	3	2	3	3	3	3	73
Obtain grant funding to study for Markley Lake and O'Dowd Lake outlet improvements	2	3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2	3	2	3	3	3	3	61

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Complete updated floodplain maps for staff and public use	1	3	2	2	3	3	3	2	3	2	2	2	2	2	3	3	3	3	2	3	3	3	3	3	3	64
Reconstruct outlet structure on Prior Lake	2	3	2	2	3	3	3	2	2	1	2	2	2	2	3	3	2	1	2	1	2	2	3	2	3	55
Clean out drainage channel from Prior Lake to Minnesota River.	2	3	4	4	3	3	2	2	1	2	2	2	2	3	3	3	2	1	2	1	2	2	3	2	3	59
Acquire/prepare property to increase storm water storage capacity for Spring Lake TWP	2	3	4	4	3	3	2	2	1	2	2	2	2	3	3	3	1	1	2	1	2	2	3	2	3	58
Conduct a study to identify hillside erosion cost/benefit on Scott Cnty Rd 51 and 6.	2	0	2	2	3	3	3	2	3	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	63
Develop solutions If hillside erosion studies has a cost/benefit and achievable methods	2	3	2	2	3	3	2	2	2	2	2	2	2	2	3	2	2	2	2	1	2	3	3	2	3	56
Obtain additional temporary road closure supplies (i.e. signs, cones barrels, and concrete barriers.	2	3	0	0	3	3	3	2	2	2	2	2	2	3	3	3	2	2	1	2	3	3	3	3	3	57
Require floodplain and shoreline ordinances to comply with MN Department of Natural Resources requirements	1	3	2	2	3	3	2	2	3	3	2	2	1	3	3	2	3	3	2	3	2	3	3	2	3	61
Assist each local government to Adopt Elevation standards legislation for new structures	1	3	4	4	3	3	2	2	2	2	1	1	1	3	3	2	3	3	2	3	3	3	3	3	3	63
Require a floodplain capacity standard.	2	3	2	2	3	3	2	2	3	3	2	2	2	3	3	2	3	3	2	3	2	3	3	2	3	63
Require peak runoff rate control standards for new developments.	2	3	2	2	3	3	2	2	3	2	1	2	2	3	3	2	3	3	2	3	2	3	3	2	3	61
Require an analysis of landlocked areas prior to the installation of outlets	1	0	2	2	3	3	3	2	3	2	1	1	2	3	3	2	3	3	2	3	2	3	3	3	3	58
Require analysis for major drainage alterations.	2	0	2	2	3	3	3	2	3	2	2	2	2	3	3	2	3	3	2	3	2	3	3	3	3	61
Coordinate between Scott Watershed Mgnt Organization and Local Governments storm water discharges to ensure sufficient downstream capacity	2	3	2	2	3	3	2	2	3	3	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	66
Promote disconnected storm water management and low impact development.	2	0	2	2	3	3	2	2	3	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	62
Work with Scott County Public Works to plan and discuss future public ditch operations.	2	0	0	2	3	3	3	2	3	2	2	2	2	3	3	3	3	3	2	3	2	3	3	3	3	60

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Coordinate with other local units of government with maintenance of outlet structures.	2	0	0	2	3	3	3	2	3	2	2	2	2	3	3	3	3	3	2	3	2	3	3	3	3	60
Coordinate with Municipal Separate Storm Sewer Systems permit requirements.	2	0	0	2	3	3	3	2	3	2	2	2	2	3	3	3	3	3	2	3	2	3	3	3	3	60
Promote and facilitate regional storm water management.	2	0	0	2	3	3	3	2	3	2	2	2	2	3	3	3	3	3	2	3	2	3	3	3	3	60
Conduct a feasibility study on the need for a new outlet on O'Dowd/Thole lake.	2	0	2	2	3	3	2	1	2	2	2	2	2	3	3	3	3	3	2	2	2	3	3	3	3	58
Work on a Hwy 169 area drainage feasibility assessment in Louisville Township.	2	0	2	2	3	3	2	2	2	2	2	2	2	3	3	3	3	3	2	2	3	3	3	3	3	60
Work with the City of Jordan on flood damage reduction efforts.	2	0	2	2	3	3	2	1	2	2	2	2	2	3	3	3	3	3	2	2	2	3	3	3	3	58
Work with local units of government to insure completion of local flooding risk projects.	2	0	2	2	3	3	2	1	2	2	2	2	2	3	3	3	3	3	2	2	2	3	3	3	3	58
Communicate with local governments to understand local flooding risks.	2	0	0	2	3	3	3	2	3	2	2	2	2	3	3	3	3	3	2	3	2	3	3	3	3	60
Use digital terrain modeling to identify potential flooding areas.	1	3	2	2	3	3	3	2	3	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	65
Distribute Hazard Materials event preparedness and response information to schools, special needs and the community	2	3	2	2	3	3	3	2	3	2	2	2	3	3	3	3	3	3	2	3	3	3	3	3	3	67
Educate the public on common hazardous materials in home	2	3	2	2	3	3	3	2	3	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	66
Educate schools special needs, and the community on chemical hazards in the area and evacuation routes.	3	3	2	2	3	3	3	2	3	2	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	70
Train and equip 1st responders to respond to hazmat incidents and exercise response	2	3	2	2	3	3	3	1	1	2	2	2	2	3	3	3	2	2	2	1	3	3	3	3	3	59
Maintain inventories of Mark I packs to respond to chemical agents	2	3	2	2	3	3	3	2	3	2	2	2	2	3	3	3	3	2	2	2	3	3	3	3	3	64
Obtain and equip a hazardous materials response vehicle	2	3	2	2	3	3	3	2	1	2	2	2	2	3	3	3	2	1	2	1	3	3	3	3	3	59
Develop evacuation perimeters and routes for high risk hazmat sites	2	3	0	2	3	3	3	2	3	2	2	2	2	3	3	3	3	3	2	3	2	3	3	3	3	63

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Maintain and annually update an inventory of hazmat sites.	2	3	2	2	3	3	3	2	3	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	66
Develop/maintain a countywide hazard materials response plan	2	3	2	2	3	3	3	2	3	2	2	2	2	3	3	3	3	3	2	2	3	3	3	3	3	65
Obtain monitoring equipment for high risk hazmat sites	2	3	2	2	3	3	2	2	1	2	1	1	1	3	3	3	2	1	2	1	2	3	3	3	3	54
Obtain hazmat containment equipment for water, roads/railroads	2	3	4	2	3	3	2	2	1	2	1	1	1	3	3	3	2	1	2	1	2	3	3	3	3	56
Enforce SARA. Title III/Tier II facility hazardous materials reporting.	2	3	2	2	3	3	3	2	3	2	2	2	2	3	3	2	3	3	2	3	3	3	3	3	3	65
Adopt/enforce hazardous materials site building setback legislation	1	3	4	4	3	3	2	2	1	2	1	1	1	3	3	3	2	1	2	1	2	3	3	3	3	57
Obtain NOAA weather radios for schools, government and special needs facilities	3	6	2	2	3	3	3	2	2	2	3	3	3	3	3	3	3	2	1	2	3	3	3	3	3	69
Distribute High Wind preparedness and response information to special needs, schools and the community	3	9	4	4	3	3	3	2	3	2	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	80
Train/equip 1st responders to respond to High Wind events and exercise response	2	3	0	2	3	3	3	3	2	2	2	2	2	3	3	3	2	1	1	1	3	3	3	3	3	58
Adopt/enforce comprehensive Building Code legislation	2	6	4	4	3	3	2	2	3	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	73
Develop a debris clearance program that can be utilized countywide	2	0	0	2	3	3	2	2	3	2	2	2	2	3	3	2	3	3	2	3	3	3	3	3	3	59
Obtain funding to build mobile home community storm shelters	2	6	0	2	3	3	2	2	1	2	2	2	2	3	3	3	2	1	2	1	2	3	3	3	3	58
Adopt/enforce mobile home tie down and skirting legislation	2	6	2	2	3	3	2	2	3	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	68
Identify storm shelters in the development of master plans for county parks	2	6	0	2	3	3	2	2	1	2	2	2	2	3	3	3	2	1	2	1	2	3	3	3	3	58
Research the feasibility of the burying of power lines in all new rural cluster subdivisions.	2	0	2	2	3	3	2	2	2	2	2	2	2	3	3	2	3	3	2	2	2	3	3	3	3	58
Distribute Meth Lab awareness information to schools and the community	3	3	0	2	3	3	3	2	3	2	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	68

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Train/equip 1st responders to respond to Meth Lab incidents	2	3	2	2	3	3	3	2	1	2	2	2	2	3	3	3	2	1	2	1	2	3	3	3	3	58
Join/participate in local state and federal drug task forces	2	3	2	2	3	3	3	2	3	2	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	69
Distribute Ice/Snow preparedness and response information to schools, special needs and the community	3	6	4	2	3	3	3	2	3	2	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	75
Establish with the media and NWS an Ice and snow community alert system	3	6	2	2	3	3	3	2	3	2	3	2	3	3	3	3	3	3	2	3	3	3	3	3	3	72
Train and equip 1st responders to respond to an Ice/Snow event and exercise response	2	3	0	2	3	3	2	1	1	2	2	2	2	3	3	3	2	1	2	1	3	3	3	3	3	55
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.)	2	3	2	2	3	3	2	2	1	2	2	2	2	3	3	3	1	1	2	1	2	3	3	3	3	56
Assist communities to establish an Ice/snow removal program for roadways	2	3	2	2	3	3	2	2	3	2	2	2	2	3	3	3	3	3	2	2	2	3	3	3	3	63
Distribute to the community information on areas of potential landslides or mudslides	2	3	2	2	3	3	3	2	3	2	1	1	1	3	3	3	2	2	1	3	3	3	3	3	3	60
Develop with the DOT and media a process to alert the public on landslide/mudslide locations	3	3	2	2	3	3	3	2	2	2	1	1	1	3	3	3	2	2	1	3	3	3	3	3	3	60
Assist in obtaining equipment to respond to landslide/mudslide events	2	0	2	2	3	3	2	2	1	2	1	1	1	3	3	3	1	1	2	1	2	3	3	3	3	50
Develop a map of potential landslide and mudslide areas	2	3	2	2	3	3	2	2	1	2	1	1	1	3	3	3	1	1	2	1	2	3	3	3	3	53
Adopt/enforce landslide/mudslide legislation to restrict development in hazard areas	1	3	2	2	3	3	2	2	1	2	1	1	2	3	3	3	2	2	2	3	3	3	3	3	3	58
Distribute land subsidence (sinkhole) awareness information to the public	2	3	2	2	3	3	2	2	1	2	1	1	2	3	3	3	2	2	2	3	2	3	3	3	3	58
Develop with the appropriate agencies an alerting process to alert the public of sinkhole locations	2	3	2	2	3	3	2	2	1	2	1	1	1	3	3	3	2	2	2	3	2	3	3	3	3	57
Assist in obtaining equipment to respond to Land subsidence events	2	0	2	2	2	2	2	2	1	2	1	1	1	3	3	3	1	1	2	1	2	3	3	3	3	48

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Distribute lightning awareness information to the public	2	3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	62
Develop with media and the NWS a lightning alerting process for the public	2	3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	62
Distribute Pandemic awareness and response information schools, special needs and the community	3	6	0	2	3	2	3	2	3	2	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	70
Develop a program to direct citizens to the Department of Public Health and CDC Web-page for Pandemic Event preparedness	3	6	0	2	3	2	3	2	3	2	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	70
Train/equip 1st responders to respond to a Pandemic/Epidemic event and exercise response	2	3	0	2	3	2	3	2	2	2	2	2	2	2	3	3	2	1	2	1	2	3	3	3	3	55
Assist in developing a 1st responder infectious disease early vaccination program	2	3	0	0	3	3	2	1	3	2	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	63
Train/equip 1st responders on agriculture and vector disease and infection response	2	0	2	2	3	3	2	2	2	2	2	2	2	3	3	2	2	2	2	2	2	3	3	3	3	56
Assist in developing a traffic flow and security plan for Pandemic vaccination sites	2	3	0	2	3	3	2	2	3	2	2	2	2	3	3	2	2	2	2	2	3	3	3	3	3	59
Adopt/enforce Pandemic Flu legislation to cancel large public and private events	2	6	0	2	3	3	3	2	3	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	67
Assist in developing procedures to prevent an outbreak of agriculture related hazards	2	0	2	2	3	3	2	2	2	2	2	2	2	3	3	3	2	2	2	2	2	2	2	2	3	54
Identify resources to combat the Emerald Ash Borer.	1	0	2	2	3	2	2	2	2	2	2	2	1	3	3	3	3	3	2	3	2	3	3	3	3	57
Obtain equipment for control and removal of agriculture infestation	2	0	2	2	3	3	2	2	2	2	2	2	2	3	3	3	2	2	2	2	2	2	3	2	3	55
Identify and plan for combating other agriculture infestation located in Scott County.	2	0	2	2	3	3	2	2	2	2	2	2	2	3	3	2	2	2	2	2	2	2	3	2	3	54
Develop a program for the hazards and boating safety of river usage during both low and hi river flow	2	3	2	2	3	3	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	3	2	2	55

Table 7.17 "STAPLEE" Mitigation Actions Prioritization Table

Action/Project Description	High Community Acceptance	High effect on Loss of Life-WF=3	High Effect on Property Loss WF=2	High Effect on Economic Loss WF=2	Is Technical Feasibility	Is a Long-Term Solution	No Secondary Impacts	Little Staffing required	Funding Potential is High	Low Maintenance/Operations	High Political Support	Has a Local Champion	Has Public Support	State Authorized	Local Authority Exists	Potential Legal Challenge is High	Action Benefit is High	Action Cost is Low WF	High Economic Goal Contribution	Outside Funding Not Required	Land/Water Effect is Low	Low Endangered Species Effect	HAZMAT Waste Site Effect is Low	Environmental Effect is low	Federal law Compliant is High	Total Priority Score
Develop a plan and identify funding for maintenance of the 4' Channel from River Mile 14.7 (Savage) to River Mile 25 (Shakopee).	2	0	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	51
Develop a plan to provide for the safe coexistence of Commercial and Recreational Navigation.	2	3	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	54
Distribute to schools and the public terrorism preparedness and awareness information	3	3	2	2	3	2	3	2	2	2	2	2	3	3	3	3	3	3	2	3	3	3	3	3	3	66
Educate government officials, special needs and schools on procedures for handling suspicious mail	3	3	2	2	3	3	3	2	2	2	2	2	3	3	3	3	3	3	2	3	3	3	3	3	3	67
Post terrorism and bomb identification information in buildings and schools	3	3	2	2	3	3	3	2	2	2	2	2	3	3	3	3	3	3	2	3	3	3	3	3	3	67
Identify/distribute to appropriate officials potential terrorism targets information	3	3	2	2	3	3	3	2	2	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	66
Train/equip all terrorism 1st responders in terrorism attack techniques	2	3	2	2	3	3	3	1	2	2	2	2	2	3	3	3	2	1	2	1	3	3	3	3	3	59
Train/equip 1st responders on CBRNE agents, responding to a CBRNE event and exercise response	2	3	2	2	3	3	3	1	2	2	2	2	2	3	3	3	2	2	2	2	3	3	3	3	3	61
Fund/maintain a trained bomb dog and handler to serve the entire county	2	3	2	2	3	3	2	1	2	1	2	2	2	3	3	3	2	1	2	2	3	3	3	3	3	58
Assist schools and medical entities in developing terrorism/CBRNE preparedness and response plans	3	3	2	2	3	3	3	2	3	2	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	70
Develop evacuation plans for identified terrorism targets	2	3	2	2	3	3	3	2	2	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	65
Distribute to schools, special needs and the public fire safety and response information	2	6	4	2	3	3	3	2	3	2	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	74
Educate school, special needs and citizens on fire extinguisher use	3	6	4	2	3	3	3	2	3	2	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	75
Assist in obtaining a fire education-training trailer for the jurisdiction.	1	6	4	2	3	3	3	1	1	1	2	2	2	3	3	3	2	1	2	1	3	3	3	3	3	61

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Train/equip 1st responders to respond to fire incidents and exercise response	3	6	4	2	3	3	3	2	3	2	3	3	3	3	3	3	3	1	2	1	3	3	3	3	3	71
Obtain/maintain fire fighting supplies at all fire departments	3	6	4	2	3	3	2	2	3	2	3	3	3	3	3	3	3	2	2	2	3	3	3	3	3	72
Obtain fire equipment to combat fires in high rise buildings	2	6	4	2	3	3	3	2	3	2	2	2	2	3	3	3	2	1	2	1	3	3	3	3	3	66
Train fire 1st responders to at least the "Awareness and Operations level"	3	3	4	2	3	3	3	2	3	2	3	3	3	3	3	3	3	3	2	2	3	3	3	3	3	71
Ensure that NFPA standards and codes are followed and that fire codes are enforced with citations issued for violations.	3	6	4	2	3	3	3	2	3	2	3	3	3	3	3	3	3	2	2	3	3	3	3	3	3	74
Develop fire plans for all major businesses and critical facilities	3	6	4	2	3	3	3	2	3	2	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	75
Adopt/enforce sprinkler and smoke alarm legislation for all facilities	2	6	4	2	3	3	3	3	2	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	71
Obtain fire equipment to combat fires where water hydrants are non-existent	3	6	4	2	3	3	3	2	2	2	2	2	2	3	3	3	2	1	2	1	3	3	3	3	3	66
Acquire and install six inch water mains and hydrants community wide	2	6	4	2	3	3	2	2	1	2	2	2	2	3	3	3	2	1	2	1	2	3	3	3	3	62
Adopt/enforce housing code legislation to limit number of citizens in housing	2	6	2	2	3	3	3	2	2	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	68
Assist power utilities in implementing a power outage public alerting program	3	3	2	2	3	3	3	2	2	2	2	2	2	3	3	3	2	3	2	3	3	3	3	3	3	65
Train 1st responders on dealing with downed power lines during a response	3	3	2	2	3	3	3	2	2	2	2	2	2	3	3	3	3	2	2	2	3	3	3	3	3	64
Identify special needs populations that rely on electricity for medical equipment	3	3	0	0	3	3	3	2	3	2	3	3	3	3	3	3	3	3	1	3	3	3	3	3	3	65
Develop with the water utilities a process to alert the public of water contamination	3	3	0	0	3	3	3	2	3	2	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	66
Train/equip utility workers with water testing and monitoring processes and equipment	2	3	0	2	3	2	3	1	2	2	2	2	2	3	3	3	2	2	2	2	3	3	3	3	3	58
Develop a wellhead protection program to upgrade wells in the 100-year flood plain.	2	3	0	2	3	2	3	2	2	2	2	2	2	3	3	3	2	2	2	3	3	3	3	3	3	60

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Adopt infiltration standards within the watershed district based on Pepin Total Maximum Daily Load	2	0	0	2	3	2	3	2	2	2	2	2	2	3	3	3	3	3	2	3	2	3	3	2	2	56
Adopt minimum, consistent runoff peak standards within the watershed district.	2	0	0	2	3	2	3	2	2	2	2	2	2	2	2	2	3	3	2	3	2	2	3	2	2	52
Reduce/stop groundwater contamination of fens and trout streams (Eagle Creek and Savage Fen) by identifying sources and limiting/stopping contaminant release.	2	0	0	2	3	3	2	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2	3	2	2	52
Identify ways to maintain supply of groundwater to fens and trout streams with the watershed district.	2	0	0	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	3	2	2	50
Analyze data to document trends on issues such as water usage, contamination, quality, and availability.	2	0	0	2	3	3	3	2	2	2	2	2	2	2	2	2	3	3	2	3	3	3	3	3	3	57
Determine fen and trout stream recharge areas.	2	0	0	2	3	3	3	2	2	2	2	2	2	2	2	2	3	3	2	3	3	3	3	3	3	57
Develop a channel lobby for funding to assess unregulated discharges in the MN River Basin.	2	0	0	2	3	3	3	2	2	2	2	2	2	2	2	2	3	3	2	3	3	3	3	3	3	57
Work with the State and stakeholders to establish a Mn. River basin commission to coordinate Mgnt, implement projects and programs of common benefit, and monitor performance of water management entities	2	0	0	2	3	3	3	2	2	2	2	2	2	2	2	2	3	3	2	3	3	3	3	3	3	57
Promote conservation and wise use of groundwater through education and public information.	2	0	0	2	3	3	3	2	2	2	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	63
Establish Stormwater infiltration criteria to protect the quality of groundwater.	2	0	0	2	3	3	2	2	3	3	3	3	3	3	3	3	3	3	2	3	2	2	3	2	2	60
Continue well decommissioning through cost sharing incentive programs.	2	0	0	2	3	3	2	2	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	64
Improve groundwater monitoring in the Watershed Management Organization.	2	0	0	2	3	3	2	1	3	2	2	2	2	2	2	2	3	3	2	3	2	2	3	2	2	52

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Work with the Metropolitan Council to complete a model of the metro region.	2	0	0	2	3	3	2	2	3	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	60
Support wellhead protection efforts by providing staff time and technical assistance.	2	0	0	2	3	3	3	2	3	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	61
Support county area planning by using the Metro Councils model to assess ground water impact of continued development.	2	0	0	2	2	3	3	2	2	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	59
Distribute Wildfire awareness, preparedness information to schools and the public	3	3	2	2	3	3	3	2	3	2	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	70
Assist DNR in distributing USFS fuels reduction information (Firewise.)	2	3	2	2	3	3	3	2	3	2	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	69
Publish outdoor burn ban info in area newspapers during Wild-land fire seasons.	3	3	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	72
Develop with the media and fire responders a public alerting process for the public	3	3	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	72
Train/equip 1st responders on techniques to respond to wild-land fire events.	2	3	2	2	3	3	3	1	2	1	2	2	2	3	3	3	2	1	2	1	3	3	3	3	3	58
Obtain specialized equipment to combat wildfires. (4-wheel drive brush fire truck)	2	3	2	2	3	3	3	2	2	2	2	2	2	3	3	3	2	1	2	1	3	3	3	3	3	60
Exercise fire response regularly for residences, businesses and industry	2	3	2	2	3	3	3	2	2	2	2	2	2	3	3	3	3	2	2	2	3	3	3	3	3	63
Identify Private contractors to assist in wild-land fire response	2	3	2	2	3	3	3	2	3	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	66
Adopt/enforce wildfire legislation that includes burning bans	2	3	2	2	3	3	3	2	3	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	66

SECTION 8
PLAN MONITORING, EVALUATING AND UPDATING

8.1 INTRODUCTION

Periodic revisions and updates of the Hazard Mitigation Plan are required to ensure that the goals of the Plan are kept current, taking into account potential changes in hazard vulnerability and mitigation priorities. In addition, revisions may be necessary to ensure that the Plan is in full compliance with applicable federal and state regulations.

8.2 MONITORING, EVALUATION AND UPDATING OVERVIEW

The Scott County Mitigation Committee intends to remain intact as the organization responsible for monitoring, evaluating and updating this Plan. The Scott County EMA Director shall continue to act as the coordinator for the Mitigation Committee. Each participating jurisdiction is expected to maintain representation on the committee which shall fulfill the monitoring, evaluation and updating responsibilities identified in this Section. The Scott County Hazard Mitigation Plan will be monitored, evaluated and updated for the following purposes:

1. Maintain the currency of hazard and risk information.
2. Ensure that mitigation projects and actions reflect the priorities of the county and its constituents.
3. To comply with Federal Emergency Management Agency (FEMA) requirements, and maintain the county's eligibility for federal disaster assistance and mitigation grants.

Requirement §201.6(c)(4)(i): The plan maintenance process shall include a section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.
A. Does the new or updated plan describe the method and schedule for monitoring the plan? (For example, does it identify the party responsible for monitoring and include a schedule for reports, site visits, phone calls, and meetings?)
B. Does the new or updated plan describe the method and schedule for evaluating the plan? (For example, does it identify the party responsible for evaluating the plan and include the criteria used to evaluate the plan?
C. Does the new or updated plan describe the method and schedule for updating the plan within the five-year cycle?

CRS Step 8: Draft an Action Plan: Credit is based on how a community monitors and evaluates its plan on an annual basis and updates it on a five-year cycle.

It is recognized that individual commitments change over time, and it shall be the responsibility of each department to inform the mitigation committee coordinator of any changes in representation by formal letter. The Coordinator will strive to keep the committee makeup as a uniform representation of planning partners and stakeholders within the planning area. The planning committee shall be informed at the time of each change in representation on the committee

8.3 SCHEDULE FOR MONITORING THE PLAN

The Mitigation Committee shall be responsible for monitoring progress on, and evaluating the effectiveness of, the Plan, and documenting this in an annual progress report. During each year, and prior to the annual meeting of the Mitigation Committee, representatives will collect and

process the annual reports from the departments, agencies and organizations involved in implementing mitigation projects or activities, or conduct phone calls and meetings with persons responsible for initiating and/or overseeing the mitigation projects to obtain progress information. Further, they shall obtain from their municipal supervisor/mayor or clerk any public comments made on the plan. The Mitigation Committee representatives shall be expected to document, as needed and appropriate:

- Hazard events and losses occurring in their jurisdiction including their nature and extent and the effects that hazard mitigation actions have had on impacts and losses,
- Progress on the implementation of mitigation actions, including efforts to obtain outside funding for mitigation actions
- Any obstacles or impediments to the implementation of actions
- Additional mitigation actions believed to be appropriate and feasible
- Public and stakeholder input and comment on the Plan.

Mitigation Committee representatives may use the progress reporting forms, Worksheets #1 and #3 in the FEMA 386-4 guidance document, to facilitate collection of progress data and information on specific mitigation actions. Local progress reports shall be provided to the Committee Coordinator at least two weeks prior to the annual Mitigation Committee plan review meeting.

8.4 SCHEDULE AND METHODOLOGY FOR PLAN EVALUATION

The evaluation of the mitigation plan is an assessment of whether the planning process and actions have been effective, if the Plan goals are being reached, and whether changes are needed. The Plan will be evaluated on an annual basis to determine the effectiveness of the programs, and to reflect changes that may affect mitigation priorities or available funding.

The status of the Plan will be discussed and documented at an annual plan review meeting of the Mitigation Committee, to be held in the month of March. In February at least one month before the annual plan review meeting, the Scott County Mitigation Plan Coordinator will advise Mitigation Committee members of the meeting date, agenda and expectations of the members.

The Mitigation Coordinator will be responsible for calling and coordinating the annual plan review meeting, and assessing progress toward meeting plan goals and objectives. These evaluations will assess whether:

- Goals and objectives address current and expected conditions.
- The nature or magnitude of the risks has changed.
- Current resources are appropriate for implementing the Mitigation Plan and if different or additional resources are now available.
- Actions were cost effective.
- Schedules and budgets are feasible.
- Implementation problems, such as technical, political, legal or coordination issues with other agencies exist.
- Outcomes have occurred as expected.
- Changes in county resources impacted plan implementation (e.g., funding, personnel, and equipment).

- New agencies/departments/staff should be included, including other local governments as defined by 44 CFR 201.6.
- Documentation for hazards that occurred within the jurisdiction during the last year.

Specifically, the Mitigation Committee will review the mitigation goals, objectives, and activities/projects using performance based indicators, including:

- New agencies/departments created that have authority to implement mitigation actions or are required to meet goals, objectives, and actions
- Project evaluation based on current needs of the mitigation plan
- Project completion regarding progress of proposed or ongoing actions
- Under/over spending regarding proposed mitigation action budgets
- Achievement of the goals and objectives
- Resource allocation to note if resources are required to implement mitigation activities
- Timeframes-comment on whether proposed schedules are sufficient to address actions
- Budgets-note if budget basis should be changed or is sufficient
- Lead/support agency commitment-note if there is a lack of commitment on the part of lead or support agencies
- Resources regarding whether resources are available to implement actions
- Feasibility –comment regarding whether certain goals, objectives, or actions prove to be unfeasible

Finally, the Mitigation Committee will evaluate how other programs and policies have conflicted or augmented planned or implemented measures, and shall identify policies, programs, practices, and procedures that could be modified to accommodate hazard mitigation actions. Other programs and policies can include those that address:

- Economic Development
- Environmental Preservation & Permitting
- Historic Preservation
- Redevelopment
- Health and/or safety
- Recreation
- Land use/zoning
- Public Education and Outreach
- Transportation

The Mitigation Committee may refer to the evaluation forms, Worksheets #2 and #4 in the FEMA 386-4 guidance document to assist in the evaluation process.

The Mitigation Committee Coordinator shall be responsible for preparing an Annual Mitigation Plan Progress Report, based on the provided local annual progress reports from each department presented at the annual Mitigation Committee meeting, and other information as appropriate and relevant. These annual reports will provide data for the 5-year update of this Mitigation Plan and will assist in pinpointing implementation challenges. By monitoring the implementation of the Plan on an annual basis, the Mitigation Committee will be able to assess which projects are completed, which are no longer feasible, and what projects may require additional funding.

This annual progress report shall apply to all planning partners, and as such, shall be developed according to an agreed format and with adequate allowance for input and comment of each planning partner prior to completion and submission to the State Hazard Mitigation Officer. Each planning partner will be responsible for providing this report to its governing body for their review. During the annual Mitigation Committee meeting, the planning partners shall establish a schedule for the draft development, review, comment, amendment and submission of the Annual Mitigation Plan Progress Report to the State.

The Annual Mitigation Plan Progress Report shall be posted on the County's Hazard Mitigation Plan website to keep the public apprised of the Plan's implementation.

The Plan will also be evaluated and revised following any major disasters, to determine if the recommended actions remain relevant and appropriate. The risk assessment will also be revisited to see if any changes are necessary based on the pattern of disaster damages or if data listed in the Hazard profile Section of this Plan has been collected to facilitate the risk assessment. This is an opportunity to increase the community's disaster resistance and build a better and stronger community.

8.5 FIVE YEAR PLAN REVIEW SCHEDULE AND METHODOLOGY

44 CFR 201.6.d.3 requires that local hazard mitigation plans be reviewed, revised as appropriate, and resubmitted for approval in order to remain eligible for benefits awarded under DMA 2000. It is the intent of the Scott County Mitigation Committee to update this Plan on a five-year cycle from the date of this 2009 plan adoption.

To facilitate the update process, the Mitigation Plan Coordinator, with support of the Mitigation Committee, shall use the third annual Mitigation Committee meeting (March of 2013 assuming this Plan is approved in 2010) to develop and commence the implementation of a detailed Plan update program. The Mitigation Plan Coordinator shall invite representatives from the State to this meeting to provide guidance on plan update procedures. This program shall, at a minimum, establish who shall be responsible for managing and completing the Plan update effort, what needs to be included in the updated plan, and a detailed timeline with milestones to assure that the update is completed according to regulatory requirements.

At this meeting, the Mitigation Committee shall determine what resources will be needed to complete the update. The Mitigation Committee Coordinator will prepare a report: 1) describing the update requirements; 2) summarizing the staff analysis of the Plan, highlighting areas that require modification and identifying why the modification is needed, and; 3) providing detailed recommendations about how the Plan should be updated, noting any technical work that may be required. The report will be provided to Mitigation Committee and County Board for consideration. The County Board and Mitigation Committee will review the report and make recommendations to the County Administrator on how to proceed with the update process. The County Administrator will designate an individual or county department to carry out the recommendations and any technical work, and will prepare draft updates to the Plan on a schedule determined by the Mitigation Committee, the County Administrator and/or the County Board.

During the five-year plan review process, the following questions will be considered as criteria for assessing the effectiveness and appropriateness of the Plan:

- Do the goals address current and expected conditions?

- Has the nature or magnitude of risks changed?
- Are the current resources appropriate for implementing the Plan?
- Are there implementation problems, such as technical, political, legal or coordination issues with other agencies?
- Have the outcomes occurred as expected?
- Did the jurisdictions, agencies, and other partners participate in the Plan implementation process as proposed?

Scott County and its participating departments or agency's will forward information on any proposed change(s) to all interested parties including, but not limited to, all affected townships and municipal departments, residents and businesses. When a proposed amendment may directly affect particular private individuals or properties, Scott County will follow existing local, state or federal notification requirements, which may include published public notices as well as direct mailings. Information on any proposed Plan amendments will also be forwarded to the State. This information will be disseminated in order to seek input on the proposed amendment(s) for not less than a 45-day review and comment period. At the end of the 45-day review and comment period, the proposed amendment(s) and all comments will be forwarded to the Mitigation Committee for final consideration. The committee will review the proposed amendment along with the comments received from other parties, and if acceptable, the committee will submit a recommendation for the approval and adoption of changes to the Plan to each appropriate governing body within 60 days. In determining whether to recommend approval or denial of a Plan amendment request, the following factors will be considered by the Mitigation Committee:

- There are errors, inaccuracies or omissions made in the identification of issues or needs in the Plan.
- New issues or needs have been identified which are not adequately addressed in the Plan.
- There has been a change in information, data, or assumptions from those on which the Plan is based.
- There has been a change in local capabilities to implement proposed hazard mitigation activities.

Upon receiving the recommendation from the Mitigation Committee and prior to adoption of the Plan, the local governing body will hold a public hearing. The governing body will review the recommendation from the Mitigation Committee (including the factors listed above) and any oral or written comments received at the public hearing. Following that review, the governing body will take one of the following actions:

- Adopt the proposed amendments as presented;
- Adopt the proposed amendments with modifications;
- Refer the amendments request back to the Mitigation Committee for further revision; or

Defer the amendment request back to the Mitigation Committee for further consideration and/or additional hearings. When the draft updates are completed, the Mitigation Committee will convene to conduct a comprehensive evaluation and revision. The Mitigation Committee (with input from the Stakeholders Group) will produce a final draft of the updated Plan for

consideration by the city, township, or county boards. The city, township, or county boards will review the updated Plan, initiate changes, approve and adopt the Plan in sufficient time to meet FEMA requirements.

8.6 INCORPORATING MITIGATION INTO EXISTING PLANNING

It is the intention of the Mitigation Committee and participating departments to incorporate mitigation planning as an integral component of daily government operations. Mitigation Committee members will work with local government officials to integrate the newly adopted hazard mitigation goals and actions into the general operations of government and partner organizations. By doing so, the Mitigation Committee anticipates that:

1) Hazard mitigation planning will be formal management efforts

2) The Hazard Mitigation Plan will become a mutually supportive document that works in concert to meet the goals and needs of County residents; and

3) Duplication of effort can be minimized.

It is recognized by all participating departments that this information can be invaluable in making decisions under other planning programs. The Table below includes existing processes and programs through which the mitigation plan should be implemented.

Requirement §201.6(c)(4)(ii): The plan shall include a process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate
A. Does the new or updated plan identify other local planning mechanisms available for incorporating the requirements of the mitigation plan
B. Does the new or updated plan include a process by which the local government will incorporate the requirements in other plans, when appropriate?
C. Does the updated plan explain how the local government incorporated the mitigation strategy and other information contained in the plan (*e.g.*, risk assessment) into other planning mechanisms, when appropriate

CRS Step 3: Coordination with Other agencies:
If the plan includes a review of existing studies, reports, and technical information for the needs goals and plan for that area.

Table 8.1 Plan Integration

Process	Action	Implementation of Plan
Administrative	Departmental or organizational work plans, policies, and procedural changes	▪ Public Works ▪ Building/Engineering ▪ Planning ▪ Emergency Services ▪ Health and Social Services ▪ Transportation ▪ Business and Economic Development
Administrative	Other organizations' plans	▪ Include reference to this plan in risk reduction section of the Municipal Emergency Operations Plans ▪ Include references in the creation of ordinances, public education, ▪ County Household Hazardous Waste information
Administrative	Jobs/Job Descriptions	Unpaid internships to assist in hazard mitigation plan maintenance
Budgetary	Capital and operational budgets	Review of county and local budgets to include line item mitigation actions
Regulatory	Executive	▪ Comprehensive Planning - Institutionalize hazard mitigation for new

Table 8.1 Plan Integration		
Process	**Action**	**Implementation of Plan**
	Orders, ordinances and other directives	construction and land use. ▪ Zoning and Ordinances ▪ Building Codes-enforcement of codes or higher standard in hazard areas ▪ Capital Improvements Plan - Ensure that the person responsible for projects under this plan evaluate if the new construction is in a high hazard area, flood plain, etc. so the construction is designed to mitigate the risk. Revise requirements for this plan to include hazard mitigation in the design of new construction. ▪ National Flood Insurance Program – Continue participation in this program and increase participation in Community Rating System Program • Continue to implement storm water management plans. • Prior to formal changes (amendments) to comprehensive plans, zoning, ordinances, capital improvement plans, or other mechanisms that control development must be reviewed to ensure they are consistent with the hazard mitigation plan
Funding	Secure traditional sources of financing	▪ Apply for grants from federal or state government, nonprofit organizations, foundations, and private sources including Pre-Disaster Mitigation Program (PDM), Flood Mitigation Assistance Program (FMA), and the Hazard Mitigation Grant Program (HMGP-Stafford Act, Section 404). ▪ Research grant opportunities through U.S. Department of Housing and Urban Development's Community Development Block Grant (CDBG) ▪ Stafford Act, Section 406 – Public Assistance Program Mitigation Grants ▪ Federal Highway Administration ▪ Catalog of Federal Domestic Assistance ▪ United States Fire Administration – Assistance to Firefighter Grants ▪ United States Small Business Administration Pre and Post Disaster Mitigation Loans ▪ United States Department of Economic Development Administration Grants ▪ United States Army Corps of Engineers ▪ United States Department of Interior, Bureau of Land Management
Partnerships	Develop creative partnerships, funding and incentives	▪ Public-Private Partnerships ▪ State Cooperation ▪ In-kind resources
Partnership	Existing Committees and Councils	▪ Local Government Committees: ▪ Environmental Commissions ▪ Planning Boards ▪ Zoning Board of Appeals ▪ Media and Communications ▪ Merchants Association ▪ Property Owners Association

Table 8.1 Plan Integration		
Process	**Action**	**Implementation of Plan**
Partnership	Working with other federal, state, and local agencies	▪ Army Corps of Engineers (USACE) ▪ American Red Cross ▪ Department of Homeland Security (DHS) ▪ Federal Emergency Management Agency (FEMA) ▪ National Oceanic and Atmosphere Agency (NOAA) ▪ National Weather Service (NWS) ▪ Minnesota Department of Transportation ▪ Minnesota Department of Environmental Protection ▪ Minnesota State Police ▪ United States Department of Agriculture (USDA) ▪ United States Department of Transportation (USDOT) ▪ United States Geological Service (USGS) ▪ Watershed Associations

The primary process for integrating mitigation strategies into other local planning mechanisms will be through the revision, update and implementation of each of the individual plans that require specific planning and administrative tasks (e.g. plan amendments, ordinance revisions, capital improvement projects, etc.). The Mitigation Committee will identify which parts of this plan would be most appropriate to have incorporated into other county plans or mechanisms. The Mitigation Committee Coordinator is charged with identifying the schedule and contacts responsible for updating other county plans and mechanisms.

During the planning process for new and updated local planning documents, such as a comprehensive plan, capital improvements plan, or emergency management plan, Scott County will provide a copy of the Hazard Mitigation Plan to the appropriate parties and recommend that all goals and strategies of new and updated local planning documents are consistent with and support the goals of the Hazard Mitigation Plan and will not contribute to increased hazards.

Although it is recognized that there are many possible benefits to integrating components of this Plan into other local planning mechanisms, the development and maintenance of this stand-alone Hazard Mitigation Plan is deemed by the Mitigation Committee to be the most effective and appropriate method to ensure implementation of local hazard mitigation actions at this time.

The members of the Mitigation Committee will remain charged with ensuring that the goals and strategies of new and updated local planning documents are consistent with the goals and actions of the Hazard Mitigation Plan, and will not contribute to increased hazard vulnerability in Scott County.

8.7 CONTINUED PUBLIC INVOLVEMENT

Requirement §201.6(c)(4)(iii): The plan maintenance process shall include a discussion on how the community will continue public participation in the plan maintenance process.
A. Does the new or updated plan explain how continued public participation will be obtained? (For example, will there be public notices, an on-going mitigation plan committee, or annual review meetings with stakeholders?)

CRS Step 10: Impalement, evaluate and revise: The community must have procedures for monitoring implementation, reviewing progress, and recommending revisions to the plan in and annual evaluation report.

Public participation is an integral component of the mitigation planning process and will continue to be essential as this Plan evolves over time. Significant changes or amendments to the Plan require a public hearing prior to any adoption procedures.

The public will have an opportunity to comment on the Plan at the annual review meeting for the Mitigation Plan and during the 5-year plan update. The annual progress reports will be posted on the County mitigation website in addition to the Hazard Mitigation Plan. The County will maintain this website, posting the annual progress reports and maintaining an active link to collect public comments.

The Mitigation Committee Coordinator is responsible for coordinating the Plan evaluation portion of the meeting, soliciting feedback, collecting and reviewing the comments, and ensuring their incorporation in the 5-year plan update as appropriate. Additional meetings may also be held as deemed necessary by the mitigation committee. The purpose of these meetings would be to provide the public an opportunity to express concerns, opinions, and ideas about the mitigation plan. Annual progress reports will also be posted to the project web site.

Other efforts to involve the public in the maintenance, evaluation, and revision process will be made as necessary. These efforts may include:

- Advertising meetings of the Mitigation Committee in the local newspaper, public bulletin boards, and/or county and county office buildings;
- Designating willing and voluntary citizens and private sector representatives as official members of the Mitigation Committee;
- Utilizing local media to update the public of any maintenance and/or periodic review activities taking place;
- Utilizing county and county web sites to advertise any maintenance and/or periodic review activities taking place.

Scott County is committed to the continued involvement of the public in the hazard mitigation process. Therefore, copies of the Plan will be made available for review during normal business hours at the Scott County Library, the County Planning Department, and on the county website.

SECTION 9
APPENDICES

9.1 REFERENCES AND ACKNOWLEDGEMENTS

The resources were accessed during plan development and in many cases provided specific content, maps and images.

Agency for Toxic Substances and Disease Registry (ATSDR)
Scott County Newspapers
Scott County Emergency Management

Centers for Disease Control and Prevention (CDC)
Coast Guard, National Response Center
Colorado State University
City-Data.com

E-Podunk.com
Environmental Protection Agency

Federal Bureau of Investigation
Federal Computer Incident Response Center
Federal Emergency Management Agency (FEMA)
Federal Motor Carrier Safety Administration

International Association of Emergency Managers (IAEM)

Jurisdictions Websites
Jurisdictions Comprehensive Plans

National Climatic Data Center, National Oceanic and Atmospheric Administration-Storm Event Database
National Earthquake Hazards Reduction Program
National Emergency Management Association (NEMA)
National Highway Traffic Safety Administration
National Nuclear Security Administration
National Oceanic and Atmospheric Agency
National Performance of Dams Program-Dam Incident Notification Database
National Response Team (NRT)
National Weather Service
Natural Hazards Center

Office of Domestic Preparedness
Office of Emergency Preparedness

Root3.eb.com

State of North Carolina Hazard Mitigation Plan
State of Minnesota Hazard Mitigation Plan

Minnesota Department of Agriculture
Minnesota Department of Justice
Minnesota Department of Transportation
Minnesota Emergency Management Agency
Minnesota Department of Health
Minnesota Department of Homan Resources

Red Cross

USACE. National Inventory of Dams
U.S. Census Bureau
U.S. Department of Agriculture
U.S. Department of Agriculture Forest Service
U.S. Department of Justice
U.S. Department of Transportation
U.S. Fire Administration
U.S. Geological Survey
U.S. Geological Survey Earthquakes Hazard Program
U.S. Health and Human Services

Wikipedia.org

9.2 PLAN CERTIFICATION

I, Chris Weldon, Emergency Management Agency Director for the County of Scott, State of Minnesota, do hereby certify that public involvement and input regarding the Shelby County Multi-Jurisdictional Hazard Mitigation Plan was carried out in accordance with Plan requirements and in accordance with local policy and ordinance.

I further certify that public notification was given and public input was sought, during the planning process and preceding adoption of the Scott County Multi-Jurisdictional Hazard Mitigation Plan by the jurisdictional governments in Scott County, by placing notice to the public in the _____ News Paper on _____ and _____in accordance with the open meetings laws of Minnesota, and that citizens had ample opportunity for input during Plan development.

I further certify that public meetings were held at the Scott County Courthouse on _____, and _____, to solicit citizen comment and input into the Scott County Multi-Jurisdictional Hazard Mitigation Plan.

I further certify that a public hearing was held at Scott County Courthouse on _____ to solicit public comment preceding adoption of the Shelby County Multi-Jurisdictional Hazard Mitigation Plan by the jurisdictional governments of Scott County, Belle Plaine, Elko-New Market, Jordan, New Prague, Prior Lake, Savage, Shakopee and the Mdewakanton Dakota Tribe.

I further certify that copies of jurisdictional Board or Council meeting minutes, kept in accordance with Minnesota law, regarding approval and adoption of the Scott County Multi-Jurisdictional Hazard Mitigation Plan are on file and available to members of the public, and local, state, and federal agencies. Inspection of these minutes may be made upon reasonable request to the respective jurisdictional authority.

This certification is in accordance with provisions of the Disaster Mitigation Act of 2000 (44 CFR 201.6 and NCGS 62A).

Certified this _____ day of _____, 2005.

_____
Scott County Emergency Management Agency Director

State of Minnesota,
County of Scott

I, _____, a Notary Public for said County and State, do hereby certify that the signee above personally appeared before me this day and acknowledged the foregoing instrument.

Witness my hand and seal this _____ day of _____, 2005.

_____
Notary Public

My Commission expires _____

9.3 JURISDICTION PLAN ADOPTION RESOLUTIONS

44 CFR Requirement

44 CFR Part 201.6(c)(5): The plan shall include documentation that the plan has been formally adopted by the local governing body of the jurisdiction requesting approval of the plan. For multi-jurisdictional plans, each jurisdiction requesting approval of the plan must document that it has been formally adopted.

9.3.1 City of Belle Plaine

BELLE PLAINE CITY COUNCIL
RESOLUTION 10-055

ADOPTION OF THE SCOTT COUNTY ALL-HAZARD MITIGATION PLAN

WHEREAS, the City of Belle Plaine has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000;

WHEREAS, the Act establishes a framework for the development of a multi-jurisdictional County Hazard Mitigation Plan;

WHEREAS, the Act as part of the planning process requires public involvement and local coordination among neighboring local units of government and businesses;

WHEREAS, the Scott County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends;

WHEREAS, the Scott County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects and costs;

WHEREAS, the Scott County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Scott County will maintain public participation and coordination;

WHEREAS, the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment;

WHEREAS, the Scott County All-Hazard Mitigation Plan will allow the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants;

WHEREAS, this is a multi-jurisdictional Plan and Belle Plaine and other Scott County cities that participated in the planning process may choose to also adopt the County Plan.

NOW THEREFORE BE IT RESOLVED that the City of Belle Plaine supports the hazard mitigation planning effort and wishes to adopt the Scott County All-Hazard Mitigation Plan as presented.

The adoption of the foregoing resolution was duly moved by Councilmember Underferth and seconded by Councilmember Coop, and after full discussion thereof and upon a vote being taken thereon, the following Councilmembers voted in favor thereof: Lies, Lange, Underferth, Coop, O'Laughlin and Trost.

and the following voted against the same: None.

Whereupon said resolution was declared duly passed and adopted. Dated this 19th day of April, 2010.

Timothy P. Lies

Timothy P. Lies
Mayor

ATTEST:

David Murphy
City Administrator

9.3.2 City of Elko-New Market

RESOLUTION 10-42

CITY OF ELKO NEW MARKET
SCOTT COUNTY

ADOPTION OF THE
SCOTT COUNTY ALL-HAZARD MITIGATION PLAN

WHEREAS, the City of Elko New Market has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000, and

WHEREAS, the Act establishes a framework for the development of a multi-jurisdictional County Hazard Mitigation Plan; and

WHEREAS, the Act as part of the planning process requires public involvement and local coordination among neighboring local units of government and businesses; and

WHEREAS, the Scott County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends; and

WHEREAS, the Scott County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects and costs; and

WHEREAS, the Scott County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Scott County will maintain public participation and coordination; and

WHEREAS, the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment; and

WHEREAS, the Scott County All-Hazard Mitigation Plan will make the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants; and

WHEREAS, this is a multi-jurisdictional Plan and cities that participated in the planning process may choose to also adopt the County Plan.

NOW THEREFORE BE IT RESOLVED that the City of Elko New Market supports the hazard mitigation planning effort and wishes to adopt the Scott County All-Hazard Mitigation Plan.

This Resolution was declared duly passed and adopted and was signed by the Mayor and attested to by the City Clerk this 27th day of May, 2010.

Jason Ponsonby, Mayor

Attest

Patricia Nutt, City Clerk

9.3.3 City of Jordan

CITY OF JORDAN

RESOLUTION # 5-12-2010

ADOPTION OF THE
SCOTT COUNTY ALL-HAZARD MITIGATION PLAN

WHEREAS, the City of Jordan has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000, and

WHEREAS, the Act establishes a framework for the development of a multi-jurisdictional County Hazard Mitigation Plan; and

WHEREAS, the Act as part of the planning process requires public involvement and local coordination among neighboring local units of government and businesses; and

WHEREAS, the Scott County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends; and

WHEREAS, the Scott County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects and costs; and

WHEREAS, the Scott County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Scott County will maintain public participation and coordination; and

WHEREAS, the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment; and

WHEREAS, the Scott County All-Hazard Mitigation Plan will make the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants; and

WHEREAS, this is a multi-jurisdictional Plan and cities that participated in the planning process may choose to also adopt the County Plan.

NOW THEREFORE BE IT RESOLVED that the City of Jordan supports the hazard mitigation planning effort and wishes to adopt the Scott County All-Hazard Mitigation Plan.

This Resolution was declared duly passed and adopted and was signed by the Mayor of Jordan and attested to by the City Administrator this 3rd day of May, 2010.

By: _____
Mayor Pete Ewals for the City Council

Attest: _____
Ed Shukle – City Administrator

9.3.4 City of New Prague

City Council Proceedings

State of Minnesota
Counties of Scott & Le Sueur
City of New Prague

RESOLUTION #10-04-19-02

RESOLUTION OF THE CITY OF NEW PRAGUE
ADOPTION OF THE SCOTT COUNTY ALL-HAZARD MITIGATION PLAN

WHEREAS, the City of New Prague has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000, and

WHEREAS, the Act establishes a framework for the development of a multi-jurisdictional County Hazard Mitigation Plan; and

WHEREAS, the Act as part of the planning process requires public involvement and local coordination among neighboring local units of government and businesses; and

WHEREAS, the Scott County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends; and

WHEREAS, the Scott County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects and costs; and

WHEREAS, the Scott County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Scott County will maintain public participation and coordination; and

WHEREAS, the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment; and

WHEREAS, the Scott County All-Hazard Mitigation Plan will make the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants; and

WHEREAS, this is a multi-jurisdictional Plan and cities that participated in the planning process may choose to also adopt the County Plan.

NOW THEREFORE BE IT RESOLVED that the City of New Prague supports the hazard mitigation planning effort and wishes to adopt the Scott County All-Hazard Mitigation Plan.

City Council Proceedings

State of Minnesota
Counties of Scott & Le Sueur
City of New Prague

Adopted by the Council this 19th day of April, 2010.

Kathryn M. Wilcox, Vice President

ATTEST:

Michael J. Johnson
City Administrator

9.3.5 City of Prior Lake

4646 Dakota Street S.E.
Prior Lake, MN 55372-1714

RESOLUTION 10-038

A RESOLUTION ADOPTING THE SCOTT COUNTY ALL-HAZARD, MULTI-JURISDICTIONAL MITIGATION PLAN

Motion By: Hedberg **Second By:** Keeney

WHEREAS, the City of Prior Lake has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000, and

WHEREAS, the Act establishes a framework for the development of a multi-jurisdictional County hazard mitigation plan; and

WHEREAS, the Act as part of the planning process requires public involvement and local coordination among neighboring local units of government and businesses; and

WHEREAS, the Scott County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends; and

WHEREAS the Scott County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects and costs; and

WHEREAS the Scott County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Scott County will maintain public participation and coordination; and

WHEREAS the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment; and

WHEREAS the Scott County All-Hazard, Multi-jurisdictional Mitigation Plan will make the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants; and

WHEREAS this is a multi-jurisdictional Plan and cities that participated in the planning process may choose to also adopt the County Plan.

NOW THEREFORE, BE IT HEREBY RESOLVED BY THE CITY COUNCIL OF PRIOR LAKE, MINNESOTA as follows:

1. The recitals set forth above are incorporated herein.
2. The City of Prior Lake supports the hazard mitigation planning effort and hereby adopts the Scott County All-Hazard, Multijurisdictional Mitigation Plan.

PASSED AND ADOPTED THIS 3rd DAY OF MAY 2010.

	YES		NO
Myser	X	**Myser**	
Erickson	X	**Erickson**	
Hedberg	X	**Hedberg**	
Keeney	X	**Keeney**	
Millar	X	**Millar**	

Frank Boyles, City Manager

9.3.6 City of Savage

RESOLUTION No. R-10- 36

ADOPTION OF THE
SCOTT COUNTY ALL-HAZARD MITIGATION PLAN

WHEREAS, the City of Savage has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000, and

WHEREAS, the Act establishes a framework for the development of a multi-jurisdictional County Hazard Mitigation Plan; and

WHEREAS, the Act as part of the planning process requires public involvement and local coordination among neighboring local units of government and businesses; and

WHEREAS, the Scott County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends; and

WHEREAS, the Scott County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects; and

WHEREAS, the Scott County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Scott County will maintain public participation and coordination; and

WHEREAS, the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment; and

WHEREAS, the Scott County All-Hazard Mitigation Plan will make the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants; and

WHEREAS, this is a multi-jurisdictional Plan and cities that participated in the planning process may choose to also adopt the County Plan.

NOW THEREFORE BE IT RESOLVED that the City of Savage supports the hazard mitigation planning effort and wishes to adopt the Scott County All-Hazard Mitigation Plan.

Adopted by the Savage City Council this 3rd day of May, 2010.

Janet Williams, Mayor

Attest:

Barry A. Stock, City Administrator

Motion by McColl

Second by Kelly

	Aye	Nay
Williams	x	
Abbott	x	
Kelly	x	
McColl	x	
Victorey	x	

9.3.7 City of Shakopee

Resolution No. 7000

A RESOLUTION OF THE CITY OF SHAKOPEE
ADOPTING THE
SCOTT COUNTY ALL-HAZARD MITIGATION PLAN

WHEREAS, the City of Shakopee has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000; and

WHEREAS, the Act establishes a framework for the development of a multi-jurisdictional County Hazard Mitigation Plan; and

WHEREAS, the Act as part of the planning process requires public involvement and local coordination among neighboring local units of government and businesses; and

WHEREAS, the Scott County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends; and

WHEREAS, the Scott County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects and costs; and

WHEREAS, the Scott County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Scott County will maintain public participation and coordination; and

WHEREAS, the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment; and

WHEREAS, the Scott County All-Hazard Mitigation Plan will make the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants; and

WHEREAS, this is a multi-jurisdictional Plan and cities that participated in the planning process may choose to also adopt the County Plan.

NOW THEREFORE BE IT RESOLVED that the City of Shakopee supports the hazard mitigation planning effort and wishes to adopt the Scott County All-Hazard Mitigation Plan.

Adopted in regular session of the City Council of the City of Shakopee, held this 6th day of April, 2010.

Mayor of the City of Shakopee

ATTEST:

Deputy City Clerk

9.3.8 Mdewakanton Dakota Tribe

9.3.9 Scott County

BOARD OF COUNTY COMMISSIONERS
SCOTT COUNTY, MINNESOTA

Date:	April 27, 2010
Resolution No.:	2010-056
Motion by Commissioner:	Ulrich
Seconded by Commissioner:	Wolf

RESOLUTION NO. 2010-056; APPROVE THE SCOTT COUNTY MULTI-JURISDICTIONAL ALL HAZARDS MITIGATION PLAN

WHEREAS, Scott County has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000, and

WHEREAS, the Act establishes a framework for the development of a County Hazard Mitigation Plan; and as part of the planning process requires public involvement and local coordination among neighboring local units of government and businesses; and

WHEREAS, the Scott County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends; and

WHEREAS, the Scott County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects and costs; and

WHEREAS, the Scott County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Scott County will maintain public participation and coordination; and

WHEREAS, the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment; and

WHEREAS, the Scott County All-Hazard Mitigation Plan will make the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants; and

WHEREAS, this is a multi-jurisdictional Plan and cities that participated in the planning process may choose to also adopt the County Plan.

BOARD OF COUNTY COMMISSIONERS
SCOTT COUNTY, MINNESOTA

Date:	April 27, 2010
Resolution No.:	2010-056
Motion by Commissioner:	Ulrich
Seconded by Commissioner:	Wolf

NOW THEREFORE BE IT RESOLVED that Scott County supports the hazard mitigation planning effort and wishes to adopt the Scott County All-Hazard Mitigation Plan.

COMMISSIONERS	VOTE
Wagner	☑ Yes ☐ No ☐ Absent ☐ Abstain
Wolf	☑ Yes ☐ No ☐ Absent ☐ Abstain
Hennen	☑ Yes ☐ No ☐ Absent ☐ Abstain
Marschall	☑ Yes ☐ No ☐ Absent ☐ Abstain
Ulrich	☑ Yes ☐ No ☐ Absent ☐ Abstain

State of Minnesota)
County of Scott)

I, Gary L. Shelton, duly appointed qualified County Administrator for the County of Scott, State of Minnesota, do hereby certify that I have compared the foregoing copy of a resolution with the original minutes of the proceedings of the Board of County Commissioners, Scott County, Minnesota, at their session held on the 27th day of April, 2010 now on file in my office, and have found the same to be a true and correct copy thereof.
Witness my hand and official seal at Shakopee, Minnesota, this 27th day of April, 2010.

County Administrator

Administrator's Designee

9.3.10 Belle Plaine Township

RESOLUTION OF THE TOWNSHIP OF BELLE PLAINE

ADOPTION OF THE
SCOTT COUNTY ALL-HAZARD MITIGATION PLAN

WHEREAS, the Township of Belle Plaine has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000, and

WHEREAS, the Act establishes a framework for the development of a multi-jurisdictional County Hazard Mitigation Plan; and

WHEREAS, the Act as part of the planning process requires public involvement and local coordination among neighboring local units of government and businesses; and

WHEREAS, the Scott County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends; and

WHEREAS, the Scott County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects and costs; and

WHEREAS, the Scott County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Scott County will maintain public participation and coordination; and

WHEREAS, the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment; and

WHEREAS, the Scott County All-Hazard Mitigation Plan will make the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants; and

WHEREAS, this is a multi-jurisdictional Plan and Townships that participated in the planning process may choose to also adopt the County Plan.

NOW THEREFORE BE IT RESOLVED that the Township of Belle Plaine supports the hazard mitigation planning effort and wishes to adopt the Scott County All-Hazard Mitigation Plan.

This Resolution was declared duly passed and adopted and was signed by the Town Board Chairman and attested to by the Town Clerk this 4th day of May, 2010.

Douglas Kasper, Town Board Chairman

Attest:

Jean McDermand, Town Clerk

9.3.11 Blakeley Township

Resolution 2010-001

RESOLUTION OF THE TOWNSHIP OF ~~2010-001~~ Blakeley

ADOPTION OF THE
SCOTT COUNTY ALL-HAZARD MITIGATION PLAN

WHEREAS, the Township of Blakeley has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000, and

WHEREAS, the Act establishes a framework for the development of a multi-jurisdictional County Hazard Mitigation Plan; and

WHEREAS, the Act as part of the planning process requires public involvement and local coordination among neighboring local units of government and businesses; and

WHEREAS, the Scott County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends; and

WHEREAS, the Scott County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects and costs; and

WHEREAS, the Scott County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Scott County will maintain public participation and coordination; and

WHEREAS, the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment; and

WHEREAS, the Scott County All-Hazard Mitigation Plan will make the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants; and

WHEREAS, this is a multi-jurisdictional Plan and Townships that participated in the planning process may choose to also adopt the County Plan.

NOW THEREFORE BE IT RESOLVED that the Township of Blakeley supports the hazard mitigation planning effort and wishes to adopt the Scott County All-Hazard Mitigation Plan.

This Resolution was declared duly passed and adopted and was signed by the Chairperson and attested to by the Clerk this 4th day of May, 2010.

Brian [illegible]

Attest:

Maureen Bruce

9.3.12 Cedar Lake Township

Resolution 2010-01

RESOLUTION OF THE TOWNSHIP OF Cedar Lake

ADOPTION OF THE
SCOTT COUNTY ALL-HAZARD MITIGATION PLAN

WHEREAS, the Township of Cedar Lake has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000, and

WHEREAS, the Act establishes a framework for the development of a multi-jurisdictional County Hazard Mitigation Plan; and

WHEREAS, the Act as part of the planning process requires public involvement and local coordination among neighboring local units of government and businesses; and

WHEREAS, the Scott County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends; and

WHEREAS, the Scott County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects and costs; and

WHEREAS, the Scott County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Scott County will maintain public participation and coordination; and

WHEREAS, the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment; and

WHEREAS, the Scott County All-Hazard Mitigation Plan will make the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants; and

WHEREAS, this is a multi-jurisdictional Plan and Townships that participated in the planning process may choose to also adopt the County Plan.

NOW THEREFORE BE IT RESOLVED that the Township of Cedar Lake supports the hazard mitigation planning effort and wishes to adopt the Scott County All-Hazard Mitigation Plan.

This Resolution was declared duly passed and adopted and was signed by the Chairman and attested to by the clerk this 4th day of May, 2010.

Gerald Williams
Chairman

Attest:

Arnita Novotny
Clerk

9.3.13 Credit River Township

RESOLUTION OF THE TOWNSHIP OF Credit River

ADOPTION OF THE
SCOTT COUNTY ALL-HAZARD MITIGATION PLAN

WHEREAS, the Township of Credit River has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000, and

WHEREAS, the Act establishes a framework for the development of a multi-jurisdictional County Hazard Mitigation Plan; and

WHEREAS, the Act as part of the planning process requires public involvement and local coordination among neighboring local units of government and businesses; and

WHEREAS, the Scott County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends; and

WHEREAS, the Scott County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects and costs; and

WHEREAS, the Scott County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Scott County will maintain public participation and coordination; and

WHEREAS, the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment; and

WHEREAS, the Scott County All-Hazard Mitigation Plan will make the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants; and

WHEREAS, this is a multi-jurisdictional Plan and Townships that participated in the planning process may choose to also adopt the County Plan.

NOW THEREFORE BE IT RESOLVED that the Township of Credit River supports the hazard mitigation planning effort and wishes to adopt the Scott County All-Hazard Mitigation Plan.

This Resolution was declared duly passed and adopted and was signed by the Chairman and attested to by the Clerk this 3rd day of May, 2010.

Chairman

Attest:
Cathy Haugh
Clerk

9.3.14 Helena Township

Resolution 050410 of the Township of Helena
Adoption of the Scott County All-Hazard Mitigation Plan

WHEREAS, the Township of Helena has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000, and

WHEREAS, the Act establishes a framework for the development of a multi-jurisdictional County Hazard Mitigation Plan; and

WHEREAS, the Act as part of the planning process requires public involvement and local coordination among neighboring local units of government and businesses; and

WHEREAS, the Scott County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends; and

WHEREAS, the Scott County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects and costs; and

WHEREAS, the Scott County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Scott County will maintain public participation and coordination; and

WHEREAS, the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment; and

WHEREAS, the Scott County All-Hazard Mitigation Plan will make the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants; and

WHEREAS, this is a multi-jurisdictional Plan and Townships that participated in the planning process may choose to also adopt the County Plan.

NOW THEREFORE BE IT RESOLVED that the Township of Helena supports the hazard mitigation planning effort and wishes to adopt the Scott County All-Hazard Mitigation Plan.

This Resolution was declared duly passed and adopted and was signed by the Chairman and attested to by the Clerk this 4th day of May 2010.

Joseph F. Pexa Jr.
Joseph F. Pexa, Jr., Chairman

Attest:

DeAnn Croat
DeAnn Croat, Clerk

9.3.15 Jackson Township

9.3.16 Louisville Township

Apr 09 10 10:01a LuAnne Lemke 952.445.8715 p.1

LOUISVILLE TOWNSHIP
SCOTT COUNTY, MN

RESOLUTION OF THE TOWNSHIP OF 2010-03

ADOPTION OF THE
SCOTT COUNTY ALL-HAZARD MITIGATION PLAN

WHEREAS, the Township of Louisville has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000, and

WHEREAS, the Act establishes a framework for the development of a multi-jurisdictional County Hazard Mitigation Plan; and

WHEREAS, the Act as part of the planning process requires public involvement and local coordination among neighboring local units of government and businesses; and

WHEREAS, the Scott County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends; and

WHEREAS, the Scott County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects and costs; and

WHEREAS, the Scott County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Scott County will maintain public participation and coordination; and

WHEREAS, the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment; and

WHEREAS, the Scott County All-Hazard Mitigation Plan will make the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants; and

WHEREAS, this is a multi-jurisdictional Plan and Townships that participated in the planning process may choose to also adopt the County Plan.

NOW THEREFORE BE IT RESOLVED that the Township of Louisville supports the hazard mitigation planning effort and wishes to adopt the Scott County All-Hazard Mitigation Plan.

This Resolution was declared duly passed and adopted and was signed by the Chair and attested to by the Clerk this 8th day of April, 2010.

John E. Weckman
Chair of Louisville Township

Attest:
LuAnne Lemke
Clerk of Louisville Township

9.3.17 New Market Township

May 07 10 05:56p clausen 9524612333 p.2

RESOLUTION OF THE TOWNSHIP OF NEW MARKET

ADOPTION OF THE
SCOTT COUNTY ALL-HAZARD MITIGATION PLAN

WHEREAS, the Township of New Market has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000, and

WHEREAS, the Act establishes a framework for the development of a multi-jurisdictional County Hazard Mitigation Plan; and

WHEREAS, the Act as part of the planning process requires public involvement and local coordination among neighboring local units of government and businesses; and

WHEREAS, the Scott County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends; and

WHEREAS, the Scott County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects and costs; and

WHEREAS, the Scott County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Scott County will maintain public participation and coordination; and

WHEREAS, the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment; and

WHEREAS, the Scott County All-Hazard Mitigation Plan will make the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants; and

WHEREAS, this is a multi-jurisdictional Plan and Townships that participated in the planning process may choose to also adopt the County Plan.

NOW THEREFORE BE IT RESOLVED that the Township of New Market supports the hazard mitigation planning effort and wishes to adopt the Scott County All-Hazard Mitigation Plan.

This Resolution was declared duly passed and adopted and was signed by the Chairperson and attested to by the Clerk this 4th day of May, 2010.

Attest:

9.3.18 St. Lawrence Township

RESOLUTION OF THE TOWNSHIP OF ST. LAWRENCE
ADOPTION OF THE
SCOTT COUNTY ALL-HAZARD MITIGATION PLAN

WHEREAS, the Township of St. Lawrence has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000, and

WHEREAS, the Act establishes a framework for the development of a multi-jurisdictional County Hazard Mitigation Plan; and

WHEREAS, the Act as part of the planning process requires public involvement and local coordination among neighboring local units of government and businesses; and

WHEREAS, the Scott County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends; and

WHEREAS, the Scott County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects and costs; and

WHEREAS, the Scott County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Scott County will maintain public participation and coordination; and

WHEREAS, the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment; and

WHEREAS, the Scott County All-Hazard Mitigation Plan will make the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants; and

WHEREAS, this is a multi-jurisdictional Plan and Townships that participated in the planning process may choose to also adopt the County Plan.

NOW THEREFORE BE IT RESOLVED that the Township of St. Lawrence supports the hazard mitigation planning effort and wishes to adopt the Scott County All-Hazard Mitigation Plan.

This Resolution was declared duly passed and adopted and was signed by the Chairman and attested to by the Clerk this 8th day of April, 2010.

Ted L. Korender, Chairman

Attest:

Ramona Bischof

9.3.19 Sand Creek Township

RESOLUTION OF THE TOWNSHIP OF Sand Creek 01-2010-05

ADOPTION OF THE
SCOTT COUNTY ALL-HAZARD MITIGATION PLAN

WHEREAS, the Township of Sand Creek has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000, and

WHEREAS, the Act establishes a framework for the development of a multi-jurisdictional County Hazard Mitigation Plan; and

WHEREAS, the Act as part of the planning process requires public involvement and local coordination among neighboring local units of government and businesses; and

WHEREAS, the Scott County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends; and

WHEREAS, the Scott County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects and costs; and

WHEREAS, the Scott County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Scott County will maintain public participation and coordination; and

WHEREAS, the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment; and

WHEREAS, the Scott County All-Hazard Mitigation Plan will make the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants; and

WHEREAS, this is a multi-jurisdictional Plan and Townships that participated in the planning process may choose to also adopt the County Plan.

NOW THEREFORE BE IT RESOLVED that the Township of Sand Creek supports the hazard mitigation planning effort and wishes to adopt the Scott County All-Hazard Mitigation Plan.

This Resolution was declared duly passed and adopted and was signed by the Chairman and attested to by the Clerk this 10th day of May, 2010.

Cy Wolf Chmn

Attest:
Rita Tauer

9.3.20 Spring Lake Township

RESOLUTION #10-003

Spring Lake Township, Scott County, Minnesota

A RESOLUTION ADOPTING THE SCOTT COUNTY ALL-HAZARD MITIGATION PLAN

WHEREAS, the Township of Spring Lake, Scott County, Minnesota has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000;

AND WHEREAS, the Act establishes a framework for the development of a multi-jurisdictional County Hazard Mitigation Plan;

AND WHEREAS, the Act, as part of the planning process, requires public involvement and local coordination among neighboring local units of government and businesses;

AND WHEREAS, the Scott County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends;

AND WHEREAS, the Scott County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects and costs;

AND WHEREAS, the Scott County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Scott County will maintain public participation and coordination;

AND WHEREAS, the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment;

AND WHEREAS, the Scott County All-Hazard Mitigation Plan will make the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants;

AND WHEREAS, this is a multi-jurisdictional Plan and Townships that participated in the planning process may choose to also adopt the County Plan.

NOW THEREFORE BE IT RESOLVED that the Township of Spring Lake supports the hazard mitigation planning effort and wishes to adopt the Scott County All-Hazard Mitigation Plan.

This Resolution was declared duly passed and adopted by Spring Lake Township this 8th day of April, 2010.

Town Chair

Attest:
Kathy Nielsen, Town Clerk

9.3.21 MN Homeland Security and Emergency Management

MINNESOTA DEPARTMENT OF PUBLIC SAFETY

Homeland Security and Emergency Management
444 Cedar Street • Suite 223 • Saint Paul, Minnesota 55101-6223
Phone: 651.201.7400 • Fax: 651.296.0459 • TTY: 651.282.6555
www.dps.state.mn.us

Alcohol and Gambling Enforcement
Bureau of Criminal Apprehension
Driver and Vehicle Services
Emergency Communication Networks
Homeland Security and Emergency Management
Minnesota State Patrol
Office of Communications
Office of Justice Programs
Office of Traffic Safety
State Fire Marshal and Pipeline Safety

May 18, 2010

Chris Weldon
Law Enforcement Center
301 Fuller Street south
Shakopee, MN 55379-1322

Dear Mr. Weldon,

I am happy to inform you that Scott County, All Hazard Mitigation Plan, has been approved by the Federal Emergency Management Agency (FEMA). The plan was reviewed based on the local plan criteria contained in 44 CFR Part 201, as authorized by the Disaster Mitigation Act of 2000. Therefore, the county and jurisdictions that adopted the plan are eligible to apply for mitigation project funding under Hazard Mitigation Assistance Programs.

Over the next five years, we encourage Scott County to follow the plan's schedule for monitoring and updating the plan and continue the efforts to implement the mitigation measures. The plan must be reviewed, revised as appropriate, and resubmitted for approval within five years in order to continue project grant eligibility. Plan expiration date is May 12, 2015.

If you have any questions, please contact me at 651-201-7427.

Sincerely,

Jennifer Nelson
Asst. State Hazard Mitigation Officer

EQUAL OPPORTUNITY EMPLOYER

9.3.22 Federal Emergency Management Agency

U.S. Department of Homeland Security
Region V
536 South Clark Street, Floor 6
Chicago, IL 60605

FEMA

MAY 1 2 2010

Ms. Kristen Sailer
State Hazard Mitigation Officer
Division of Homeland Security and Emergency Management
444 Cedar Street—Suite #223
St. Paul, Minnesota 55101-6223

Dear Ms. Sailer:

Thank you for submitting adoption documentation for the Scott County Hazard Mitigation Plan. The plan was reviewed based on the local plan criteria contained in 44 CFR Part 201, as authorized by the Disaster Mitigation Act of 2000. Scott County met the required criteria for a local hazard mitigation plan and the plan is now approved for the County and the cities of Belle Plaine, Jordan, New Prague, Prior Lake, Savage and Shakopee. However, formal approval of this plan for the other participating jurisdictions (i.e the City of Elko-New Market and the Mkewakanton Sioux Community) is contingent upon their adoption of this plan.

The approval of this plan ensures continued availability of the full complement of Hazard Mitigation Assistance (HMA) Grants. All requests for funding, however, will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted.

We encourage Scott County and the participating jurisdictions to follow the plan's schedule for monitoring and updating the plan and to continue their efforts to implement the mitigation measures. The plan must be reviewed, revised as appropriate, resubmitted, and approved within five years in order to continue project grant eligibility.

Please pass on our congratulations to the community on completing this significant action. If you or the community has any questions, please contact Tom Smith at (312) 408-5220.

Sincerely,

Norbert Schwartz, Director
Mitigation Division

www.fema.gov

MULTI-JURISDICTIONAL ALL HAZARDS MITIGATION PLAN SUPPORTING ANNEX

SCOTT COUNTY MINNESOTA 2009

TABLE OF CONTENTS

Detailed Hazard Event Data **1**
NOTE: **29**
Information regarding the following subject areas is located on file in the Scott County Emergency Management Office: Detailed Critical Facilities, Tier II Facilities and Terrorist Targets. Due to the sensitive nature of this information it is not provided in this public document. **29**
Jurisdiction Participation Resolutions **30**
Public Meeting Documents **48**
Support Letter 48
Public Meeting Number 1 Agenda 49
Public Meeting Number 1 Minutes 50
Public Meeting Number 1 Attendance Sheet 51
Public Meeting Number 2 Announcement Letter 52
Public Meeting Number 2 Newspaper Announcement 54
Public Meeting Number 2 Attendance Sheet 55

Detailed Hazard Event Data

JURISDICTION HISTORIC HAZARD INCIDENTS								
HAZARD	Extreme Temperatures							
Data Sources	NOAA/NWS, Sheldus, Local Sources							
Loss Type	A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup							
Event Date/ Duration	Location or Map Reference	Impact Description Utility Outage Assets Damaged Road/Bridge Closed Evacuation, Etc.	Fatalities	Injuries	Assets Damaged	Structure Loss	Other Loss or Cost Amount	Other Loss or Cost Type
01/15/94	Countywide	Extreme Cold Businesses Schools closed, 5 days 2hr	1	0	0	0	0	
07/10/95	Countywide	Extreme Heat 120* 275,000 turkeys died, 4days 6hrs	1	0	0		2,000,000	A
12/08/95	Countywide	Extreme Cold Wind chill -75, 1 day 4hr	0	0	0	0	0	
01/18/96	Countywide	Extreme Cold wind chill -50 schools closed 24hrs	0	0	0	0	0	
01/31/96	Countywide	Extreme Cold Schools closed -32, 7hrs	0	0	0	0	0	
02/01/96	Countywide	Extreme Cold Schools closed -60, 3 days	0	0	0	0	0	
12/24/96	Countywide	Extreme Cold -38	0	0	0	0	0	
01/15/97	Countywide	Extreme Cold Wind Chill -60, 4 Hrs	0	0	0	0	0	
07/23/99	Countywide	Extreme Heat 116*	1	0	0	0	0	
07/29/99	Countywide	Extreme Heat 114* 2days	0	0	0	0	0	
07/04/01	Countywide	Extreme Heat 100* 3 days	0	0	0	0	0	
07/30/01	Countywide	Extreme Heat 113* 31hrs	0	0	0	0	0	
08/01/01	Countywide	Extreme Heat 111* 4hrs	1	0	0	0	0	
07/30/06	Countywide	Extreme Heat 110* 2 days+C7	0	0	0	0	0	
02/10/08	Countywide	Extreme Cold Wind chill -48	0	0	0	0	0	
02/19/08	Countywide	Extreme Cold Wind chill -45	0	0	0	0	0	
16		**TOTALS**	**4**	**0**	**0**	**0**	**2,000,000**	

JURISDICTION HISTORIC HAZARD INCIDENTS								
HAZARD	Flooding - Riverine/Storm water							
Data Sources	NOAA/NWS, Sheldus, Local Sources							
Loss Type	A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup							
Event Date/ Duration	Location or Map Reference	Impact Description Utility Outage Assets Damaged Road/Bridge Closed Evacuation, Etc.	Fatalities	Injuries	Assets Damaged	Structure Loss	Other Loss or Cost Amount	Other Loss or Cost Type
1952.	Countywide	Scott County was flooded by the Minnesota River.					270,000	A
1960	Jordan	A flood that ravaged downtown Jordan						
05/20/60	Scott	Flooding	0.1	0	0	$3,125	$313	A
06/25/78	Scott	Flooding	0	0		$625,000	$6,250	A
06/30/83	Scott	Flooding	0	0		$14,286	$142,857	A
07/23/87	Scott	Flooding	0.3	0.33		$833,333	$0	
03/15/97	Countywide	Flood Minnesota river out of banks for 45 days	0	0		0	0	
04/01/97	Countywide	Flood 4th all time high for Minnesota river roads closed, sewer backups, 30 day flood	0	0		0	0	
05/01/97	Countywide	Flood Minnesota river out of banks for 15 days	0	0		0	0	
07/22/97	Prior Lake	Flood Flash 4" rain, roads closed, landslide	0	0		0	0	
07/25/97	Belle Plaine	Flood Flash 4" rain, streets closed 2days	0	0		0	0	
06/28/98	Countywide	Flood Flash, sand creek, 7" rain, bridges damaged 3days	0	0		0	0	
08/22/98	Savage	Flood Flash	0	0		0	0	
04/01/01	Countywide	Flood, snow melt/rain, Most rivers above flood stage, bridges and homes damaged. Man swept away by rushing water on 4/21/01 30days	3	1	200	200,000,000	0	
05/01/01	Countywide	Flood, snow melt, most rivers flooded, 45days	0	0		0	0	
08/03/02	Countywide	Flood Flash 6" rain, streets closed, flooded basements, mudslides	0	0		200,000	0	

06/08/04	Countywide	Flood, crop bridge, road, basement damage, mudslides	0	0		0	0	
09/04/05	Countywide	Flood Flash 6" rain, streets closed	0	0		0	0	
10/04/05	Countywide	Flood Flash 6" rain streets vehicles and a school was damaged,	0	0		0	0	
10/04/05	Countywide	Flood road, basement vehicle damage	0	0		0	0	
06/16/06	Jordan	Flood Flash	0	0		0	0	
03/19/07	Jordan	Flood ice jam, RR bridge and RR cars damaged	0	0	6	900,000	0	
22		**TOTALS**	3.4	1.33	6	202,575,744	149,420	

JURISDICTION HISTORIC HAZARD INCIDENTS								
HAZARD	**Thunderstorm, Hail, Lightning, Wind Incidents**							
Data Sources	**NOAA/NWS, Sheldus, Local Sources**							
Loss Type	**A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup**							
Event Date	**Location or Map Reference**	**Impact Description** Utility Outage Assets Damaged Road/Bridge Closed Evacuation, Etc.	**Fatalities**	**Injuries**	**Assets Damaged**	**Structure Loss**	**Other Loss or Cost**	
							Amount	**Type**
06/19/56	Scott	Tstm Hail 3.00 in. Auto's damaged	0	0		0	0	
07/17/56	Scott	Tstm Hail 1.75 in.	0	0		0	0	
08/03/60	Scott	Tstm, Hail, Wind	0	0.03		$1,515	$152	A
07/30/61	Scott	Tstm, Lightning, Wind	0	0		$2,941	$294	A
06/17/62	Scott	Tstm, Hail, Wind	0	0		$1,923	0	
07/19/62	Scott	Tstm, Hail	0	0		$0	$2,941	A
06/08/63	Scott	Tstm, Wind	0	0		$2,941	$29,412	A
05/23/64	Scott	Tstm Wind 60 kts.	0	0		0	0	
06/01/65	Scott	Tstm, Hail, Lightning	0	0		$3,125	0	
07/08/65	Scott	Tstm, Hail, Wind	0.1	0.35		$2,941	29	A
07/12/65	Scott	Tstm, Lightning, Wind	0	0.03		$735	1	A
07/16/65	Scott	Tstm Wind 0 kts.	0	0		0	0	
08/02/65	Scott	Tstm, Hail, Wind	0	0		$152	$15,152	A
08/25/65	Scott	Tstm, Hail, Wind	0	0		$2,941	$294	A
07/10/66	Scott	Tstm, Lightning, Wind	0	0		$575	$575	A
06/04/67	Scott	Tstm	0	0		$833	$500,000	A
06/14/67	Scott	Tstm, Hail, Wind	0	0		$3,333	$3,333	A
07/22/67	Scott	Tstm, Hail, Wind	0	0.02		$1,064	$1,064	A
06/20/68	Scott	Tstm, Hail, Wind	0	0		$7,143	$0	
07/23/68	Scott	Tstm, Hail	0	0		$0	$3,846	A
07/30/68	Scott	Tstm, Hail	0	0		$0	$2,273	A

08/06/68	Scott	Tstm	0	0		$38,462	$0	
09/08/68	Scott	Tstm, Hail	0	0		$0	$1,250	A
10/01/68	Scott	Tstm	0	0		$5,747	$0	
09/28/69	Scott	Tstm, Lightning	0	0.01		$575	$0	
04/01/70	Scott	Tstm	0	0		$0	$73,529	A
06/10/70	Scott	Tstm, Hail, Wind	0	0		$74	$735	A
06/25/70	Scott	Tstm, Hail	0	0		$2,941	$2,941	A
07/18/70	Scott	Tstm, Hail, Wind	0	0		$1,163	$1,163	A
08/28/70	Scott	Tstm, Wind	0	0		$2,381	$0	
09/20/70	Scott	Tstm, Hail, Lightning, Wind	0	0		$575	$575	A
06/18/71	Scott	Tstm, Hail, Wind	0	0		$2,941	$2,941	A
06/19/71	Scott	Tstm, Hail, Wind	0	0		$57	$575	A
06/24/71	Scott	Tstm, Hail, Wind	0	0.47		$29,412	$29,412	A
06/29/71	Scott	Tstm, Hail, Wind	0	0.02		$926	$926	A
07/07/71	Scott	Tstm, Hail, Tstm, Wind	0	0		$6,757	$6,757	A
07/07/71	Scott	Tstm, Hail, Wind	0	0		$8,475	$8,475	A
07/12/71	Scott	Tstm, Hail, Lightning, Wind	0	0		$2,273	$2,273	A
07/14/71	Scott	Tstm, Hail, Lightning	0	0.03		$1,389	$13,889	A
07/18/71	Scott	Tstm, Hail, Lightning	0	0		$575	$575	A
07/22/71	Scott	Tstm, Hail	0	0		$93	$926	A
07/27/71	Scott	Tstm, Hail, Wind	0	0		$185	$1,852	A
08/31/71	Scott	Tstm, Lightning	0	0		$1,613	$0	
05/01/72	Scott	Tstm, Wind	0	0		$926	$0	
05/26/72	Scott	Tstm, Hail, Lightning, Wind	0	0		$926	$93	
06/27/72	Scott	Tstm, Hail, Lightning, Wind	0	0		$88	$8,772	A
06/28/72	Scott	Tstm, Hail, Lightning	0	0		$109	$1,087	A
07/11/72	Scott	Tstm, Hail, Wind	0	0		$1,852	$1,852	A
05/01/73	Scott	Tstm	0	0		$2,941	$0	
07/29/73	Scott	Tstm Hail 2.50 in.	0	0		0	0	
07/29/73	Scott	Tstm Wind 68 kts.	0	0		0	0	
06/18/74	Scott	Tstm, Hail, Wind	0	0.06		$2,941	$29,412	A
06/20/74	Scott	Tstm, Hail, Wind	0.1	0.44		$277,778	$277,778	A
04/26/75	Scott	Tstm	0	0		$1,163	$0	
05/20/75	Scott	Tstm Hail 0.75 in.	0	0		0	0	
05/20/75	Scott	Tstm Wind 50 kts.	0	0		0	0	
01/26/77	Scott	Tstm, Wind	0	0		$575	$0	
05/23/77	Scott	Tstm Hail 1.75 in.	0	0		0	0	
08/01/78	Scott	Tstm, Hail, Tornado, Wind	0	0.13		$62,500	$62,500	A
05/17/79	Scott	Tstm Wind 0 kts.	0	0		12,500	0	
05/17/79	Scott	Tstm Wind 52 kts.	0	0		12,500	0	
06/19/79	Scott	Tstm, Wind	0	0.76		$151,515	$15,152	A
01/11/80	Scott	Tstm, Wind	0	0		$575	$0	
03/16/80	Scott	Tstm Hail 1.00 in.	0	0		0	0	
06/07/80	Scott	Tstm Hail 1.00 in.	0	0		0	0	

06/07/80	Scott	Tstm, Wind	0	1		$125,000	$1,250,000	A
07/15/80	Scott	Tstm Wind 90 kts.	0.7	0		$1,666,667	$166,667	A
08/07/80	Scott	Tstm, Wind	0	0		$1,923	$1,923	A
08/19/80	Scott	Tstm Hail 1.75 in.	0	0		0	0	
08/19/80	Scott	Tstm Wind 65 kts.	0	0		0	0	
08/19/80	Scott	Tstm Wind 70 kts.	0	0		$20,833	$20,833	A
09/03/80	Scott	Tstm Wind 61 kts.	0	0		0	0	
09/03/80	Scott	Tstm Wind 70 kts.	0	0		0	0	
04/29/81	Scott	Tstm Hail 1.75 in.	0	0		$50,000	$0	
06/13/81	Scott	Tstm Wind 65 kts.	0	0		0	0	
06/14/81	Scott	Tstm Wind 0 kts.	0	0		0	0	
08/31/82	Scott	Tstm Wind 0 kts.	0	0		0	0	
08/31/82	Scott	Tstm Wind 0 kts.	0	0		0	0	
10/05/82	Scott	Tstm, Lightning	0	0		$7,042	$0	
06/13/83	Scott	Tstm, Wind	0	0		$10,000	$0	
07/01/83	Scott	Tstm, Hail, Wind	0	0		$1,429	$14,286	A
07/03/83	Scott	Tstm Wind 0 kts.	0	0		$16,667	0	
07/03/83	Scott	Tstm, Wind	0	0		$156,250	$0	
07/19/83	Scott	Tstm, Lightning, Wind	0	0		$156,250	$1,563	A
08/29/83	Scott	Tstm, Hail, Lightning, Wind	0	0.09		$1,429	$1,429	A
07/09/84	Scott	Tstm Hail 0.75 in.	0	0		0	0	
04/20/85	Scott	Tstm Hail 1.00 in.	0	0		0	0	
04/20/85	Scott	Tstm Hail 1.75 in.	0	0		0	0	
05/30/85	Scott	Tstm Hail 1.75 in.	0	0		$575	0	
01/11/86	Scott	Tstm, Wind	0	0		$575	$0	
03/31/86	Scott	Tstm Hail 0.75 in.	0	0		0	0	
04/26/86	Scott	Tstm Wind 0 kts.	0	0		$575	0	
11/07/86	Scott	Tstm, Wind	0	0		$575	$0	
05/13/87	Scott	Tstm Wind 0 kts.	0	0		0	0	
06/28/87	Scott	Tstm Wind 0 kts.	0	0		0	0	
07/27/87	Scott	Tstm Wind 0 kts.	0	0		0	0	
07/27/87	Scott	Tstm Wind 0 kts.	0	0		0	0	
05/24/89	Scott	Tstm Wind 61 kts.	0	0		0	0	
06/12/90	Scott	Tstm Hail 0.75 in.	0	0		0	0	
06/12/90	Scott	Tstm Wind 0 kts.	0	0		0	0	
04/29/91	Scott	Tstm Wind 0 kts.	0	0		0	0	
05/28/91	Scott	Tstm Wind 0 kts.	0	0		0	0	
06/30/91	Scott	Tstm Wind 0 kts.	0	0		0	0	
06/16/92	Scott	Tstm Wind 0 kts.	0	0		0	0	
08/01/92	Scott	Tstm Hail 1.75 in.	0	0		0	0	
08/01/92	Scott	Tstm Wind 0 kts.	0	0		0	0	
09/13/93	Savage	Tstm Hail 1.00 in.	0	0		0	0	

04/15/94	Countywide	Tstm Wind 0 kts. Roof, trees, power lines truck damaged	0	0	2	0	0	
06/30/94	Shakopee	Tstm Hail 1.75 in.	0	0		0	0	
06/30/94	Prior Lake	Tstm Hail 1.75 in.	0	0		0	0	
07/05/94	Belle Plaine	Tstm Winds Trees down	0	0		0	0	
07/07/94	Jordan	Tstm Hail 1.00 in. buildings damaged	0	0	7	0	0	
07/07/94	Prior Lake	Tstm Hail 1.00 in.	0	0		0	0	
07/07/94	Jordan	Tstm Winds trees down structures damaged	0	0		0	0	
07/21/95	New Prague	Tstm Hail 1.00 in.	0	0		0	0	
03/24/96	Prior Lake	Tstm Lightning Auto damaged 1 fatality	0	1	1	0	0	
05/19/96	New Prague	Tstm Wind 55 kts. Trees down garage damage	0	0	1	0	0	
05/19/96	Belle Plaine	Tstm Wind 70 kts. Houses/barns damaged	0	0		0	0	
05/19/96	Prior Lake	Tstm Wind 70 kts. Trees down, houses/casino/high school roof damage, evacuation	0	0		0	0	
06/06/96	Prior Lake	Tstm Hail 0.75 in.	0	0		0	0	
06/29/96	Lydia	Tstm Wind 60 kts. Trees/power lines down sheds damaged	0	0		0	0	
08/06/96	Shakopee	Tstm Wind 50 kts. Trees down	0	0		0	0	
08/06/96	Lydia	Tstm Wind 55 kts. Roof damaged	0	0	1	0	0	
10/16/96	St Patrick	Tstm Hail 0.75 in., 3.5" rain 1hr	0	0		0	0	
10/29/96	Countywide	Tstm Wind 64 kts. Trees/power lines down, airplane and structures damaged	0	0		0	0	
06/28/97	Marystown	Tstm Hail 2.00 in.	0	0		0	0	
06/28/97	Elko	Tstm Wind 50 kts. Shed damaged	0	0		0	0	
07/01/97	Lydia	Tstm Hail 0.75 in.	0	0		0	0	
07/01/97	Jordan	Tstm Hail 0.88 in.	0	0		0	0	
07/01/97	Jordan	Tstm Hail 0.88 in.	0	0		0	0	
07/01/97	Marystown	Tstm Hail 1.00 in.	0	0		0	0	
07/01/97	Prior Lake	Tstm Hail 1.00 in.	0	0		0	0	
07/01/97	Shakopee	Tstm Hail 1.25 in.	0	0		0	0	
07/01/97	Jordan	Tstm Hail 2.00 in.	0	0		0	0	

07/13/97	Shakopee	Tstm Hail 1.75 in.	0	0		0	0	
07/13/97	Savage	Tstm Hail 1.75 in.	0	0		0	0	
07/13/97	Belle Plaine	Tstm Wind 60 kts. Trees/power lines down	0	0		0	0	
07/13/97	Belle Plaine	Tstm Wind 61 kts.	0	0		0	0	
07/13/97	Belle Plaine	Tstm Wind 61 kts. Trees down	0	0		0	0	
07/13/97	Jordan	Tstm Wind 61 kts.	0	0		0	0	
07/13/97	Savage	Tstm Wind 61 kts.	0	0		0	0	
07/13/97	Shakopee	Tstm Wind 65 kts. Trees down	0	0		0	0	
08/15/97	Lydia	Tstm Hail 1.75 in.	0	0		0	0	
08/15/97	Jordan	Tstm Hail 1.75 in.	0	0		0	0	
08/15/97	Spring Lake	Tstm Hail 1.75 in.	0	0		0	0	
08/15/97	Spring Lake	Tstm Wind 52 kts.	0	0		0	0	
08/15/97	Jordan	Tstm Wind 55 kts. Mobile home damaged	0	0	1	0	0	
08/15/97	Prior Lake	Tstm Wind 55 kts. Trees down garage damage	0	0		0	0	
09/08/97	Savage	Tstm Hail 1.00 in.	0	0		0	0	
10/06/97	Prior Lake	Tstm Hail 0.75 in.	0	0		0	0	
05/15/98	Savage	Tstm Hail 0.75 in.	0	0		0	0	
05/15/98	Shakopee	Tstm Hail 0.75 in.	0	0		0	0	
05/15/98	New Prague	Tstm Hail 0.88 in.	0	0		0	0	
05/15/98	Savage	Tstm Hail 1.75 in.	0	0		170,000,000	0	
05/15/98	Prior Lake	Tstm Hail 2.00 in.	0	0			0	
05/15/98	Savage	Tstm Hail Wind 61 kts. Roof damage to homes and businesses	0	0		0	0	
05/18/98	Jordan	Tstm Hail 0.75 in.	0	0		0	0	
05/30/98	Shakopee	Tstm Wind 60 kts. Trees/power lines down, semi and auto damage	0	0		0	0	
05/30/98	Belle Plaine	Tstm Wind 65 kts. Trees down, roofs damaed	0	0		17,600,000	0	
05/30/98	New Market	Tstm Wind 65 kts.	0	0		0	0	
05/30/98	Prior Lake	Tstm Wind 85 kts. 250 trees down 100 boats/docks/28 homes damaged	0	128		$21,900,000	0	
05/30/98	Savage	Tstm Wind 85 kts. Trees down homes damaged, 7 destroyed	0	0		0	0	
05/30/98	Scott	Tstm, Wind	0	0		$21,900,000	$0	
06/24/98	Belle Plaine	Tstm Wind 61 kts.	0	0		0	0	
06/24/98	Jordan	Tstm Wind 61 kts.	0	0		0	0	

06/26/98	Belle Plaine	Tstm Hail 0.88 in.	0	0		0	0	
06/26/98	New Prague	Tstm Hail 1.75 in.	0	0		0	0	
06/26/98	New Prague	Tstm Wind 61 kts.	0	0		0	0	
07/14/98	Shakopee	Tstm Wind 50 kts. Trees/power lines down	0	0		0	0	
08/09/98	Prior Lake	Tstm Hail 0.75 in.	0	0		0	0	
08/22/98	Shakopee	Tstm Hail 1.00 in.	0	0		0	0	
08/22/98	Savage	Tstm Wind 52 kts. Trees down	0	0		0	0	
08/22/98	Shakopee	Tstm Wind 52 kts.	0	0		0	0	
08/23/98	Blakeley	Tstm Hail 0.75 in.	0	0		0	0	
03/17/99	Countywide	Tstm Wind 55 kts.	0	0		0	0	
06/05/99	Shakopee	Tstm Hail 0.88 in.	0	0		0	0	
06/05/99	Shakopee	Tstm Hail 2.75 in. Auto's damaged	0	0	12	0	0	
06/05/99	Shakopee	Tstm Hail 3.00 in.	0	0	22	0	0	
06/05/99	Shakopee	Tstm Lightning	0	0	2	0	0	
06/06/99	Belle Plaine	Tstm Hail 1.75 in.	0	0		0	0	
06/06/99	Shakopee	Tstm Wind 50 kts.	0	0		0	0	
06/22/99	Prior Lake	Tstm Wind 55 kts. Trees/power lines down	0	0		0	0	
07/30/99	Elko	Tstm Wind 55 kts. Trees/power lines down	0	0		0	0	
09/07/99	Savage	Tstm Hail 0.75 in.	0	0		0	0	
04/05/00	Countywide	Tstm Wind 64 kts. Trees/power lines down, Homes/structures/truck damaged	0	0		0	0	
09/02/00	Savage	Tstm Hail 0.75 in.	0	0		8,000,000	0	
09/02/00	Prior Lake	Tstm Hail 0.75 in.	0	0		$470,588	0	
04/07/01	Countywide	Tstm Wind 69 kts. Structures damaged	0	0		0	0	
05/01/01	Jordan	Tstm Hail 0.75 in.	0	0		0	0	
06/01/01	Savage	Tstm Hail 0.88 in.	0	0		500,000	0	
06/11/01	Savage	Tstm Hail 0.75 in.	0	0		5,000	0	
06/11/01	Prior Lake	Tstm Hail 1.75 in. houses and vehicles damaged	0	0	20	0	0	
06/11/01	New Prague	Tstm Wind 52 kts. trees down, boats damaged	0	0	2	$500,000	0	
06/11/01	Belle Plaine	Tstm Wind 55 kts. Trees down	0	0		$5,000	0	
06/13/01	New Market	Tstm Wind 50 kts. Trees down	0	0		0	0	
06/13/01	New Prague	Tstm Wind 61 kts. Trees down	0	0		0	0	
06/18/01	Savage	Tstm Hail 0.75 in.	0	0		0	0	

08/29/01	Blakeley	Tstm Wind 60 kts. Trees down	0	0		0	0	
04/18/02	Jordan	Tstm Hail 0.75 in.	0	0		0	0	
04/18/02	Shakopee	Tstm Hail 0.88 in.	0	0		0	0	
04/18/02	Savage	Tstm Hail 1.00 in.	0	0		0	0	
05/05/02	Belle Plaine	Tstm Hail 0.75 in.	0	0		0	0	
05/05/02	New Market	Tstm Hail 0.75 in.	0	0		0	0	
05/08/02	New Market	Tstm Hail 0.75 in.	0	0		0	0	
06/10/02	Blakeley	Tstm Hail 0.75 in.	0	0		0	0	
07/28/02	New Prague	Tstm Hail 0.75 in.	0	0		0	0	
07/28/02	Belle Plaine	Tstm Hail 0.88 in.	0	0		0	0	
07/28/02	New Market	Tstm Hail 1.00 in.	0	0		0	0	
08/03/02	Prior Lake	Tstm Hail 0.75 in. 6,000 in Prior Lake and Credit River and Spring Lake townships lost power	0	0		40,000	0	
08/03/02	Lydia	Tstm Wind 50 kts. Trees/power lines down	0	0		$40,000	0	
08/03/02	New Prague	Tstm Wind 62 kts. Trees down roofs damaged	0	0	3	0	0	
08/16/02	Shakopee	Tstm Hail 0.88 in.	0	0		0	0	
08/16/02	Belle Plaine	Tstm Wind 50 kts. Tree branches down	0	0		50,000	0	
08/16/02	Belle Plaine	Tstm Wind 52 kts. Trees down	0	0		$50,000	0	
08/16/02	New Prague	Tstm Wind 70 kts. Trees down, houses/cars damaged	0	0		0	0	
09/01/02	Jordan	Tstm Hail 1.00 in.	0	0		0	0	
04/15/03	New Market	Tstm Hail 1.00 in.	0	0		0	0	
06/24/03	Spring Lake	Tstm Wind 55 kts. Boat damaged	0	0	1	0	0	
07/04/03	Shakopee	Tstm Wind 52 kts. Trees/power lines down	0	0		0	0	
07/04/03	Prior Lake	Tstm Wind 52 kts. Trees down	0	0		0	0	
07/14/03	Prior Lake	Tstm Hail 1.25 in.	0	0		0	0	
04/18/04	Shakopee	Tstm Hail 0.75 in.	0	0		0	0	
04/18/04	Countywide	Tstm Wind 52 kts. Trees down structures damaged	0	0		0	0	
04/18/04	Prior Lake	Tstm Wind 61 kts. Trees/radio towers down outbuildings damaged	0	0	9	0	0	
05/09/04	Prior Lake	Tstm Hail 0.75 in.	0	0		0	0	
05/09/04	Belle Plaine	Tstm Hail 0.75 in.	0	0		0	0	
05/09/04	Jordan	Tstm Hail 0.88 in.	0	0		0	0	

05/09/04	Prior Lake	Tstm Hail 1.00 in.	0	0		0	0	
05/09/04	Belle Plaine	Tstm Hail 1.00 in.	0	0		0	0	
05/09/04	Shakopee	Tstm Wind 50 kts. Tree branches down	0	0		0	0	
05/09/04	Belle Plaine	Tstm Wind 55 kts.	0	0		0	0	
06/23/04	Belle Plaine	Tstm Wind 53 kts.	0	0		0	0	
06/23/04	New Prague	Tstm Wind 73 kts.	0	0		0	0	
08/01/04	Shakopee	Tstm Hail 1.00 in.	0	0		0	0	
10/29/04	Shakopee	Tstm Hail 0.75 in.	0	0		0	0	
12/12/04	Countywide	Tstm Wind 40 kts. Roof/trees damaged	0	0		0	0	
05/08/05	Prior Lake	Tstm Wind 50 kts. Tree branches down	0	0		0	0	
05/08/05	New Prague	Tstm Wind 55 kts. Trailer roofs signs damaged	0	0		0	0	
06/07/05	Shakopee	Tstm Hail 0.75 in.	0	0		0	0	
06/07/05	Prior Lake	Tstm Hail 1.00 in.	0	0		0	0	
06/08/05	Prior Lake	Tstm Hail 0.88 in.	0	0		0	0	
06/08/05	Belle Plaine	Tstm Hail 1.00 in.	0	0		0	0	
06/08/05	Belle Plaine	Tstm Wind 52 kts. Trees/power lines down	0	0		0	0	
06/08/05	Savage	Tstm Wind 52 kts. Trees down	0	0		0	0	
06/13/05	New Prague	Tstm Hail 0.75 in. extremely heavy hail	0	0		0	0	
06/13/05	Prior Lake	Tstm Hail 1.00 in.	0	0		0	0	
06/20/05	Shakopee	Tstm Wind 52 kts. Trees down	0	0		0	0	
06/20/05	Prior Lake	Tstm Wind 52 kts. Trees down	0	0		0	0	
06/24/05	Prior Lake	Tstm Wind 52 kts. Trees down	0	0		0	0	
06/24/05	St Patrick	Tstm Wind 55 kts. Trees/power lines down, roofs homes boat damage	0	0	7	0	0	
06/24/05	New Prague	Tstm Wind 56 kts. Trees/power lines down, homes auto's sheds damaged	0	0		0	0	
06/24/05	Belle Plaine	Tstm Wind 58 kts. Trees down	0	0		0	0	
08/09/05	Belle Plaine	Tstm Hail 1.00 in.	0	0		0	0	
08/09/05	St Benedict	Tstm Hail 1.75 in.	0	0		0	0	
09/03/05	New Prague	Tstm Hail 0.75 in.	0	0		604,000	0	
09/03/05	New Prague	Tstm Wind 52 kts. Trees down RR track damage	0	0	1	$604,000	0	

09/04/05	Prior Lake	Tstm Lightning homes damaged	0	0	3	0	0	
09/12/05	Shakopee	Tstm Wind 52 kts. Trees down home/vehicle damage	0	0	2	0	0	
09/21/05	Prior Lake	Tstm Hail 0.75 in.	0	0		0	0	
10/04/05	Savage	Tstm Lightning electrical components destroyed	0	0	6	0	0	
04/18/06	Belle Plaine	Tstm Hail 0.75 in.	0	0		0	0	
04/18/06	Marystown	Tstm Hail 0.75 in.	0	0		0	0	
04/24/06	New Market	Tstm Hail 0.75 in.	0	0		0	0	
05/06/06	Mnz069 - 076 - 085	Tstm Wind 59 kts. Trees/power lines down, homes townhouses damaged	0	0		0	0	
06/16/06	Shakopee	Tstm Wind 55 kts. Trees down	0	0		0	0	
06/24/06	Jordan	Tstm Hail 0.88 in.	0	0		0	0	
06/24/06	Elko	Tstm Hail 1.00 in.	0	0		0	0	
06/24/06	Lydia	Tstm Hail 1.50 in.	0	0		0	0	
07/13/06	Shakopee	Tstm Wind 55 kts. Trees down	0	0		0	0	
08/24/06	Prior Lake	Tstm Hail 0.75 in.	0	0		0	0	
08/24/06	Belle Plaine	Tstm Hail 1.75 in.	0	0		0	0	
08/24/06	New Prague	Tstm Hail 1.75 in.	0	0		0	0	
08/24/06	New Prague	Tstm Hail 1.75 in.	0	0		0	0	
08/24/06	Jordan	Tstm Hail 1.75 in.	0	0		0	0	
08/24/06	Elko	Tstm Hail 1.75 in.	0	0		0	0	
08/24/06	New Prague	Tstm Hail 2.75 in.	0	0		0	0	
08/24/06	Belle Plaine	Tstm Hail 3.00 in.	0	0		0	0	
08/24/06	New Market	Tstm Hail 3.00 in.	0	0		10,000,000	0	
08/24/06	New Market	Tstm Hail 3.00 in.	0	0		0	0	
08/24/06	New Prague	Tstm Hail 4.25 in. Auto's homes businesses damaged	0	0		0	0	
08/24/06	Elko	Tstm Wind 55 kts. Trees down	0	0		0	0	
10/03/06	New Prague	Tstm Hail 0.75 in.	0	0		0	0	
10/03/06	New Prague	Tstm Hail 0.88 in.	0	0		0	0	
10/03/06	New Prague	Tstm Hail 0.88 in.	0	0		0	0	
10/03/06	New Prague	Tstm Hail 0.88 in.	0	0		0	0	
10/03/06	New Prague	Tstm Hail 1.00 in.	0	0		0	0	
06/20/07	Elko	Tstm Hail 0.75 in.	0	0		0	0	
06/20/07	Shakopee	Tstm Hail 0.88 in.	0	0		0	0	
06/20/07	Jordan	Tstm Hail 0.88 in.	0	0		0	0	
06/20/07	Prior Lake	Tstm Hail 1.00 in.	0	0		0	0	

06/20/07	New Prague	Tstm Hail 1.00 in.	0	0		0	0	
06/20/07	New Prague	Tstm Hail 1.00 in.	0	0		0	0	
06/20/07	Belle Plaine	Tstm Hail 1.25 in.	0	0		0	0	
06/20/07	Elko	Tstm Hail 1.50 in.	0	0		0	0	
06/20/07	Jordan	Tstm Hail 1.75 in.	0	0		0	0	
06/20/07	Elko	Tstm Hail 1.75 in.	0	0		0	0	
06/20/07	New Prague	Tstm Hail 1.75 in.	0	0		0	0	
06/20/07	New Prague	Tstm Hail 1.75 in.	0	0		0	0	
06/20/07	New Prague	Tstm Hail 1.75 in.	0	0		0	0	
06/20/07	New Prague	Tstm Hail 2.75 in.	0	0		0	0	
06/20/07	New Prague	Tstm Wind 54 kts. Branches down	0	0		0	0	
06/21/07	Belle Plaine	Tstm Hail 0.75 in.	0	0		0	0	
07/03/07	Elko	Tstm Hail 1.75 in.	0	0		0	0	
08/11/07	Shakopee	Tstm Hail 0.75 in.	0	0		0	0	
08/11/07	Lydia	Tstm Hail 0.75 in.	0	0		0	0	
08/11/07	Savage	Tstm Hail 0.88 in. lightning, house fires and city server	0	0	3	100,000	0	
08/11/07	Prior Lake	Tstm Hail 0.88 in.	0	0		0	0	
08/11/07	Jordan	Tstm Hail 1.00 in.	0	0		0	0	
08/13/07	Lydia	Tstm Hail 1.50 in.	0	0		0	0	
08/28/07	Savage	Tstm Wind 50 kts. Trees down	0	0		0	0	
08/28/07	Prior Lake	Tstm Wind 55 kts. Trees down	0	0		0	0	
09/24/07	Prior Lake	Tstm Wind 50 kts.	0	0		0	0	
05/29/08	Prior Lake	Tstm Hail 0.75 in.	0	0		0	0	
05/29/08	Prior Lake	Tstm Hail 0.80 in.	0	0		0	0	
05/29/08	Blakeley	Tstm Hail 1.00 in.	0	0		0	0	
05/29/08	Belle Plaine	Tstm Hail 1.75 in.	0	0		0	0	
05/30/08	Belle Plaine	Tstm Hail 1.00 in.	0	0		0	0	
317		**TOTALS**	1	132	103	255,152,043	2,561,507	

JURISDICTION HISTORIC HAZARD INCIDENTS								
HAZARD	Tornado Incidents							
Data Sources	NOAA/NWS, Sheldus, Local Sources							
Loss Type	A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup							
Event Date	Location or Map Reference	Impact Description Utility Outage Assets Damaged Road/Bridge Closed Evacuation, Etc.	Fatalities	Injuries	Assets Damaged	Structure Loss	Other Loss or Cost Amount	Type
05/21/77	Scott Co Begin Lat/Lon: 44° 34'n / 93° 37'w End Lat/Lon: 44° 48'n / 93°31'w	Tornado F2 17mi/33yds	0	0		250,000	0	
07/21/95	Lydia Begin LAT/LON: 44°38'N / 93°31'W End Unk+A114	Tornado Begin 0mi/10yds F1	0	0		0	0	
08/01/78	Scott Co	Tornado	0	0.13		$62,500	$62,500	
08/12/95	New Prague	Tornado Funnel Clouds	0	0		0	0	
08/22/98	Savage Begin Lat/Lon: 44° 47'n / 93°20'w End Lat/Lon: 44° 47'n / 93° 20'w	Tornado F0 0mi/50yds	0	0		0	0	
06/05/99	Savage Begin Lat/Lon: 44° 47'n / 93°20'w End Lat/Lon: 44° 47'n / 93° 20'w	Tornado F0 0mi/50yds	0	0		0	0	
07/30/99	Blakeley	Tornado F0 Silo's/trees damaged	0	0	3	0	0	
07/30/99	Lydia	Tornado F0 Trees/power lines down	0	0		0	0	
07/30/99	Belle Plaine	Tornado F1 business roofs/trees damaged	0	0		0	0	
05/09/01	New Prague Begin Lat/Lon: 44° 34'n / 93° 32'w End Lat/Lon: 44° 34'n / 93°32'w	Tornado F0 0mi/25yds	0	0		0	0	
05/09/01	183 New Market Begin Lat/Lon: 44° 36'n / 93°22'w End Lat/Lon: 44° 36'n / 93° 22'w	Tornado F0 0mi/25yds	0	0		0	0	
05/09/01	New Prague Begin Lat/Lon: 44°36'n / 93° 34'w End Lat/Lon: 44° 36'n / 93°34'w	Tornado F0 0mi/25yds	0	0		0	0	

05/09/01	Belle Plaine Begin Lat/Lon: 44° 36'n / 93° 43'w End Lat/Lon: 44° 36'n / 93°43'w	Tornado F0 1mi/50yds	0	0		0	0	
06/11/01	New Market Begin Lat/Lon: 44°35'n / 93° 23'w End Lat/Lon: 44° 35'n / 93°23'w	Tornado F1 1mi/50yds sheds outbuildings barn destroyed	0	0	9	50,000	0	
08/03/02	Belle Plaine Begin Lat/Lon: 44°37'n / 93° 44'w End Lat/Lon: 44° 37'n / 93°44'w	Tornado F0 0mi/25yds	0	0		0	0	
09/03/05	22 Jordan	Tornado Funnel Cloud	0	0		0	0	
15		**TOTALS**	0	0	12	$362,500	$62,500	

JURISDICTION HISTORIC HAZARD INCIDENTS								
HAZARD	**Winter Weather Incidents**							
Data Sources	**NOAA/NWS, Sheldus, Local Sources**							
Loss Type	**A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup**							
Event Date	**Location or Map Reference**	**Impact Description** Utility Outage Assets Damaged Road/Bridge Closed Evacuation, Etc.	**Fatalities**	**Injuries**	**Assets Damaged**	**Structure Loss**	**Other Loss or Cost**	
							Amount	**Type**
03/10/62	Countywide	Winter Weather	0	0		$6,849	$0	
05/21/63	Countywide	Winter Weather	0	0		$0	$685	A
04/13/64	Countywide	Winter Weather	0	0.09		$1,429	$0	
12/17/64	Countywide	Winter Weather	0	0		$575	$0	
03/01/65	Countywide	Winter Weather	0	0		$5,747	$0	
09/26/65	Countywide	Winter Weather	0	0		$0	$574,713	A
03/22/66	Countywide	Winter Weather	0.1	0		$1,351	$0	
01/06/67	Countywide	Winter Weather	0.1	0		$575	$0	
01/24/67	Countywide	Winter Weather	0	0		$575	$0	
02/15/67	Countywide	Winter Weather	0	0		$704	$0	
12/21/68	Countywide	Winter Weather	0	0		$667	$0	
01/03/71	Countywide	Winter Weather	0	0		$1,852	$0	
02/26/71	Countywide	Winter Weather	0	0		$575	$0	
10/30/71	Countywide	Winter Weather	0	0		$575	$57	A
11/25/71	Countywide	Winter Weather	0	0		$0	$943	A
02/17/72	Countywide	Winter Weather	0	0		$735	$0	
09/03/74	Countywide	Winter Weather	0	0		$0	$574,713	A
01/10/75	Countywide	Winter Weather	0.2	0.57		$57,471	$0	
03/23/75	Countywide	Winter Weather	0	0.11		$5,747	$0	
03/26/75	Countywide	Winter Weather	0	0		$575	$0	
07/20/75	Countywide	Winter Weather	0.1	0.18		$5,747	$0	

03/04/76	Countywide	Winter Weather	0	0		$943	$0	
03/11/76	Countywide	Winter Weather	0	0.34		$575	$0	
02/23/77	Countywide	Winter Weather	0	0.01		$5,747	$0	
03/02/77	Countywide	Winter Weather	0	0.16		$5,747	$0	
01/18/79	Countywide	Winter Weather	0	0		$575	$0	
01/22/79	Countywide	Winter Weather	0	0.04		$943	$0	
02/22/79	Countywide	Winter Weather	0	0		$15,152	$0	
03/01/79	Countywide	Winter Weather	0	0		$15,152	$0	
03/14/79	Countywide	Winter Weather	0.1	0.45		$943	$0	
04/05/79	Countywide	Winter Weather	0	0		$943	$0	
01/06/80	Countywide	Winter Weather	0	0		$575	$0	
11/18/81	Countywide	Winter Weather	0	0		$14,286	$0	
11/23/81	Countywide	Winter Weather	0	0		$1,429	$0	
04/29/84	Countywide	Winter Weather	0	0		$9,434	$0	
04/28/94	Countywide	Winter Weather 6" heavy Snow And Ice 1day 5 hrs,	0	0		0	0	
11/27/94	Countywide	Winter Weather 6" heavy Snow/ice 25hrs	0	0		0	0	
11/26/95	Countywide	Winter Weather 5' heavy Snow 31hrs	0	0		0	0	
12/13/95	Countywide	Winter Weather Glaze	0	0		0	0	
01/10/96	Countywide	Winter Weather 6" heavy Snow 26hrs	0	0		0	0	
01/17/96	Countywide	Winter Weather 12" Ice trees/power lines down 23hrs	0	0		0	0	
03/23/96	Countywide	Winter Weather 13' heavy Snow 49hrs	0	0		0	0	
10/22/96	Countywide	Winter Weather 6" heavy Snow	0	0		0	0	
11/14/96	Countywide	Winter Weather 1/2" Ice schools closed 6hrs	0	0		0	0	
11/20/96	Countywide	Winter Weather 8" heavy Snow roof damage	0	0		0	0	
12/14/96	Countywide	Winter Weather 12' heavy Snow	0	0		0	0	
12/23/96	Countywide	Winter Weather 10" snow roofs collapsed	1	0		0	0	
03/13/97	Countywide	Winter Weather 7" snow to freezing rain	0	0		0	0	
01/04/98	Countywide	Winter Weather 3/4" Ice Auto accident damage	0	0		0	0	
01/01/99	Countywide	Winter Weather 9' heavy Snow train derailed	0	0	1	0	0	
03/08/99	Countywide	Winter Weather 17" snow	0	0		0	0	

01/12/00	Countywide	Winter Weather 6 ' heavy Snow Auto accident damage	0	0		0	0	
01/19/00	Countywide	Winter Weather 9" heavy Snow school and businesses closed	0	0		0	0	
12/28/00	Countywide	Winter Weather 7" heavy snow 12hrs	0	0		0	0	
01/29/01	Countywide	Winter Weather 8" snow trees/powerlines down 24hrs	0	0		0	0	
02/07/01	Countywide	Winter Weather 7" heavy Snow, Auto vehicle damage	0	0		0	0	
02/24/01	Countywide	Winter Weather 6" heavy snow machine sheds collapsed 24hrs	0	0	2	0	0	
03/11/01	Countywide	Winter Weather 8" heavy Snow several structures roof damage	0	0		0	0	
03/30/01	Countywide	Winter Weather Fog	0	0		0	0	
11/26/01	Countywide	Winter Weather 20" snow 24 hrs	0	0		0	0	
03/08/02	Countywide	Winter Weather 5' heavy Snow 1/4" Ice 12hrs	0	0		0	0	
03/14/02	Countywide	Winter Weather 16" snow	0	0		0	0	
11/22/03	Countywide	Winter Weather 10" snow, roofs collapsed schools closed auto accident amage	0	0		0	0	
12/09/03	Countywide	Winter Weather 10" snow	0	0		0	0	
01/21/04	Countywide	Winter Weather 10" snow	0	0		0	0	
02/01/04	Countywide	Winter Weather 6" snow 24hrs	0	0		0	0	
03/05/04	Countywide	Winter Weather 8" snow 10hrs	0	0		0	0	
01/01/05	Countywide	Winter Weather 4" snow 1/4" Ice 12hrs	0	0		0	0	
01/21/05	Countywide	Winter Weather 8" snow 20Hrs	0	0		0	0	
03/18/05	Countywide	Winter Weather 10" snow roads closed 12Hrs	0	0		0	0	
12/13/05	Countywide	Winter Weather 9" heavy Snow 24 hrs	0	0		0	0	

03/12/06	Countywide	Winter Weather 19" snow roads closed power outages 21,000 customers, injuries, accidents 12hrs	0	0		0	0	
03/15/06	Countywide	Winter Weather 6" snow 9hrs	0	0		0	0	
12/31/06	Countywide	Winter Weather	0	0		0	0	
01/14/07	Countywide	Winter Weather 7" heavy Snow	0	0		0	0	
02/23/07	Countywide	Winter Weather 12' heavy Snow 24hrs	0	0		0	0	
03/01/07	Countywide	Winter Weather 18" heavy snow roads/schools closed 25hrs	0	0		0	0	
12/01/07	Countywide	Winter Weather 7" snow 12hrs	0	0		0	0	
03/31/08	Countywide	Winter Weather 9" heavy Snow 24 hrs	0	0		0	0	
04/01/08	Countywide	Winter Weather 8" heavy Snow 24hrs	0	0		0	0	
04/02/08	Countywide	Winter Weather heavy Snow 7" schools roads businesses closed	0	2		0	0	
81		**TOTALS**	1	3	3	164,193	1,151,111	

JURISDICTION HISTORIC HAZARD INCIDENTS								
HAZARD	**Wild-land Fire Incidents**							
Data Sources	**NOAA/NWS, Sheldus, Local Sources**							
Loss Type	**A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup**							
Event Date	**Location or Map Reference**	**Impact Description** Utility Outage Assets Damaged Road/Bridge Closed Evacuation, Etc.	**Fatalities**	**Injuries**	**Assets Damaged**	**Structure Loss**	**Other Loss or Cost**	
							Amount	**Type**
2001	Rice Lake Savage Shakopee Burnsville border	1,200 acres of Swamp Land	0	2			$5,000	A
09/16/07	5700 Birchwood Ave. Prior Lake	A debris fire call for a debris fire in the The fire was a result of an illegal burn.						
07/16/04	12498 Wyoming Ave. Savage	15 pallets of shredded rubber was involved						
10/14/03	Lynn Avenue pits. Savage	Fire in a wooded area on the Savage-Burnsville border						

		TOTALS						

Jurisdiction Historic Hazard Incidents								
Hazard	Hazardous Materials Incidents							
Data Sources	Noaa/Nws, Sheldus, Local Sources							
Loss Type	A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup							
Event Date	Location Or Map Reference	Impact Description Utility Outage Assets Damaged Road/Bridge Closed Evacuation, Etc.	Fatalities	Injuries	Assets Damaged	Structure Loss	Other Loss Or Cost	
							Amount	Type
06/12/90	Minnesota River Savage	Unknown Sheen Release Of Oil: Diesel Impacting Water						
06/12/90	Minnesota River North Of Hwy 13 Savage	Pipeline Release Of Oil: Diesel Impacting Water						
07/16/90	Minnesota River Savage	Vessel Release Of Unknown Oil Impacting Water						
07/16/90	Minnesota River Savage	Vessel Release Of Oil: Diesel Impacting Water						
08/29/90	Minnesota River Savage	Unknown Sheen Release Of Unknown Oil Impacting Water						
04/24/90	12130 Lynn Ave South Savage	Fixed Release Of Darex 1105 Impacting Land						
04/04/91	3260 Bluff Drive Shakopee	Fixed Release Of Oil, Misc: Mineral Impacting Land						
06/07/91	12130 Lynn Ave South Savage	Fixed Release Of Solvent Based Sealant Impacting Land						
09/03/91	12120 Lynn Ave Savage	Fixed Release Of Hydraulic Oil Impacting Water						
12/31/91	1109 County Rd 89 Shakopee	Fixed Release Of Petroleum Naphtha Impacting Land						
05/05/92	17520 Noel Ave Belle Plaine	Mobile Release Of Hydraulic Oil Impacting Land						
05/01/92	Hwy 21 North New Pregue	Fixed Release Of Ammonia, Anhydrous Impacting Air						
04/28/93	4108 Valley Industrial Blvd N Shakopee	Mobile Release Of Hydraulic Oil Impacting Land						

05/04/93	1270th Street Shakopee	Fixed Release Of Oil, Fuel: No. 2 Impacting Land						
06/16/93	4108 Valley Industrial Blvd N Shakopee	Fixed Release Of Hydraulic Oil Impacting Land						
07/26/93	612 N Broadway Jordan	Fixed Release Of Polychlorinated Biphenyls Impacting Land						
08/23/93	Near The Hwy 25 Bridge Belle Plaine	Unknown Sheen Release Of Unknown Impacting Water						
09/14/93	Lynn Ave Savage	Vessel Release Of Fertilizer Impacting Water						
10/01/93	1155 E. 1st Ave Shakopee	Unknown Sheen Release Of Oil: Diesel Impacting Land						
12/06/93	6th Street And Varner Avenue Jordan	Mobile Release Of Hydraulic Oil Impacting Land						
04/05/94	945 W 1st Ave Sub Station Shakopee	Fixed Release Of Polychlorinated Biphenyls Impacting Land						
04/29/94	12115 Lynn Ave Savage	Fixed Release Of Oil, Misc: Mineral Impacting Unknown						
07/29/94	Port Cargill Stiff Leg Dock Savage	Vessel Release Of Oil, Fuel: No. 2-D Impacting Water						
04/25/95	Blakely Trail 1.5 South Of Bell Plain Bell Plain	Unknown Sheen Release Of Ammonia, Anhydrous Impacting Air						
05/16/95	12115 Lynn Ave South Savage	Pipeline Release Of Natural Gas Impacting Air						
06/22/95	12502 Xenwood Ave S Savage	Fixed Release Of Acid Mix(Nitric And Sulfuric) Impacting Land						
09/11/95	7632 Hwy 101 Shakopee	Fixed Release Of Ammonia, Anhydrous Impacting Air						
10/31/95	1155 E 1st Ave Shakopee	Fixed Release Of Oil: Diesel Impacting Water						
05/06/96	12051 Yosemite Ave Richards Dock Savage	Fixed Release Of Granular Fertilizer Impacting Water						
06/20/96	4108 Valley Industrial Blvd Shakopee	Mobile Release Of Hydraulic Oil Impacting Land						

08/22/96	Minnesota River Mile 11 Savage	Vessel Release Of Bilge Material Impacting Water						
11/06/96	551 Valley Park Drive Shakopee	Fixed Release Of Potassium Hydroxide Impacting Land						
01/29/97	4108 Valley Industural Blvd Shakopee	Mobile Release Of Oil: Diesel Impacting Land						
03/11/97	1155 East 1st Ave Shakopee	Fixed Release Of Oil: Diesel Impacting Land						
03/11/97	1155 East 1st Ave Shakopee	Fixed Release Of Oil: Diesel Impacting Land						
05/22/97	4108 Valley Indust Blvd N Shakopee	Mobile Release Of Oil, Fuel: No. 2-D Impacting Water						
07/14/97	Highway 50 And 35w Lakeville	Mobile Release Of Oil: Diesel Impacting Water						
05/30/98	Merriam	Railroad Release Of Impacting Rail Report (N/A)						
11/04/98	23636 Delaware Ave Belle Plaine	Fixed Release Of Ammonia, Anhydrous Impacting Air						
11/06/98	12051 Yosemite Ave Savage	Fixed Release Of Oil, Fuel: No. 2-D Impacting Water						
04/20/99	Belle Plaine	Fixed Release Of Ammonia, Anhydrous Impacting Air						
05/05/99	12051 Yosmite Ave Savage	Fixed Release Of Hydraulic Oil Impacting Water						
05/10/99	12050 Yosemite Ave Savage	Mobile Release Of Hydraulic Oil Impacting Water						
05/13/99	Jordon	Railroad Release Of Impacting Rail Report (N/A)						
05/21/99	12051 Yosemite Ave Savage	Fixed Release Of Hydraulic Oil Impacting Water						
05/24/99	County Road 8 Jordan	Railroad Non-Release Release Of Impacting Rail Report (N/A)						
06/03/99	12051 Yosemite Ave Savage	Vessel Release Of Hydraulic Oil Impacting Water						
07/28/99	Marschall Road Shakopee	Railroad Non-Release Release Of Impacting Rail Report (N/A)						

08/21/99	12051 Yeosemite Avenue Savage	Fixed Release Of Hydraulic Oil Impacting Water						
09/15/99	Bluff St Crossing Merriam	Railroad Non-Release Release Of Impacting Rail Report (N/A)						
09/22/99	Bluff Drive Crossing Merriam	Railroad Non-Release Release Of Impacting Rail Report (N/A)						
12/07/99	In Railyard Shakopee	Railroad Release Of Impacting Rail Report (N/A)						
05/02/00	400 East Main	Mobile Release Of Liquid Fertilizer 1034o Impacting Water						
05/08/00	12120 Linn Ave Savage	Fixed Release Of Oil, Misc: Mineral Impacting Water						
05/17/00	12105 Lynn Ave South Savage	Fixed Release Of Paint Impacting Water						
05/26/00	1529 6th Ave West Shakopee	Mobile Release Of Oil, Fuel: No. 2-D Impacting Water						
05/26/00	1529 6th Ave West Shakopee	Mobile Release Of Fuel Soaked Soil Impacting Water						
08/28/00	Industrial Lead Savage	Railroad Non-Release Release Of Impacting Rail Report (N/A)						
10/01/01	27856 Vernon Webster	Pipeline Release Of Natural Gas Impacting Air						
10/01/01	27856 Vernon Ave. Webster	Pipeline Release Of Natural Gas Impacting Air						
04/01/02	Rv Park Mystic Lake Blvd Prior Lake	Fixed Release Of Unknown Oil Impacting Land						
05/31/02	On Canterbury Rd Shakopee	Mobile Release Of Chlorine Impacting Air						
06/10/02	Minnesota River Savage	Unknown Sheen Release Of Unknown Oil Impacting Water						
06/10/02	Yosemite Ave Savage	Mobile Release Of Hydraulic Oil Impacting Water						
08/01/02	Mile Post 28.2/ 800 West 1st Ave Shakopee	Railroad Non-Release Release Of Impacting Rail Report (N/A)						

03/26/03	Continental Machines, Savage	A Light Haze From A Waste Drain. 125 were Evacuated 3 Firefighters Experienced Eye Irritation.						
04/11/03	County Road 7,. Belle Plain	Storage Tank Release Of Ammonia, Anhydrous Impacting Land						
07/17/03	150th St. Prior Lake	70 Homes Evacuated Due To Ruptured A High-Pressure Gas Main..						
10/09/03	Inside Rail Yard Valley Park / Shakopee	Railroad Non-Release Release Of Impacting Rail Report (N/A)						
11/29/03	, Milepost 18.5 Princeton Avenue Savage	Railroad Release Of Oil, Fuel: No. 2-D Impacting Rail Report (N/A)						
04/05/04	2200 Trail Of Dreams Dr. Prior Lake	Mobile Release Of Oil: Diesel Impacting Water						
04/21/04	124 Yosemite Ave Savage	Mobile Release Of Hydraulic Oil Impacting Water						
07/10/04	Minnesota River/ Mile 12.5 Savage	Vessel Release Of Hydraulic Oil Impacting Water						
09/04/04	124 Yosemite Ave/ Minnesota River Savage	Mobile Release Of Hydraulic Oil Impacting Water						
11/21/05	Scott County	Fixed Release Of Ammonia, Anhydrous Impacting Air						
01/12/06	Mile Post 38.70 Jordan	Mobile Release Of Oil: Diesel Impacting Land						
06/02/06	12051 Yosmite Ave Savage	Fixed Release Of Hydraulic Oil Impacting Water						
06/21/06	1068 County Rd 18 Shakopee	Railroad Release Of Non- Hazardous Magnesium Chloride Brine Impacting Land						
07/20/06	Minnisota River Mile 13.1 Savage	Mobile Release Of Oil, Fuel: No. 2-D Impacting Water						
03/23/07	Mp: 33.84 Shakopee	Railroad Non-Release Release Of Sugar Impacting Non-Release (N/A)						
06/18/07	Adc Communications 1187 Park Place Shakopee	Mobile Release Of Corrosive Liquids Nos Impacting Water						

09/26/07	12101 Yosemite Avenue South Savage	Railroad Release Of Asphalt Impacting Water						
11/11/07	Gas Station 12835 Ventura Ct Shakopee	Fixed Release Of Oil, Fuel: No. 2-D Impacting Water						
11/26/07	Milepost: 22 Shakopee	Railroad Release Of Unknown Oil Impacting Ballast						
02/27/08	1068 Stage Coach Rd. Shakopee	Railroad Release Of Oil, Fuel: No. 2-D Impacting Ballast						
03/04/08	14033 Commerce Ave. Prior Lake	A Chemical Leak From An X-Ray Machine At Crossroads Medical Center, 20 Evacuated						
03/12/08	2330 Sioux Trail Nw Prior Lake	Fixed Release Of Hydraulic Oil Impacting Water						
03/25/08	2330 Sioux Trail Nw Prior Lake	Fixed Release Of Gasoline: Automotive (Unleaded) Impacting Land						
05/01/08	Mp: 39 Jordan	Railroad Non-Release Release Of Impacting Non-Release (N/A)						
06/24/08	1200 70th Street Shakopee	Storage Tank Release Of Oil, Fuel: No. 2-D Impacting Land						
08/11/08	7632 County Rd 101 Shakovie	Continuous Release Of Ammonia, Anhydrous Impacting Air						
08/20/08	15035 Mystic Lake Drive Prior Lake	Fixed Release Of Gasoline: Automotive (Unleaded) Impacting Land						
10/15/08	2500 Mystic Lake Blvd Prior Lake	Mobile Release Of Hydraulic Oil Impacting Water						
01/27/09	Mile Post - 28 Rail Yard Shakopee	Railroad Release Of Unknown Oil Impacting Ballast						
04/27/09	1200 70th St Shakopee	Continuous Release Of Nitrogen Oxide Impacting Air						
04/27/09	1200 70th St Shakopee	Continuous Release Of Nitrogen Dioxide Impacting Air						
05/21/09	9085 13th Ave E. Savage	Fixed Release Of Natural Gas Impacting Air						

07/21/09	Audobon Rd Canhassen	Fixed Release Of Ammonia, Anhydrous Impacting Air						
		Totals						

JURISDICTION HISTORIC HAZARD INCIDENTS								
HAZARD	**Illegal Drug Laboratories**							
Data Sources	**NOAA/NWS, Sheldus, Local Sources**							
Loss Type	**A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup**							
Event Date	**Location or Map Reference**	**Impact Description** Fatalities/Injuries Assets Damaged Evacuation, Etc.	**Fatalities**	**Injuries**	**Assets Damaged**	**Structure Loss**	**Other Loss or Cost**	
							Amount	**Type**
	4601 MN-13 West	Abandon lab in trunk of vehicle	0	0	1	0	6500	C R
	14900 block of Louisiana St.	Cardboard box in ditch	0	0	1	0	0	
06/01/99	Third Street in Jordan	Methamphetamine Lab	0	2	1	0	6000	R
01/02/01	Chaska	Methamphetamine Lab	0	1	1	0	6000	R
01/05/01	NW Howard Lake Rd & SW Spring lake Rd Prior Lake	Meth Lab found in wooded area	0	0	0	0		R
01/11/01	4000 block of Colorado St Prior Lake	Methamphetamine Lab	0	2	1	0	6000	R
03/01/01	828 Atwood Shakopee	Meth lab in house	0	0	1	10,000	7000	C R
4/09/01	2840 Spring Lake Rd Prior Lake	Meth lab found in residence	0	0	1	0	6000	R
04/19/01	Prior Lake	Methamphetamine Lab	0		1	0	6000	R
04/26/01	Prior Lake	Methamphetamine Lab in bedroom along with 3 Adults and 3 children	0	6	1	0	6000	R
08/04/01	New Market Township	Methamphetamine manufacturing	0	1	1	0	6000	R
11/27/01	100 S Varner St Jordan	Methamphetamine lab in the attic	0	1	1	0	6000	R
12/04/01	8300 block of Cypress Lane.	Methamphetamine Lab	0	1	1	0	6000	R
04/03/02	309 Mill Street Jordan	Methamphetamine lab in a garage	0	1	1	0	6000	R
05/16/02	203 SW 1ST St. New Prague	Meth Lab in trunk of car	0	0	1	0	500	R
05/08/03	Jordan	Methamphetamine lab in trunk of a car	0	1	1	0	500	R

02/18/04	Hwy 169 and Delaware Jordan	Methamphetamine lab found in Vehicle	0	0	1		500	R
08/13/04	501 N Central Ave New Prague	Meth Lab components in detached garage	0	0	1		6000	R
08/07/06	New Market Township	Residence meth lab.		1	1		6000	R
08/01/07	500 block of West 3rd St. Shakopee	Meth lab in house	0	0	1	0	6000	R
20		**TOTALS**	0	17	15	0	74500	

JURISDICTION HISTORIC HAZARD INCIDENTS								
HAZARD	**Pandemic/Epidemic and Infestation Incidents**							
Data Sources	**NOAA/NWS, Sheldus, Local Sources**							
Loss Type	**A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup**							
Event Date	**Location or Map Reference**	**Impact Description**	**Fatalities**	**Injuries**	**Assets Damaged**	**Structure Loss**	**Other Loss or Cost**	
							Amount	**Type**
1918-19	US wide	Spanish Flu	500,000					
1935-38	Countywide	Typhoid						
1947-49	Countywide	Scarlet Fever						
1950-59	Countywide	Poliomyelitis						
1950-59	Countywide	Measles						
1957-58	US wide	Asian Flu	70,000					
1968-69	US wide	Hong Kong Flu	34,000					
1937	Countywide	Grasshopper destruction of crops.						
2004	Scott County	West Nile virus in two birds			2			
2004	MN Statewide	Whooping cough		727				
2003		One child in Scott County is being monitored as probable cases of severe acute respiratory syndrome, or SARS						
2003	MN Statewide	Whooping cough		207				
2001	Scott County	e-coli	1	2				
09/18/02	Scott County	Four cases of West Nile virus in horses			4			
2005	Scott County	Whooping cough		12				
2006	Scott County	Whooping cough		31				
04/04/02	Shakopee Jr. High School	Salmonella		36				
		TOTALS						

JURISDICTION HISTORIC HAZARD INCIDENTS								
HAZARD	Terrorism-Domestic/International							
Data Sources	NOAA/NWS, Sheldus, Local Sources							
Loss Type	A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup							
Event Date	Location or Map Reference	Impact Description Fatalities/Injuries Assets Damaged Evacuation, Etc.	Fatalities	Injuries	Assets Damaged	Structure Loss	Other Loss or Cost Amount	Other Loss or Cost Type
10/17/01	Shakopee	4 pieces of mail containing a white powdery substance						
9/12/07	Prior lake High School	Bomb threat Evacuated students Explosive sweep of the building.	0	0	0	0	5000	
12/21/07	Prior Lake High School	Bomb threat Students were secured in classrooms 1.5HRS	0	0	0	0	50000	
09/30/07	Valleyfair Amusement Park.	Bomb threat 50 employees were sent home..	0	0	0	0	5000	
04/21/07	Glendale Elementary School Savage	Spray-painted bomb threat	0	0	0	0	2000	
04/20/07	Prior Lake High School	Gun threat	0	0	0	0	1000	
04/25/07	Pioneer Ridge Freshmen Center Chaska	Bomb threat	0	0	0	0	3000	
05/17/00	Prior Lake High School	Bomb threat on a table in the cafeteria	0	0	0	0	3000	
10/24/05	E. Pioneer Trail Chaska	Bomb threat.	0	0	0	0	3000	
10/05/04	Shakopee High School	Bomb threat 900 students and staff were evacuated	0	0	0	0	10000	
12/04/00	Friendship Manor Nursing Home Shakopee	Bomb threat 74 residents evacuated.	0	0	0	0	5000	
09/24/03	Prior Lake Savage School District	School shooting Threat	0	0	0	0	2000	
01/17/03	Southwest Metro Transit Station, 13500 Technology Drive	A man threatened to blow himself up on a bus	0	0	0	0	2000	
04/06/01	Prior Lake High School	A bomb threat note was found The high school was evacuated	0	0	0	0	5000	
04/14/04	North Meadow Apartments Chaska	Bomb-making materials were found	0	0	0	0	1000	

04/29/04	Jordan	Explosives and weapons found in a truck.	0	0	0	0	1000	
04/28/02	Savage	2 explosive devices made out of plastic bottles were found	0	0	0	0	1000	
04/29/02	14900 block of Overlook Drive Savage	Explosion outside a home, a bottle with a type of gas was found	0	0	0	0	5000	
9/11/01	104 NW 4th Ave New Prague	Bomb threat	0	0	0	0	2000	
9/16/01	104 NW 4th Ave New Prague	Bomb threat	0	0	0	0	2000	
8/03/02	104 NW 4th Ave New Prague	Bomb threat	0	0	0	0	2000	
4/02/02	221 NE 12th St New Prague	Bomb threat	0	0	0	0	2000	
06/18/04	13400 Glenhurst Ave. Savage	Car fires caused by Molotov cocktails,						
07/08/04	221 NE 12th St New Prague	Bomb threat	0	0	0	0	2000	
09/15/06	Highway 13 Toledo Ave. Savage	Cut gas line						
10/15/07	721 N Central Ave New Prague	Bomb threat	0	0	0	0	2000	
8/01/07	800W 1st Ave Shakopee	Pipe bomb found under Propane tanks	0	0	0	0	5000	
2003	6957 E Hwy 101 Shakopee	Pipeline was damaged	0	0	1	40000	10000	
08/01/07	1100 S Canterbury Rd Shakopee	PETA threat to Horse Track	0	0	0	0	3000	
		TOTALS						

JURISDICTION HISTORIC HAZARD INCIDENTS								
HAZARD	**Urban Structure Fire**							
Data Sources	**NOAA/NWS, Sheldus, Local Sources**							
Loss Type	**A=Agriculture, C=Content, E=Equipment, R=Response/Recovery/Cleanup**							
Event Date	**Location or Map Reference**	**Impact Description** Fatalities/Injuries Assets Damaged Evacuation, Etc.	**Fatalities**	**Injuries**	**Assets Damaged**	**Structure Loss**	**Other Loss or Cost**	
							Amount	**Type**
02/26/99	Shakopee	Arson fire 32 food and craft booths destroyed	0	0	32	200,000	300,000	C
01/18/01	Prior Lake	Landing fire damaged offices, apartments County Rd 101 closed.						

11/25/01	20335 Sawmill Rd. Jordan	Six fire departments responded to a huge fire at a large hay barn and a horse barn. One animal was lost.	0	0		$1,000,000	$500,000	
10/01/02	Rahr Malting, Shakopee.	A four-alarm blaze County Road 69 was shut down						
12/01/03	4900 Valley Industrial Blvd Shakopee	Commercial business fire						
03/19/08	Shakopee	A man died in an Apartment fire	1		1	100,000	25,000	C
01/28/08	21846 Sielaff Dr. St. Lawrence Twp	Arson fire destroyed a home				120,000	30,000	C
07/16/08	Rollx Vans, 6591 Hwy. 13,	Vans designed for the disabled were destroyed by arson			6	180,000		
02/01/08		Arson destroyed vans 2 miles west of the Rollx Vans lot			2	60,000		
07/22/08	Prior Lake High School	Air-conditioning unit fire. 75 to 100 were evacuated			1	30,000		
	Tractor Supply 16907 Hwy 13,Prior Lake	Flames spread from the trash bin to the building.			1	10,000	5,000	C
08/24/05 11 hrs	St. Mark's Catholic Church Shakopee	2 historic stained glass windows the roof, floor and pews were damaged			1	300,000	100,000	C
03/31/08	2077 12th Avenue West, Shakopee	Apartment complex fire. 1 child and 2 adults were injured		3	1	100,000	40,000	C
07/16/07 7hrs	Shingle factory Warehouse	Warehouse Damaged			1	100,000	20,000	C
09/11/06 6 hrs	Hughes Garage 2nd & Lewis St. Shakopee	Building fire-fireman victim	1		1	200,000		
07/14/07	Murphy Hanrehan Park, Shakopee	Grass fire						
07/16/07	CertainTeed, 3303 4th Ave E. Shakopee	Business Damaged						
07/06/07	1294 78th St Belle Plaine Twp	Home and business destroyed						
10/19/05	101 West Main St Belle Plaine.	Wood and brick building. Entire building destroyed	0	0	1	$1,200,000		

05/31/05	155 Laredo St. Belle Plaine	Pole shed type of building. Entire building destroyed	0	0	1	$600,000	200,000	C
01/11/04	Prior Lake	Townhouse complex	0	0	3	500,000	140,000	
01/13/04	7599 Arbor Lane Savage	Townhouse Complex	0	3	16	$1,000,000	300,000	C
08/18/02	9747 Hwy 101 Savage	Single Family Residence	1	0	1	$180,000	$50,000	C
03/20/04	101 Main St W New Prague	Restaurant	0	0	1	$300,000	70,000	C
12/07/06	26370 Helena Blvd New Prague	Machine Shop	0	0	1	$300,000	$350,000	C
04/24/05	313 2nd Street New Prague	Large residence	0	0	1	$90,000	$35,000	C
02/23/08		A truck and trailer was set ablaze						
06/24/07	Valley Green Mobile Home Park, Jordan	Arson fire						
07/22/06	!st Ave, Eagle Creek Blvd Shakopee	Trailer home and horse stable arson fire						
04/04/06	Edgewood School, Prior Lake	Under construction school building,						
02/02/06	Bunge North America, Savage	After 15 hours on the scene of a fire in a grain bin. The bin, contained						
10/19/05	Belle Plaine	Apartment/commercial building fire						
		TOTALS						

NOTE:
Information regarding the following subject areas is located on file in the Scott County Emergency Management Office: Detailed Critical Facilities, Tier II Facilities and Terrorist Targets. Due to the sensitive nature of this information it is not provided in this public document.

Jurisdiction Participation Resolutions

RESOLUTION

WHEREAS, Helena Township has limited capability to undertake extensive participation in the preparation of a hazard mitigation plan; and.

WHEREAS, the Scott County Emergency Management Director is able to act on behalf of Helena Township in the analysis and development of a hazard mitigation plan; and WHEREAS, the Scott County Emergency Management Director shall be responsible for the preparation of a hazard mitigation plan in accordance with 44 FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Scott County Emergency Management Director shall deliver a draft copy of the Plan for public comment as well as the governing body's comment during the planning process and prior to adoption.

NOW THEREFORE, Helena Township Board authorizes the Scott County Emergency Management Director on behalf of Helena Township to prepare the Scott County Multi-Hazard Mitigation Plan, which shall be reviewed and considered for adoption by the Helena Township Board upon completion.

ADOPTED this ~~6th~~ 3rd day of ~~January~~ February, 2009 at the meeting of the Helena Township Board of Helena Township.

Authorized by:

Duane Reitsch, Chair, 2-3-09
Signature, Title, Date

RESOLUTION

WHEREAS, St. Lawrence Township has limited capability to undertake extensive participation in the preparation of a hazard mitigation plan; and.

WHEREAS, the Scott County Emergency Management Director is able to act on behalf of St. Lawrence Township in the analysis and development of a hazard mitigation plan; and WHEREAS, the Scott County Emergency Management Director shall be responsible for the preparation of a hazard mitigation plan in accordance with 44 FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Scott County Emergency Management Director shall deliver a draft copy of the Plan for public comment as well as the governing body's comment during the planning process and prior to adoption.

NOW THEREFORE, St. Lawrence Township Board authorizes the Scott County Emergency Management Director on behalf of St. Lawrence Township to prepare the Scott County Multi-Hazard Mitigation Plan, which shall be reviewed and considered for adoption by the St. Lawrence Township Board upon completion.

ADOPTED this 21 day of February, 2009 at the meeting of the St. Lawrence Township Board of St. Lawrence Township.

Authorized by:

Ed L. Koender, Chairman, 2-21-09
Signature, Title, Date

CREDIT RIVER TOWNSHIP
SCOTT COUNTY
STATE OF MINNESOTA

RESOLUTION NO. 2009-02

RESOLUTION AUTHORIZING THE EMERGENCY MANAGEMENT DIRECTOR TO ACT ON BEHALF OF CREDIT RIVER TOWNSHIP FOR THE PURPOSE OF DEVELOPING SCOTT COUNTY'S HAZARD MITIGATION PLAN.

WHEREAS, Credit River Township has limited capability to undertake extensive participation in the preparation of a hazard mitigation plan; and.

WHEREAS, the Scott County Emergency Management Director is able to act on behalf of Credit River Township in the analysis and development of a hazard mitigation plan; and WHEREAS, the Scott County Emergency Management Director shall be responsible for the preparation of a hazard mitigation plan in accordance with 44 FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Scott County Emergency Management Director shall deliver a draft copy of the Plan for public comment as well as the governing body's comment during the planning process and prior to adoption.

NOW THEREFORE, the Credit River Township Board authorizes the Scott County Emergency Management Director on behalf of Credit River Township to prepare the Scott County Multi-Hazard Mitigation Plan, which shall be reviewed and considered for adoption by the Credit River Township Board upon completion.

ADOPTED this 20TH day of January, 2009 at the meeting of the Township Board of Credit River Township.

Authorized by:

_____, 5-27-08
Leroy Schommer, Chairman — Date
Credit River Town Board

RESOLUTION 2009-001

WHEREAS, Blakeley Township has limited capability to undertake extensive participation in the preparation of a hazard mitigation plan; and.

WHEREAS, the Scott County Emergency Management Director is able to act on behalf of Blakeley Township in the analysis and development of a hazard mitigation plan; and WHEREAS, the Scott County Emergency Management Director shall be responsible for the preparation of a hazard mitigation plan in accordance with 44 FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Scott County Emergency Management Director shall deliver a draft copy of the Plan for public comment as well as the governing body's comment during the planning process and prior to adoption.

NOW THEREFORE, Blakeley Township Board authorizes the Scott County Emergency Management Director on behalf of Blakeley Township to prepare the Scott County Multi-Hazard Mitigation Plan, which shall be reviewed and considered for adoption by the Blakeley Township Board upon completion.

ADOPTED this 6th day of January, 2009 at the meeting of the Blakeley Township Board of Blakeley Township.

Authorized by:

Signature Chairperson Title 1/6/09 Date

RESOLUTION

WHEREAS, Belle Plaine Township has limited capability to undertake extensive participation in the preparation of a hazard mitigation plan; and.

WHEREAS, the Scott County Emergency Management Director is able to act on behalf of Belle Plaine Township in the analysis and development of a hazard mitigation plan; and WHEREAS, the Scott County Emergency Management Director shall be responsible for the preparation of a hazard mitigation plan in accordance with 44 FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Scott County Emergency Management Director shall deliver a draft copy of the Plan for public comment as well as the governing body's comment during the planning process and prior to adoption.

NOW THEREFORE, Belle Plaine Township Board authorizes the Scott County Emergency Management Director on behalf of Belle Plaine Township to prepare the Scott County Multi-Hazard Mitigation Plan, which shall be reviewed and considered for adoption by the Belle Plaine Township Board upon completion.

ADOPTED this 6th day of January, 2009 at the meeting of the Belle Plaine Township Board of Belle Plaine Township.

Authorized by:

Signature Clerk Title 01-06-09 Date

RESOLUTION 2009-02

WHEREAS, Louisville Township has limited capability to undertake extensive participation in the preparation of a hazard mitigation plan; and.

WHEREAS, the Scott County Emergency Management Director is able to act on behalf of Louisville Township in the analysis and development of a hazard mitigation plan; and WHEREAS, the Scott County Emergency Management Director shall be responsible for the preparation of a hazard mitigation plan in accordance with 44 FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Scott County Emergency Management Director shall deliver a draft copy of the Plan for public comment as well as the governing body's comment during the planning process and prior to adoption.

NOW THEREFORE, Louisville Township Board authorizes the Scott County Emergency Management Director on behalf of Louisville Township to prepare the Scott County Multi-Hazard Mitigation Plan, which shall be reviewed and considered for adoption by the Louisville Township Board upon completion.

ADOPTED this 8th day of January, 2009 at the meeting of the Louisville Township Board of Louisville Township.

Authorized by:

John E. Deckman Supervisor 1-8-09

Signature Title Date

RESOLUTION (09-02)

WHEREAS, Cedar Lake Township has limited capability to undertake extensive participation in the preparation of a hazard mitigation plan; and.

WHEREAS, the Scott County Emergency Management Director is able to act on behalf of Cedar Lake Township in the analysis and development of a hazard mitigation plan; and WHEREAS, the Scott County Emergency Management Director shall be responsible for the preparation of a hazard mitigation plan in accordance with 44 FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Scott County Emergency Management Director shall deliver a draft copy of the Plan for public comment as well as the governing body's comment during the planning process and prior to adoption.

NOW THEREFORE, Cedar Lake Township Board authorizes the Scott County Emergency Management Director on behalf of Cedar Lake Township to prepare the Scott County Multi-Hazard Mitigation Plan, which shall be reviewed and considered for adoption by the Cedar Lake Township Board upon completion.

ADOPTED this 6th day of January, 2009 at the meeting of the Cedar Lake Township Board of Cedar Lake Township.

Authorized by:

Signature	Title	Date
Gerald Williams	Chairman	1-6-09

RESOLUTION

WHEREAS, New Market Township has limited capability to undertake extensive participation in the preparation of a hazard mitigation plan; and.

WHEREAS, the Scott County Emergency Management Director is able to act on behalf of New Market Township in the analysis and development of a hazard mitigation plan; and WHEREAS, the Scott County Emergency Management Director shall be responsible for the preparation of a hazard mitigation plan in accordance with 44 FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Scott County Emergency Management Director shall deliver a draft copy of the Plan for public comment as well as the governing body's comment during the planning process and prior to adoption.

NOW THEREFORE, New Market Township Board authorizes the Scott County Emergency Management Director on behalf of New Market Township to prepare the Scott County Multi-Hazard Mitigation Plan, which shall be reviewed and considered for adoption by the New Market Township Board upon completion.

ADOPTED this 3rd day of Feb, 2009 at the meeting of the New Market Township Board of New Market Township.

Authorized by:

Signature, Chair New Market Township Title, 2/3/09 Date

RESOLUTION

WHEREAS, Helena Township has limited capability to undertake extensive participation in the preparation of a hazard mitigation plan; and.

WHEREAS, the Scott County Emergency Management Director is able to act on behalf of Helena Township in the analysis and development of a hazard mitigation plan; and WHEREAS, the Scott County Emergency Management Director shall be responsible for the preparation of a hazard mitigation plan in accordance with 44 FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Scott County Emergency Management Director shall deliver a draft copy of the Plan for public comment as well as the governing body's comment during the planning process and prior to adoption.

NOW THEREFORE, Helena Township Board authorizes the Scott County Emergency Management Director on behalf of Helena Township to prepare the Scott County Multi-Hazard Mitigation Plan, which shall be reviewed and considered for adoption by the Helena Township Board upon completion.

ADOPTED this 3rd day of February, 2009 at the meeting of the Helena Township Board of Helena Township.

Authorized by:

Signature, Chair Title, 2-3-09 Date

JACKSON TOWNSHIP
920 ROSEWOOD CIRCLE
SHAKOPEE, MN 55379

WHEREAS, Jackson Township has limited capability to undertake extensive participation in the preparation of a hazard mitigation plan, and

WHEREAS, the Scott County Emergency Management Director is able to act on behalf of Jackson Township in the analysis and development of a hazard mitigation plan, and

WHEREAS, the Scott County Emergency Management Director shall be responsible for the preparation of a hazard mitigation plan in accordance with 44 FEMA requirements at 44 C.F.R.201.6; and

WHEREAS, the Scott County Emergency Management Director shall deliver a draft copy of the Plan for public comment as well as the governing body's comment during the planning process and prior to adoption.

NOW THEREFORE, the Jackson Township Board authorizes the Scott County Emergency Management Director on behalf of Jackson Township to prepare the Scott County Multi-Hazard Mitigation Plan, which shall be reviewed and considered for adoption by the Jackson Township Board upon completion.

ADOPTED this 9th day of April, 2009 at the meeting of the Jackson Township Board of Jackson Township.

Chris Brinkhaus, Jackson Township Chairman

ATTEST:

Roselyn Menke, Jackson Township Clerk

RECEIVED
on

RESOLUTION #09-002

Spring Lake Township, Scott County, Minnesota

A RESOLUTION AUTHORIZING THE SCOTT COUNTY EMERGENCY MANAGEMENT DIRECTOR TO PREPARE A HAZARD MITIGATION PLAN ON BEHALF OF SPRING LAKE TOWNSHIP

Motion By: Borka **Second By:** Kelley

WHEREAS, Spring Lake Township has limited capability to undertake extensive participation in the preparation of a hazard mitigation plan; and

WHEREAS, the Scott County Emergency Management Director is able to act on behalf of Spring Lake Township in the analysis and development of a hazard mitigation plan; and

WHEREAS, the Scott County Emergency Management Director shall be responsible for the preparation of a hazard mitigation plan in accordance with 44 FEMA requirements at 44.C.F.R. 201.6; and

WHEREAS, the Scott County Emergency Management Director shall deliver a draft copy of the Plan for public comment as well as the governing body's comment during the planning process and prior to adoption

NOW THEREFORE, BE IT HEREBY RESOLVED BY THE SPRING LAKE TOWNSHIP BOARD that it authorizes the Scott County Emergency Management Director, on behalf of Spring Lake Township, to prepare the Scott County Multi-Hazard Mitigation Plan, which shall be reviewed and considered for adoption by the Spring Lake Township Board upon completion.

PASSED AND ADOPTED THIS 8TH DAY OF JANUARY, 2009.

RECEIVED
on
FEB 23 2009
Scott County
Emergency Mangement Office

	YES		NO
Berens	X	Berens	
Borka	X	Borka	
Kelley	X	Kelley	

Kathy Nielsen, Township Clerk

Date: Mon, 13 Apr 2009 09:00:22 -0500
Subject: RE: Hazardous Mitigation Plan

Sounds great, I have it marked down and will see you then.

Dave

From: Weldon, Chris [mailto:CWeldon@co.scott.mn.us]
Sent: Monday, April 13, 2009 8:39 AM
To: David Lanning
Subject: RE: Hazardous Mitigation Plan

How about 3:00 P.M., Thursday afternoon at your office.

Thanks,
Chris Weldon
Emergency Management Director

From: David Lanning [mailto:DLanning@ci.belleplaine.mn.us]
Sent: Monday, April 13, 2009 6:33 AM
To: Weldon, Chris
Subject: RE: Hazardous Mitigation Plan

Thursday afternoon would work best for me. I am open from 1 to 8pm. Just le=
t me know and we can sit down and start hammering this out.

Thanks,
Dave

From: "Weldon, Chris" <CWeldon@co.scott.mn.us>
To: David Lanning <DLanning@ci.belleplaine.mn.us>
Date: Fri, 10 Jul 2009 14:30:20 -0500
Subject: Hazardous Mitigation Worksheets

Hi Dave,

Here are the two worksheets that are partially filled out for the city. I t=
ried to fill these in with the information available to me and am hoping ci=
ty staff or you can provide some of the missing data. The third worksheet w=
e need to work on would be the Goals and Actions form I sent out earlier. I=
f you need another copy of that worksheet please let me know and I also hav=
e some sample goals I could resend. I have our meeting as Tuesday, July 14t=
h at 1 P.M. at your office. If this is incorrect please let me know.

Have a good week-end.

Thanks Dave,

Chris Weldon
Emergency Management Director
Scott County Sheriffs Office
952-496-8381

From: "Weldon, Chris" <CWeldon@co.scott.mn.us>
To: "Rick Jensen (rjensen@ci.enm.mn.us)" <rjensen@ci.enm.mn.us>
Date: Thu, 11 Jun 2009 14:55:10 -0500
Subject: Meet RE: Haz Mit Plans

Rick,

Here are the documents we need for the ENM part of the plan. Two of them ar=
e reference documents. The first reference document is the one titled, "Cri=
tical Facilities Info" and the second is "MITI Sample Goals Objectives Acti=
ons". We will use them to help answer question or use as examples.

The other three are already partially filled out. Some by the consultant an=
d some I answered, but we should look at to make sure they are as accurate =
as we can make them. I'll bring my computer and we can fill them out as we =
talk about them.

Right now next week is pretty open for me except for Monday. How about Wedn=
esday, June 17 at 10:00 A.M. or 1:00 P.M. or Thursday, June 18th same times=
? If these times don't work please suggest something that would work bette=
r for you. I think we can get through it fairly quickly, maybe an hour. If =
you get time to look through it we might be able to get it done quicker tha=
n that.

Let me know if you have any questions.

Thanks,

Chris Weldon
Emergency Management Director
Scott County Sheriffs Office
952-496-8381

From: "Weldon, Chris" <CWeldon@co.scott.mn.us>
To: Randy Hofstad <RHofstad@CityofPRIORLAKE.com>
Date: Sat, 27 Jun 2009 14:12:25 -0500
Subject: Haz Mitigation - Goals and Actions

Randy,

Here are the Goals and Actions that we discussed on June 26th. I did send t=
hem to our consultant but please look them over to make sure it includes al=
l the items we discussed. If we need to make changes please let me know.

Thanks,
Chris Weldon
Emergency Management Director
Scott County Sheriffs Office
952-496-8381

From: "Weldon, Chris" <CWeldon@co.scott.mn.us>
To: "jmccoll@ci.savage.mn.us" <jmccoll@ci.savage.mn.us>
Date: Thu, 23 Jul 2009 12:54:25 -0500
Subject: Hazardous Mitigation Goals for Savage

Joel,

Here are the goals we discussed last week for Savage. I believe I have incl=
uded everything we discussed. Before these and the other worksheets get sen=
t to our consultant I would like to have your Ok. We can make changes befor=
e final submission to FEMA but I have had all jurisdictions review the docu=
ments before sending.

I know this is not your problem but I'll be out of the office starting tomo=
rrow at noon and all next week. If you would get time to review before then=
 it would be helpful, if not I'll be checking my email next week and can se=
nd them at that time. I think the goals are the most critical.

Thanks,
Chris Weldon
Emergency Management Director
Scott County Sheriffs Office
952-496-8381

From: Kathy Nielsen <kathynielsen@springlaketownship.com>
To: "Weldon, Chris" <CWeldon@co.scott.mn.us>
Date: Wed, 11 Mar 2009 15:52:46 -0500
Subject: Clerks meeting

Chris,

Here is the agenda and location for the Clerk=92s meeting. Thank you for y=
our flexibility in being able to meet with us. See on Monday.

Kathy Nielsen. Town Clerk
(952) 492-7030

From: Mcdermand [mailto:mcdermands@frontiernet.net]
Sent: Wednesday, March 11, 2009 3:41 PM
To: Arnita Novotny; DeAnn Croatt; Jerry Maas; Kathy Nielsen, Spring Lake To=
wnship; LuAnne Lemke; Maureen Busse; Mona Bischof; Rita Tauer; Rose Menke; =
Albert
Subject: Clerks meeting

Greetings,

I hope everyone's Annual meeting went well. Mine surprisingly went very we=
ll. The upcoming Clerks meeting on Monday, March 16th, will be held at 7:0=
0 p.m. at the Belle Plaine Township "Garage" 25130 Hickory Blvd., Belle Pla=
ine, MN 56011 (see directions below). For the Agenda please refer to atta=
chment (Clerks agenda March 09).

Jean McDermand
Belle Plaine Township Clerk
952-873-5661

From: Menke, Rose
Sent: Monday, March 23, 2009 2:54 PM
To: Weldon, Chris
Subject: RE: Meet today

Chris

Your office is fine.

Rose

From: Weldon, Chris
Sent: Monday, March 23, 2009 12:34 PM
To: Menke, Rose
Subject: RE: Meet today

That works for me. Would you like to come to my office or is there somewher=
e else that works better for you?

Thanks,

Chris Weldon
Emergency Management Director
Scott County Sheriffs Office
952-496-8381

From: Menke, Rose
Sent: Monday, March 23, 2009 12:27 PM
To: Weldon, Chris
Subject: RE: Meet today

Chris,

Wednesday about 4 would work.

Rose

From: Weldon, Chris
Sent: Monday, March 23, 2009 12:22 PM
To: Menke, Rose
Subject: Meet today

Hi Rose,

Would you like to meet this afternoon after 4:30 to talk about the Hazard M=
itigation Plan? I have a training that starts at 6:30 so I have time before=
 that to meet with you.

Thanks,
Chris Weldon
Emergency Management Director
Scott County Sheriffs Office
952-496-8381

From: "Weldon, Chris" <CWeldon@co.scott.mn.us>
To: "Menke, Rose" <RMenke@co.scott.mn.us>
Date: Wed, 1 Apr 2009 16:22:49 -0500
Subject: RE: Township meeting

No problem. It was my fault as I entered it in my calendar wrong.
Thanks for confirming and getting back to me.

Chris Weldon
Emergency Management Director
Scott County Sheriffs Office
952-496-8381

From: Menke, Rose
Sent: Wednesday, April 01, 2009 12:06 PM
To: Weldon, Chris
Subject: RE: Township meeting

Chris,

Our meeting is the 2nd Tuesday of the month, so it is next Tuesday, April 7=
Sorry for the confusion.

Rose

From: Weldon, Chris
Sent: Wednesday, April 01, 2009 11:29 AM
To: Menke, Rose
Subject: Township meeting

Hi Rose,

Just wanted to confirm, did you still want me to attend the township board =
meeting? I have it on my calendar for tonight, could you please confirm for=
 me when you get a chance?

Thanks,

Chris Weldon
Emergency Management Director
Scott County Sheriffs Office
952-496-8381

From: "Weldon, Chris" <CWeldon@co.scott.mn.us>
To: Dennis Tauer <DTauer1@comcast.net>
Date: Fri, 1 May 2009 17:59:41 -0500
Subject: RE: Hazardous Mitigation planning

Thank you Rita for coming in and I'm glad Cy was able to attend. It was a g=
ood meeting and I'll try to get you the update worksheets early next week.

Thanks,
Chris Weldon
Emergency Management Director
Scott County Sheriffs Office
952-496-8381

From: Dennis Tauer [mailto:DTauer1@comcast.net]
Sent: Friday, May 01, 2009 4:37 PM
To: Weldon, Chris
Subject: RE: Hazardous Mitigation planning

Chris,

Thank you allowing Cy and myself to work with you today. I found the resol=
ution and will mail this out to you right away - you should see it early ne=
xt week.

Rita Tauer
Sand Creek Township clerk
952-492-3122
Dtauer1@comcast.net

Some additional meetings with plan contributors where held on the following dates.

CITIES

City of Belle Plaine Emergency Management/Police Chief/Fire Chief
March 2008, July 2008, April 16, 2009, July 14, 2009

City of Elko New Market Emergency Management/Police Chief
April 2008, September 2008, June 18, 2009

City of Prior Lake Emergency Management/Police Lieutenant/Fire Chief
April 30, 2008, July 2008, October 2008, June 26, 2009

City of Savage Emergency Management/Fire Chief & Police Chief
February 11. 2008, July 17, 2009

```
From: Mona Bischof <m.bischof@kleinbank.com>
To: "Weldon, Chris" <CWeldon@co.scott.mn.us>
Content-Class: urn:content-classes:message
Date: Tue, 14 Apr 2009 16:35:23 -0500
Subject: RE: Hazardous Mitigation Planning

10 a.m. would work good.  If you want to come to Chaska, I will be at my of=
fice =96 KleinBank, 301 Chestnut Street, Chaska, MN 55318.  Let me know and=
 we=9211 go from there.

Thanks again,

Mona Bischof
KleinBank Chaska
301 Chestnut Street
Chaska, MN 55318
952-361-5325


From: Weldon, Chris [mailto:CWeldon@co.scott.mn.us]
Sent: Tuesday, April 14, 2009 4:33 PM
To: Mona Bischof
Subject: RE: Hazardous Mitigation Planning

Sure. How about tomorrow morning at 10:00 PM. Would it be easier if we met =
to work on it? Not sure if you=92re working in Chaska tomorrow but if that =
works I can come over.

Thanks,
Chris Weldon
Emergency Management Director
Scott County Sheriffs Office
952-496-8381
```

City of Shakopee Emergency Management/Police Captain/Fire Chief
May 2008, October 24, 2008

City of Jordan Emergency Management/Police Chief/Fire Chief
July 2008,

City of New Prague Emergency Management/Police Chief/Fire Chief
April 2008, August 2008

TOWNSHIPS

County Township Clerks Meeting
March 16, 2009

Jackson Township Clerk
March 25, 2009

Cedar Lake Township Clerk and Board Chair
March 30, 2009

Jackson Township Clerk and Board
March 24, 2009, April 7, 2009,

New Market Township Clerk and Board
March 23, 2009, April 7, 2009

St. Lawrence Township Clerk and Board
February 21, 2009, April 15, 2009

Sand Creek Township Clerk and Board Chair
May 1, 2009

Spring Lake Township Clerk and Board
February 25, 2009

MEETINGS WITH COUNTY STAFF

County staff was also involved in the gathering of information and ideas. Information was exchanged in some face to face meetings, via email and telephone conversations.

This list does not include all phone calls and email exchanges regarding plan development that took place between Scott County Emergency Management and contributors from other jurisdictions and agencies in Scott County.

Public Meeting Documents
Support Letter

KEVIN STUDNICKA - SCOTT COUNTY SHERIFF
OFFICE OF EMERGENCY MANAGEMENT
LAW ENFORCEMENT CENTER • 301 FULLER STREET SOUTH • SHAKOPEE, MN 55379-1322
(952) 496-8181 • FAX: (952) 445-4622 • www.co.scott.mn.us

TO: Hazardous Mitigation Plan

FROM: Chris Weldon, Scott County Emergency Management Director

SUBJECT: Planning documents for Scott County Plan

Please find this memo with some additional information in regards to the planning timeline, meetings, and documents relating to this project.

I started working in my present position in Scott County in October of 2007. The initial meeting with stakeholders for this plan was held in May of 2007 and some initial planning meetings were conducted as far back as 2005. A grant from Minnesota Homeland Security and Emergency Management was obtained in May of 2007 and the initial public meeting was also held at that time.

My predecessor applied for the grant, organized the first meetings and gathered some of the preliminary data for Beck Disaster Recovery, Inc., who is the contractor that assisted with writing this plan. My predecessor then retired from Scott County in June of 2007 and I didn't come on board until October of the same year. This makes locating some letters and rosters generated before my starting date at Scott County and before I started working on the plan problematic.

To my knowledge all the information gathered prior to May of 2007 was sent to Beck for inclusion in the Scott County Plan. What I am unable to locate are specific letters generated prior to my starting date to stakeholders inviting them to participate in the Initial Kick-Off Meeting or a date and attendees for the Initial Strategy Meeting.

We did include an agenda and a roster of attendees for the Kick-off Meeting so I can only assume letters were sent and notice distributed because these people participated. I also believe the Initial Strategy Meeting may have been held either shortly before the Kick-Off Meeting or perhaps even on the same day. Ms. Tami Mann attended the Kick-Off meeting and she would have had to travel to our state and county to attend this meeting. It makes sense to me that in an effort to be efficient with expenses and time that these meetings may have been held on the same day.

All the rest of the documentation that I was able to locate regarding meetings and notifications is included in this Supporting Annex.

Public Meeting Number 1 Agenda

SCOTT COUNTY HAZARD MITIGATION PLANNING
KICK-OFF MEETING
May 15, 2007

AGENDA

Introduction

- Introduction of Attendees
- Introduction of BDR Project Team
- Agenda Overview

Project Responsibilities

- BDR Responsibilities
- Scott County Responsibilities

Project Deliverables

- **Phase 1 → Project Initiation/Organization of Resources**
  - Documents of Understanding
  - Kick Off Meeting
  - Hazard Mitigation Planning Steering Committee
  - Document Gathering
- **Phase 2 → Review Hazard Assessment and Construct Hazard Mitigation Plan**
  - Develop Base List of Hazards
  - Gather Information about the Hazards
  - Conduct Risk Assessment
  - Vulnerability Assessment (Loss Estimation)
  - Construction of Plan
- **Phase 3 → Complete Hazard Mitigation Plan**
  - Local Approval
  - State Approval
  - Signature by County Governing Board

Project Timeline

Questions and Answers

Adjourn

800 North Magnolia Avenue Suite 400 Orlando, FL 32803 Phone (407) 803-5700 Fax (407) 803-5701 *beckdr.com*

Public Meeting Number 1 Minutes

PROJECT KICK OFF MEETING MINUTES – May 15, 2007

Beck Disaster Recovery Project Manager, Tami Mann conducted two kick off meetings on May 15, 2007. The afternoon session was primarily attended by incorporated cities located within Scott County. The evening session was primarily attended by township representatives. Attendance sheets from both meetings are filed with these minutes.

The meeting was conducted using a multi-media presentation. The agenda was as follows:

Introduction
Introduction of Attendees
Introduction of BDR Project Team
Agenda Overview
Project Responsibilities
BDR Responsibilities
Scott County Responsibilities
Project Deliverables
Phase 1 → Project Initiation/Organization of Resources
Document of Understanding
Kick Off Meeting
Hazard Mitigation Planning Steering Committee
Document Gathering
Phase 2 → Review Hazard Assessment and Construct Hazard Mitigation Plan
Develop Base List of Hazards
Gather Information about the Hazards
Conduct Risk Assessment
Vulnerability Assessment (Loss Estimation)
Construction of Plan
Phase 3 → Complete Hazard Mitigation Plan
Local Approval
State Approval
Signature by County Governing Board
Project Timeline
Questions and Answers
Adjourn

- The afternoon meeting began at 1:30pm CDT and ended at 3:00pm CDT.
- The evening session began at 7:00pm CDT and ended at 8:30pm CDT.

Action Items: BDR will provide a list of hazards and a spreadsheet indicating the information that has been collected to date by the jurisdictions, NLT May 25th.

Public Meeting Number 1 Attendance Sheet

Scott County, Minnesota
May 15, 2007
Sign in Roster

Name	Position	Division	Telephone	Email
Terry Mans	Sup	Helena Twp	952-758-4488	[illegible]
John Cuell	Clerk	"	952-758-4505	[illegible]
Terry Mans	Clerk	Cedar River Twp	952-440-5515	jmans@prodigy.net
Robert Wagner	Sup	Blak Twp	952 873 6260	
John Busse	Sup	Blakeley Twp	952-273-6647	[illegible]
Brian Schmidt	Sup	Blakeley Twp	952-873-4402	
Eugene Berens	"	Spring Lake	952-447-9050	← call Sov Email
Cy Wolf	Sup	Sand Creek Twp	952 492-2668	
Bob Tauer	Clerk	Sand Creek	952 492-3122	DTauer1@Comcast.net
Bob Koenig	Sup	Belle Plaine	952 873-2345	Koenig Robert@msn.com
Jean McDonald	Clerk	Belle Plaine	952-873-5661	mcdonalds@frontiernet.net
Sue Morawec	Sup	Louisville Twp	952-445-4015	suemorawec@comcast.net

BECK DISASTER RECOVERY, INC.

Scott County, Minnesota
May 15, 2007
Sign in Roster

Name	Position	Division	Telephone	Email
Ken Ondich	Planner	New Prague	952-758-1136	Kondich@ci.new-prague.mn.us
Mark Vasek	Police Chief	New Prague	952-758-2791	mvasek@ci.new-prague.mn.us
Jim McCall	Fire Chief	Fire	952-852-2689	jmccall@ci.savage.mn.us
Randy Hofstad	Emg. Mgr.	Police	952-447-9862	rhofstad@ci.spring-lake.mn.us
Robert Malz	Police Chief / Em. Manager	Police	952-492-2009	bmalz@ci.jordan.mn.us
Brian Lamey	Public Works Director	Shakopee PW	952-233-9361	blamey@ci.shakopee.mn.us
Mike McLaughlin	Public Works Supervisor	Shakopee PW	952-233-9554	mmclaughlin@ci.shakopee.mn.us
Steve Rost	Police Chief	Belle Plaine	952 873-4307	srost@ci.belleplaine.mn.us
Craig Robson	Police Captain	Shakopee P.D.	952 233 9423	crobson@ci.shakopee.mn.us
Ed Schumesdall	Fire Chief	Shakopee FIRE	612-490-9500	eschumesdall@ci.shakopee.mn.us
David Judd	Fire Capt/Lieutenant	Shakopee Fire	612-490-9503	djudd@ci.shakopee.mn.us
Tim Olaughlin	EM Director	EMgmt	952-496-8381	tolaughlin@co.scott.mn.us
Tami Mann	Project Mgr	Beck DR	260-726-7419	tmann@beckdr.com

BECK DISASTER RECOVERY, INC.

Public Meeting Number 2 Announcement Letter

BDR
An SAIC Company

October 6, 2009

The Disaster Mitigation Act of 2000 (DMA 2000) requires National Flood Insurance Program (NFIP) communities to prepare a Multi-Hazard Mitigation Plan (MHMP) in order to be eligible for future mitigation funding through the State and Federal Emergency Management Agencies. The intent of this planning process is to plan for a disaster before it occurs in order to reduce the physical, social and economical impact of that disaster. DMA 2000 also requires that local residents be given the opportunity to be involved in the planning process.

Stakeholders from Scott County have prepared an MHMP assessing the risk and vulnerability of disasters likely to affect the county. The Scott County MHMP will be presented at a public meeting on Tuesday, October 20th at 7:00 p.m. at the Scott County Sheriff's Office Law Enforcement Center, 301 Fuller Street South, Room LA240 in Shakopee.

Comments will be accepted via email, letter or fax through Tuesday, October 20th at 5:00 p.m. Please submit comments to:

Chris Weldon
Scott County Sheriff's Office
Emergency Management Director
Law Enforcement Center
301 Fuller Street South
Shakopee, MN 55379-1322
(952) 496-8381 – Office
(952) 445-4622 – Fax
cweldon@co.scott.mn.us

The Scott County MHMP Planning Committee thanks you for your time and interest in the development of the MHMP, and we look forward to reviewing your comments.

Respectfully,

Tami Mann
Regional Manager

6515 East 82nd Street, Suite 109, Indianapolis, IN 46250 t 317.436.8073 f 317.436.8084 beckdr.com

Scott County Emergency Management Seeks Input On Hazards

Scott County Emergency Management, October 6, 2009 - The public is invited to help plan ways to respond to both natural and manmade hazards in the ***Scott County*** area. A public meeting at ***the Scott County Law Enforcement Center on Tuesday, October 20, 2009 at 7:00 P.M.*** in room LA240 will offer an overview of the planning process and give the public an opportunity to offer recommendations.

Scott County Emergency Manager Chris Weldon said, "This will be a multi-jurisdictional plan to identify local hazards, assess the risks and plan ways to reduce loss of life and property damage in emergency situations. We welcome any and all input from our residents to help keep everyone safe."

The final plan will eventually be submitted to the Federal Emergency Management Agency (FEMA) for review and approval. The public meeting will be held in at ***the Scott County Law Enforcement Center on Tuesday, October 20, 2009 at 7:00 P.M.*** in room LA240***.*** For more information, please call ***Scott County Emergency Management at 952-496-8381***.

Public Meeting Number 2 Newspaper Announcement

563 - Printer's Affidavit of Publication. Mason's Minn. Statutes, 1927, Chaps. 109 35, an amended by Ce. 373, G. L. 1933

Scott County Emergency Management Seeks Input On Hazards

Scott County Emergency Management, October 6, 2009 - The public is invited to help plan ways to respond to both natural and man-made hazards in the Scott County area. A public meeting at the Scott County Law Enforcement Center on Tuesday, October 20, 2009 at 7:00 P.M. in room LA240 will offer an overview of the planning process and give the public an opportunity to offer recommendations.

Scott County Emergency Manager Chris Weldon said, "This will be a multi-jurisdictional plan to identify local hazards, assess the risks and plan ways to reduce loss of life and property damage in emergency situations. We welcome any and all input from our residents to help keep everyone safe."

The final plan will eventually be submitted to the Federal Emergency Management Agency (FEMA) for review and approval. The public meeting will be held in at the Scott County Law Enforcement Center on Tuesday, October 20, 2009 at 7:00 P.M. in room LA240. For more information, please call Scott County Emergency Management at 952-496-8381.

Published in the Belle Plaine Herald on Wednesday, October 14, 2009.

State of Minnesota, COUNTY OF SCOTT } ss.

C. Edward Townsend, being duly sworn, on oath says; that he is, and during all the times herein stated has been editor and publisher of the newspaper known as the Belle Plaine Herald, and has full knowledge of the facts hereinafter stated; that for more than one year prior to the publication therein of the

Belle Plaine Herald

hereinafter described said newspaper was printed and published in the City of Belle Plaine in the County of Scott, State of Minnesota, on Wednesday of each week; that during all said time said newspaper has been printed in the English language from its known office of publication within the City of Belle Plaine from which it purports to be issued as above stated in column and sheet form equivalent in space to at least four pages, with five columns to a page, each sixteen inches long; has been issued once each week from a known office established in said place of publication and equipped with skilled workmen and the necessary material for preparing and printing the same; that in its makeup not less that twenty-five per cent of its news columns have been devoted to local news of interest to the community it purports to serve; that it has not wholly duplicated any other publication, and has not been entirely made up of patents, plate matter and advertisements; that it has been circulated in and near its said place of publication to the extent of at least two hundred and forty (240) copies regularly delivered to paying subscribers and had entry as second class matter in its local postoffice; and that there has been on file in the office of the County Auditor of Scott County, Minnesota, the affidavit of a person having knowledge of the facts, showing the name and location of said newspaper and the existence of the conditions constituting its qualifications as a legal newspaper.

That the Scott County Emergency Management Seeks hereto attached was cut from the columns of said newspaper, and was printed and published therein in the English language, one each week, for one (1) successive weeks; that it was first so published on Wednesday, the 14th day of Oct, 20 09, and ~~thereafter on Wednesday of each~~ week to and including the ~~day of~~ ....., 20.....; and that the following is a printed copy of the lower case alphabet from A to Z, both inclusive, and is hereby acknowledged as being the size and kind of type used in composition and publication of said notice, to-wit:

abcdefghijklmnopqrstuvwxyz abcdefghijklmnopqrstuvwxyz

C. Edward Townsend

Subscribed and sworn to before me this 14th day Oct, 20 09

Samantha J. Edger-Johnson

Notary Public, Scott County, Minnesota

My commission expires 1-31, 20 13

SAMANTHA J. EDGER-JOHNSON
NOTARY PUBLIC - MINNESOTA
MY COMMISSION EXPIRES 01/31/2013

Public Meeting Number 2 Attendance Sheet

Scott County, Minnesota
Hazard Mitigation Planning Public Meeting
October 20, 2009
Sign-in Roster

Name	Position	Jurisdiction	Phone	Email
John Busse	Supervisor	Blakeley Twp	952-873-6647	
Brian Schmidt	Supervisor	Blakeley Twp	952-873-4402	
Bill Heinkes	"	Sand Creek Twp	612-719-0111	
Cy Wirz	Supervisor	Spring Lake Twp	952-492-2165	
David Frame	Treasurer	New Market	952-461-2409	
Tom Weckman	Supervisor	Jackson	952-826-9367	
John Weckman	Supervisor	Louisville	952-445-5363	
Tami Mann	Reg Mgr	BDR	260-729-7589	
Marlin Richard Hill	CERT	Shakopee	952-445-5621	
Victoria Elmes Hill	CERT	Shakopee	612-281-8581	
Bob Pieper	Supervisor	Louisville	952-445-5213	
BRUCE NILSEN	SUPERVISOR	CREDIT RIVER TWSP	952-226-3535	
Doug Ketsche	Supervisor	Belle Plaine Twsp	952-873-6733	
Bob Kaczig	"	" " "	952-873-2345	
Jean McDermand	Clerk	Belle Plaine Twnship	952-873-5661	
BRAD DAVIS	Co. Planner	-	-	
Emily Gangano	Emer. Mgmt	Scott Co.		

BDR

LOCAL MITIGATION PLAN REVIEW SUMMARY

The plan cannot be approved if the plan has not been formally adopted. Each requirement includes separate elements. All elements of the requirement must be rated "Satisfactory" in order for the requirement to be fulfilled and receive a score of "Satisfactory." Elements of each requirement are listed on the following pages of the Plan Review Crosswalk. A "Needs Improvement" score on elements shaded in gray (recommended but not required) will not preclude the plan from passing. Reviewer's comments must be provided for requirements receiving a **"Needs Improvement"** score.

Prerequisite(s) (Check Applicable Box)	**NOT MET**	**MET**
1. Adoption by the Local Governing Body: §201.6(c)(5) OR	X	
2. Multi-Jurisdictional Plan Adoption: §201.6(c)(5) **AND**	X	
3. Multi-Jurisdictional Planning Participation: §201.6(a)(3)	X	

Planning Process	**N**	**S**
4. Documentation of the Planning Process: §201.6(b) and §201.6(c)(1)	X	

Risk Assessment	**N**	**S**
5. Identifying Hazards: §201.6(c)(2)(i)		X
6. Profiling Hazards: §201.6(c)(2)(i)		X
7. Assessing Vulnerability: Overview: §201.6(c)(2)(ii)		X
8. Assessing Vulnerability: Addressing Repetitive Loss Properties. §201.6(c)(2)(ii)	X	
9. Assessing Vulnerability: Identifying Structures, Infrastructure, and Critical Facilities: §201.6(c)(2)(ii)(B)		X
10. Assessing Vulnerability: Estimating Potential Losses: §201.6(c)(2)(ii)(B)		X
11. Assessing Vulnerability: Analyzing Development Trends: §201.6(c)(2)(ii)(C)		X
12. Multi-Jurisdictional Risk Assessment: §201.6(c)(2)(iii)		X

*States that have additional requirements can add them in the appropriate sections of the *Local Multi-Hazard Mitigation Planning Guidance* or create a new section and modify this Plan Review Crosswalk to record the score for those requirements.

SCORING SYSTEM

Please check one of the following for each requirement.

N – Needs Improvement: The plan does not meet the minimum for the requirement. Reviewer's comments must be provided.

S – Satisfactory: The plan meets the minimum for the requirement. Reviewer's comments are encouraged, but not required.

Mitigation Strategy	**N**	**S**
13. Local Hazard Mitigation Goals: §201.6(c)(3)(i)		X
14. Identification and Analysis of Mitigation Actions: §201.6(c)(3)(ii)	X	
15. Identification and Analysis of Mitigation Actions: NFIP Compliance. §201.6(c)(3)(ii)	X	
16. Implementation of Mitigation Actions: §201.6(c)(3)(iii)	X	
17. Multi-Jurisdictional Mitigation Actions: §201.6(c)(3)(iv)	X	

Plan Maintenance Process	**N**	**S**
18. Monitoring, Evaluating, and Updating the Plan: §201.6(c)(4)(ii)		X
19. Incorporation into Existing Planning Mechanisms: §201.6(c)(4)(ii)		X
20. Continued Public Involvement: §201.6(c)(4)(iii)		X

Additional State Requirements*	**N**	**S**
Insert State Requirement		
Insert State Requirement		
Insert State Requirement		

LOCAL MITIGATION PLAN APPROVAL STATUS

PLAN NOT APPROVED	
See Reviewer's Comments	
PLAN APPROVED	

Local Mitigation Plan Review and Approval Status

Jurisdiction: Scott County	**Title of Plan:** Scott County, Minnesota Multi-jurisdictional All Hazards 2009 Mitigation Plan	**Date of Plan:** 2009
Local Point of Contact: Chris Weldon	**Address:** Law Enforcement Center 301 Fuller Street South Shakopee, MN 55379-1322	
Title: Emergency Management Director		
Agency: Scott County Sheriff's Office		
Phone Number: 952-496-8381	**E-Mail:** cweldon@co.scott.mn.us	

State Reviewer: Jim McClosky	**Title: Mitigation Planner**	**Date: October 13, 2009**

FEMA Reviewer:	**Title:**	**Date:**
Date Received in FEMA Region [Insert #]		
Plan Not Approved		
Plan Approved		
Date Approved		

Jurisdiction:	**DFIRM**		**NFIP Status***			
	In Plan	**NOT in Plan**	**Y**	**N**	**N/A**	**CRS Class**
1. Scott County	TBD		X			
2. Belle Plaine	TBD		X			
3. Elko-New Market		X			X	
4. Jordan	TBD		X			
5. New Prague	TBD		X			
6. Prior Lake	TBD		X			

7. Savage	TBD		X			
8. Shakopee	TBD		X			
9. Mkewakanton Sioux Tribal area		X			X	

*** Notes:** **Y = Participating** **N = Not Participating** **N/A = Not Mapped**

PREREQUISITE(S)

1. Adoption by the Local Governing Body

***Requirement §201.6(c)(5)*:** *[The local hazard mitigation plan **shall** include] documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County Commissioner, Tribal Council).*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE NOT MET	SCORE MET
A. Has the local governing body adopted **new or updated** plan?	Sec3 pp 1.2 When Adopted	In accordance with page 3-2.	X	
B. Is supporting documentation, such as a resolution, included?	Sec9.3 pp 9.4-14 When Adopted	In accordance with page 3-2.	X	
		SUMMARY SCORE	X	

2. Multi-Jurisdictional Plan Adoption

***Requirement §201.6(c)(5)*:** *For multi-jurisdictional plans, each jurisdiction requesting approval of the plan **must** document that it has been formally adopted.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE NOT MET	SCORE MET
A. Does the **new or updated** plan indicate the specific jurisdictions represented in the plan?	Sec3 pp 1.3			
B. For each jurisdiction, has the local governing body adopted the **new or updated** plan?	Sec3 pp 1.2 When Adopted	In accordance with page 3-2.	X	
C. Is supporting documentation, such as a resolution, included for each participating jurisdiction?	Sec9.3 pp 9.4-14 When Adopted	In accordance with page 3-2.	X	
		SUMMARY SCORE	X	

3. Multi-Jurisdictional Planning Participation

***Requirement §201.6(a)(3)*:** *Multi-jurisdictional plans (e.g., watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process … Statewide plans will not be accepted as multi-jurisdictional plans.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE NOT MET	SCORE MET
A. Does the **new or updated** plan describe **how** each jurisdiction participated in the plan's development?	Sec3.4 pp 3.3			
B. Does the updated plan identify all participating jurisdictions, including new, continuing, and the jurisdictions that no longer participate in the plan?	NA		NA	NA
		SUMMARY SCORE		

PLANNING PROCESS: *§201.6(b): An open public involvement process is essential to the development of an effective plan.*

4. Documentation of the Planning Process

Requirement §201.6(b): *In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process* ***shall*** *include:*
(1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
(2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and
(3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

Requirement §201.6(c)(1): *[The plan* ***shall*** *document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the plan provide a narrative description of the process followed to prepare the **new or updated** plan?	Sec3 pp3.1-15			
B. Does the **new or updated** plan indicate who was involved in the **current** planning process? (For example, who led the development at the staff level and were there any external contributors such as contractors? Who participated on the plan committee, provided information, reviewed drafts, *etc*.?)	Sec3.6 pp3.5-8			
C. Does the **new or updated** plan indicate how the public was involved? (Was the public provided an opportunity to comment on the plan during the drafting stage and prior to the plan approval?)	Sec3.7-8 pp3.5-11			
D. **Does the new or updated plan discuss the** opportunity for neighboring communities, agencies, businesses, academia, nonprofits, and other interested parties to be involved in the planning process?	Sec3.9 pp3.11 Table 3.5 pp3.8			
E. Does the planning process describe the review and incorporation, if appropriate, of existing plans, studies, reports, and technical information?	Sec3.10 pp3.12-13			
F. Does the updated plan document how the planning team reviewed and analyzed each section of the plan and whether each section was revised as part of the update process?	NA		NA	NA
		SUMMARY SCORE		

RISK ASSESSMENT: *§201.6(c)(2): The plan shall include a risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Local risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards.*

5. Identifying Hazards

Requirement §201.6(c)(2)(i): *[The risk assessment **shall** include a] description of the type … of all natural hazards that can affect the jurisdiction.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan include **a description** of the types of **all natural hazards** that affect the jurisdiction?	Sec4 pp4.1-18			
		SUMMARY SCORE		

6. Profiling Hazards

Requirement §201.6(c)(2)(i): *[The risk assessment **shall** include a] description of the … location and extent of all natural hazards that can affect the jurisdiction. The plan **shall** include information on previous occurrences of hazard events and on the probability of future hazard events.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the risk assessment identify the **location** (*i.e.*, geographic area affected) of each natural hazard addressed in the **new or updated** plan?	Sec5 pp5-1-47 Support Annex Pp1-29			
B. Does the risk assessment identify the **extent** (*i.e.*, magnitude or severity) of each hazard addressed in the **new or updated** plan?	Sec5 pp5-1-47 Support Annex Pp1-29			
C. Does the plan provide information on **previous occurrences** of each hazard addressed in the **new or updated** plan?	Sec5 pp5-1-47 Support Annex Pp1-29			
D. Does the plan include the **probability of future events** (*i.e.*, chance of occurrence) for each hazard addressed in the **new or updated** plan?	Sec5 pp5-1-47 Sec6 pp 6.4			
		SUMMARY SCORE		

Pg. 5-1 thru 5-47

7. Assessing Vulnerability: Overview

Requirement §201.6(c)(2)(ii): *[The risk assessment **shall** include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description **shall** include an overall summary of each hazard and its impact on the community.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan include an **overall summary** description of the jurisdiction's **vulnerability** to each hazard?	Sec5 pp5-1-47 Sec6 pp 6.1-4			
B. Does the **new or updated** plan address the **impact** of each hazard on the jurisdiction?	Sec5 pp5-1-47 Sec 6 pp6.1-4 Support Annex Pp1-29			
		SUMMARY SCORE		

8. Assessing Vulnerability: Addressing Repetitive Loss Properties

Requirement §201.6(c)(2)(ii): *[The risk assessment] **must** also address National Flood Insurance Program (NFIP) insured structures that have been repetitively damaged floods.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the new or updated plan describe vulnerability in terms of the types and numbers of *repetitive loss properties* located in the identified hazard areas?	Sec6 pp 6.5-6			
		SUMMARY SCORE		

9. Assessing Vulnerability: Identifying Structures

Requirement §201.6(c)(2)(ii)(A): *The plan **should** describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard area … .*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan describe vulnerability in terms of the **types and numbers** of **existing** buildings, infrastructure, and critical facilities located in the identified hazard areas?	Sec6 pp 6.5-32 Support Annex pp 30-43	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		
B. Does the **new or updated** plan describe vulnerability in terms of the **types and numbers** of **future** buildings, infrastructure, and critical facilities located in the identified hazard areas?	Sec6 pp 6.5-32	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		

SUMMARY SCORE		

10. Assessing Vulnerability: Estimating Potential Losses

Requirement §201.6(c)(2)(ii)(B): *[The plan **should** describe vulnerability in terms of an] estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(ii)(A) of this section and a description of the methodology used to prepare the estimate … .*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan estimate **potential dollar losses** to vulnerable structures?	Sec6.4 pp6.34-61	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		
B. Does the **new or updated** plan describe the **methodology** used to prepare the estimate?	Sec6.4 pp6.33-34	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		
		SUMMARY SCORE		

11. Assessing Vulnerability: Analyzing Development Trends

Requirement §201.6(c)(2)(ii)(C): *[The plan **should** describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan describe land uses and development trends?	Sec6.5 pp6.62-67 Sec2 pp2.7-8			
		SUMMARY SCORE		

12. Multi-Jurisdictional Risk Assessment

Requirement §201.6(c)(2)(iii): *For multi-jurisdictional plans, the risk assessment **must** assess each jurisdiction's risks where they vary from the risks facing the entire planning area.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan include a risk assessment for each participating jurisdiction as needed to reflect unique or varied risks?	Sec6. Pp 6-68-67			
		SUMMARY SCORE		

MITIGATION STRATEGY: *§201.6(c)(3): The plan shall include a mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.*

13. Local Hazard Mitigation Goals

Requirement §201.6(c)(3)(i): *[The hazard mitigation strategy **shall** include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A Does the **new or updated** plan include a description of mitigation **goals** to reduce or avoid long-term vulnerabilities to the identified hazards?	Sec7.3 pp7.12-15 Individual Action plans			
		SUMMARY SCORE		

14. Identification and Analysis of Mitigation Actions

Requirement §201.6(c)(3)(ii): *[The mitigation strategy **shall** include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan identify and analyze a **comprehensive range** of specific mitigation actions and projects for each hazard?	Sec7 pp.7.5-17 Pp 7.27-39 Individual Action Plans			
B Do the identified actions and projects address reducing the effects of hazards on **new** buildings and infrastructure?	Sec7.3.5 pp.7.18 Pp 7.27-39 Individual Action Plans			
C. Do the identified actions and projects address reducing the effects of hazards on **existing** buildings and infrastructure?	Sec7.3.5 pp.7.18 Pp 7.27-39 Individual Action Plans			
		SUMMARY SCORE		

15. Identification and Analysis of Mitigation Actions: National Flood Insurance Program (NFIP) Compliance

Requirement: §201.6(c)(3)(ii): *[The mitigation strategy] must also address the jurisdiction's participation in the National Flood Insurance Program (NFIP), and continued compliance with NFIP requirements, as appropriate.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the new or updated plan describe the jurisdiction (s) participation in the NFIP?	Sec7.3.7-8 pp 7.18-20	**Required:**.		
B. Does the mitigation strategy identify, analyze and prioritize actions related to continued compliance with the NFIP?	Sec7.3.7-8 pp 7.18-20	**Required:** .		
		SUMMARY SCORE		

16. Implementation of Mitigation Actions

Requirement: §201.6(c)(3)(iii): *[The mitigation strategy section **shall** include] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization **shall** include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** mitigation strategy include how the actions are **prioritized**? (For example, is there a discussion of the process and criteria used?)	Sec7.3.9 pp7.21-23 Pp7.40-52			
B. Does the **new or updated** mitigation strategy address how the actions will be implemented and administered, including the responsible department , existing and potential resources and the timeframe to complete each action?	Sec7.3.10 pp2.23-24 & pp7.27-39	**Required:**		
C. Does the **new or updated** prioritization process include an emphasis on the use of a **cost-benefit review** to maximize benefits?	Sec7.3.11 pp7-24 & pp7.27-39			
D. Does the **updated** plan identify the completed, deleted or deferred mitigation actions as a benchmark for progress, and if activities are unchanged (*i.e.*, deferred), does the updated plan describe why no changes occurred?	NA		NA	
		SUMMARY SCORE		

17. Multi-Jurisdictional Mitigation Actions

Requirement §201.6(c)(3)(iv): *For multi-jurisdictional plans, there **must** be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A Does the **new or updated** plan include identifiable **action items** for each jurisdiction requesting FEMA approval of the plan?	Individual Action Plans	Requried:		
B. Does the **updated** plan identify the completed, deleted or deferred mitigation actions as a benchmark for progress, and if activities are unchanged (*i.e.*, deferred), does the updated plan describe why no changes occurred?	NA		NA	
		SUMMARY SCORE		

PLAN MAINTENANCE PROCESS

18. Monitoring, Evaluating, and Updating the Plan

Requirement §201.6(c)(4)(i): *[The plan maintenance process **shall** include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan describe the method and schedule for **monitoring** the plan, including the responsible department?	Sec8.3 pp8.1-2			
B. Does the **new or updated** plan describe the method and schedule for **evaluating** the plan, including how, when and by whom (*i.e.* the responsible department)?	Sec8.4 Pp8.2-4			
C. Does the **new or updated** plan describe the method and schedule for **updating** the plan within the five-year cycle?	Sec8.5 Pg. 8.4-6			
		SUMMARY SCORE		

19. Incorporation into Existing Planning Mechanisms

Requirement §201.6(c)(4)(ii): *[The plan **shall** include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan identify other local planning mechanisms available for incorporating the mitigation requirements of the mitigation plan?	Sec8.6 pp8.6-8			
B. Does the **new or updated** plan include a process by which the local government will incorporate the mitigation strategy and other information contained in the plan (*e.g.*, risk assessment) into other planning mechanisms, when appropriate?	Sec8.6 pp8.6-8			
C. Does the **updated** plan explain how the local government incorporated the mitigation strategy and other information contained in the plan (*e.g.*, risk assessment) into other planning mechanisms, when appropriate?	Sec8.6 pp8.6-8			
		SUMMARY SCORE		

Continued Public Involvement

Requirement §201.6(c)(4)(iii): *[The plan maintenance process **shall** include a] discussion on how the community will continue public participation in the plan maintenance process.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan explain how **continued public participation** will be obtained? (For example, will there be public notices, an on-going mitigation plan committee, or annual review meetings with stakeholders?)	Sec8.7 pp8.9			
		SUMMARY SCORE		

MATRIX A: PROFILING HAZARDS

This matrix can assist FEMA and the State in scoring each hazard. Local jurisdictions may find the matrix useful to ensure that their plan addresses each natural hazard that can affect the jurisdiction. **Completing the matrix is not required**.

Note: First, check which hazards are identified in requirement §201.6(c)(2)(i). Then, place a checkmark in either the N or S box for each *applicable* ***hazard. An "N" for any element of any identified hazard will result in a "Needs Improvement" score for this requirement. List the hazard and its related shortcoming in the comments section of the Plan Review Crosswalk.***

Hazard Type	Hazards Identified Per Requirement §201.6(c)(2)(i)	A. Location		B. Extent		C. Previous Occurrences		D. Probability of Future Events	
	Yes	N	S	N	S	N	S	N	S
Avalanche	☐	☐	☐	☐	☐	☐	☐	☐	☐
Coastal Erosion	☐	☐	☐	☐	☐	☐	☐	☐	☐
Coastal Storm	☐	☐	☐	☐	☐	☐	☐	☐	☐
Dam Failure	☐	☐	☐	☐	☐	☐	☐	☐	☐
Drought	☐	☐	☐	☐	☐	☐	☐	☐	☐
Earthquake	☐	☐	☐	☐	☐	☐	☐	☐	☐
Expansive Soils	☐	☐	☐	☐	☐	☐	☐	☐	☐
Levee Failure	☐	☐	☐	☐	☐	☐	☐	☐	☐
Flood	☐	☐	☐	☐	☐	☐	☐	☐	☐
Hailstorm	☐	☐	☐	☐	☐	☐	☐	☐	☐
Hurricane	☐	☐	☐	☐	☐	☐	☐	☐	☐
Land Subsidence	☐	☐	☐	☐	☐	☐	☐	☐	☐
Landslide	☐	☐	☐	☐	☐	☐	☐	☐	☐
Severe Winter Storm	☐	☐	☐	☐	☐	☐	☐	☐	☐
Tornado	☐	☐	☐	☐	☐	☐	☐	☐	☐
Tsunami	☐	☐	☐	☐	☐	☐	☐	☐	☐
Volcano	☐	☐	☐	☐	☐	☐	☐	☐	☐
Wildfire	☐	☐	☐	☐	☐	☐	☐	☐	☐
Windstorm	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other _____	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other _____	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other _____	☐	☐	☐	☐	☐	☐	☐	☐	☐

To check boxes, double click on the box and change the default value to "checked."

Legend:

§201.6(c)(2)(i) Profiling Hazards
A. Does the risk assessment identify the location (*i.e.*, geographic area affected) of each hazard addressed in the **new or updated** plan?
B. Does the risk assessment identify the extent (*i.e.*, magnitude or severity) of each hazard addressed in the **new or updated** plan?
C. Does the plan provide information on previous occurrences of each natural hazard addressed in the **new or updated** plan?
D. Does the plan include the probability of future events (*i.e.*, chance of occurrence) for each hazard addressed in the plan?

MATRIX B: ASSESSING VULNERABILITY

This matrix can assist FEMA and the State in scoring each hazard. Local jurisdictions may find the matrix useful to ensure that the new or updated plan addresses each requirement. **Completing the matrix is not required**.

Note: First, check which hazards are identified in requirement §201.6(c)(2)(i). Then, place a checkmark in either the N or S box for each ***applicable*** *hazard. An "N" for any element of any identified hazard will result in a "Needs Improvement" score for this requirement. List the hazard and its related shortcoming in the comments section of the Plan Review Crosswalk. Note: Receiving an N in the shaded columns will not preclude the plan from passing.*

To check boxes, double click on the box and change the default value to "checked."

Hazard Type	Hazards Identified Per Requirement §201.6(c)(2)(i)	§201.6(c)(2)(ii) Assessing Vulnerability: Overview					§201.6(c)(2)(ii) Assessing Vulnerability: Identifying Structures					§201.6(c)(2)(ii) Assessing Vulnerability: Estimating Potential Losses				
		A. Overall Summary Description of Vulnerability		B. Hazard Impact			A. Types and Number of Existing Structures in Hazard Area (Estimate)		B. Types and Number of Future Structures in Hazard Area (Estimate)			A. Loss Estimate		B. Methodology		
	Yes	N	S	N	S		N	S	N	S		N	S	N	S	
Avalanche	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Coastal Erosion	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Coastal Storm	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Dam Failure	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Drought	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Earthquake	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Expansive Soils	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Levee Failure	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Flood	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Hailstorm	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Hurricane	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Land Subsidence	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Landslide	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Severe Winter Storm	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Tornado	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Tsunami	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Volcano	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Wildfire	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Windstorm	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Other _____	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Other _____	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	
Other _____	☐	☐	☐	☐	☐		☐	☐	☐	☐		☐	☐	☐	☐	

Legend:

§201.6(c)(2)(ii) Assessing Vulnerability: Overview

A. Does the **new or updated** plan include an overall summary description of the jurisdiction's vulnerability to each hazard?

B. Does the **new or updated** plan address the impact of each hazard on the jurisdiction?

§201.6(c)(2)(ii)(A) Assessing Vulnerability: Identifying Structures

A. Does the **new or updated** plan describe vulnerability in terms of the types and numbers of existing buildings, infrastructure, and critical facilities located in the identified hazard areas?

B. Does the **new or updated** plan describe vulnerability in terms of the types and numbers of future buildings, infrastructure, and critical facilities located in the identified hazard areas?

§201.6(c)(2)(ii)(B) Assessing Vulnerability: Estimating Potential Losses

A. Does the **new or updated** plan estimate potential dollar losses to vulnerable structures?

B. Does the **new or updated** plan describe the methodology used to prepare the estimate?

MATRIX C: IDENTIFICATION AND ANALYSIS OF MITIGATION ACTIONS

This matrix can assist FEMA and the State in scoring each hazard. Local jurisdictions may find the matrix useful to ensure consideration of a range of actions for each hazard. **Completing the matrix is not required.**

Note: First, check which hazards are identified in requirement §201.6(c)(2)(i). Then, place a checkmark in either the N or S box for each ***applicable*** *hazard. An "N" for any identified hazard will result in a "Needs Improvement" score for this requirement. List the hazard and its related shortcoming in the comments section of the Plan Review Crosswalk.*

Hazard Type	Hazards Identified Per Requirement §201.6(c)(2)(i)	A. Comprehensive Range of Actions and Projects	
	Yes	N	S
Avalanche	☐	☐	☐
Coastal Erosion	☐	☐	☐
Coastal Storm	☐	☐	☐
Dam Failure	☐	☐	☐
Drought	☐	☐	☐
Earthquake	☐	☐	☐
Expansive Soils	☐	☐	☐
Levee Failure	☐	☐	☐
Flood	☐	☐	☐
Hailstorm	☐	☐	☐
Hurricane	☐	☐	☐
Land Subsidence	☐	☐	☐
Landslide	☐	☐	☐
Severe Winter Storm	☐	☐	☐
Tornado	☐	☐	☐
Tsunami	☐	☐	☐
Volcano	☐	☐	☐
Wildfire	☐	☐	☐
Windstorm	☐	☐	☐
Other _____	☐	☐	☐
Other _____	☐	☐	☐
Other _____	☐	☐	☐

To check boxes, double click on the box and change the default value to "checked."

Legend:
§201.6(c)(3)(ii) Identification and Analysis of Mitigation Actions
A. Does the **new or updated** plan identify and analyze a comprehensive range of specific mitigation actions and projects for each hazard?