



2019 RAMSEY COUNTY, MINNESOTA  
**MULTI-HAZARD MITIGATION PLAN**



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# Multi-Hazard Mitigation Plan

## Ramsey County, Minnesota

### 2019

This plan was prepared under the direction of the Ramsey County Multi-Hazard Mitigation Planning Steering Committee. For additional information, please contact the Ramsey County Emergency Management and Homeland Security Department.

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# Section I – Introduction

## 1.1 Introduction

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

Between 1960 and 2014, natural hazards cost the U.S. an annual average loss of \$15.6 billion (Hazards & Vulnerability Research Institute, 2015).

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

The Multi-Hazard Mitigation Plan (MHMP) is a requirement of the Federal Disaster Mitigation Act of 2000 (DMA 2000). The development of a local government plan is required to maintain eligibility for federal hazard mitigation grant funding programs. For communities to be eligible for future mitigation funds, they must adopt an MHMP. This plan update has been prepared because of Pre-Disaster Mitigation (PDM) Grant Program funds. These funds are disbursed by the Federal Emergency Management Agency (FEMA) through Minnesota Homeland Security and Emergency Management (HSEM).

Researchers at the National Institute of Building Sciences looked at the results of 23 years of federally funded mitigation grants provided by the Federal Emergency Management Agency (FEMA), U.S. Economic Development Administration (EDA) and U.S. Department of Housing and Urban Development (HUD) and found mitigation funding can save the nation \$6 in future disaster costs, for every \$1 spent on hazard mitigation (National Institute of Building Sciences, 2017).

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

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

### 1.1.1 Scope

Ramsey County Emergency Management and Homeland Security and the University of Minnesota Duluth Geospatial Analysis Center (GAC) have combined efforts to update the 2012 Ramsey County Multi-Hazard Mitigation Plan. The GAC contracted with Hundrieser Consulting LLC for additional emergency management planning expertise and facilitation.

This Multi-Hazard Mitigation Plan evaluates and ranks the major natural hazards affecting Ramsey County as determined by frequency of event, economic impact, deaths and injuries. Mitigation recommendations are based on input from state and local agencies, public input and national best practices. While the primary focus of the plan is to evaluate the County's potential exposure to natural hazards and identify appropriate mitigation actions, Ramsey County has expanded the scope of this planning effort to include additional technological hazards, though this plan conforms to federal mitigation planning requirements.

The University of Minnesota Duluth Geospatial Analysis Center (GAC) performed the hazard risk assessment for 100-year floods using the Hazus GIS tool. The Minnesota Homeland Security and Emergency Management (HSEM) office has determined that Hazus should play a critical role in Minnesota's risk assessments, and therefore the 100-year flood hazard analysis is used in this plan.

This is a multi-jurisdictional plan that covers Ramsey County, including the cities of Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North Saint Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights and White Bear Lake. The Ramsey County risks and mitigation activities identified in this plan also incorporate the concerns and needs of townships (White Bear Township), school districts, and other entities participating in this plan. While the city of Saint Paul is in Ramsey County, it has its own Multi-Hazard Mitigation Plan. The cities of Blaine and Spring Lake Park have a portion of their cities within the boundaries of Ramsey County; however, they primarily reside in Anoka County. They will be included in Anoka County's Mitigation Plan. The City of St. Anthony geographically is half in Hennepin County and half in Ramsey County, and it shares a school district with another city within Ramsey County, the City of St. Anthony will be covered by the Hennepin County's Mitigation Plan. The University of Minnesota – Twin Cities Campus also presents a unique situation. The university is in both Minneapolis and Falcon Heights, the St. Paul campus. The University of Minnesota is covered under its own plan.

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

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

- Include more recent data documenting the critical infrastructure and hazards faced by Ramsey County.
- Reformat and reorganize the plan to reflect definitions of hazards as expressed in the 2014 State of Minnesota Multi-Hazard Identification and Risk Assessment Plan.
- Reflect current hazard mitigation priorities in Ramsey County.

### **1.1.2 Hazard Mitigation Definition**

Hazard mitigation may be defined as any action taken to eliminate or reduce the long-term risk to human life and property from natural hazards. Following are examples of hazard mitigation measures that fall within one of five types of mitigation strategies:

- *Planning* – Development of mitigation standards, regulations, policies, and programs.
- *Structure and Infrastructure Projects* – Structural retrofits, property acquisition, local flood reduction projects, and safe room construction.
- *Natural Systems Protection* – Sediment and erosion control, stream corridor restoration, forest and vegetative management, floodplain and stream restoration.
- *Education and Awareness Programs* – Outreach programs, hazard awareness campaigns, real estate disclosure, and promotion of family/personal emergency preparedness
- *Mitigation Preparedness & Response Support* – Emergency planning and services such as warning siren systems, Everbridge, and installing generators for critical facilities.

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

The benefits of hazard mitigation planning include the following:

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

## **1.2 State Administration of Mitigation Grants**

FEMA currently has three mitigation grant programs that are administered by the State of Minnesota: The Hazard Mitigation Grant Program (HMGP), the Pre-Disaster Mitigation program (PDM), and the Flood Mitigation Assistance (FMA) program. The HMGP, PDM and FMA are administered through the state of Minnesota Department of Public Safety, Division of Homeland Security and Emergency Management. All applicants must have or be covered under an approved Hazard Mitigation Plan. Eligible applicants include state and local governments; certain private non-profit organizations or institutions; and tribal communities.

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## Section 2 – Public Planning Process

### 2.1 Steering Committee Information

The Ramsey County multi-hazard mitigation plan steering committee is headed by the Ramsey County Emergency Management Coordinator, who is the primary point of contact. Members of the Ramsey County MHMP steering committee include representatives from the public and governmental sectors. Table 1 identifies the steering committee individuals and the organizations they represent.

Table 1. Multi-Hazard Mitigation Steering Committee

Name	Jurisdiction/Agency/Organization	Title
Judd Freed	Ramsey County EMHS	Director
Kristy Stauffer	Ramsey County EMHS	Deputy Director
Bryan Mayer	Ramsey County EMHS	EM Coordinator
Karma Kumlin-Diers	Ramsey County EMHS	EM Coordinator
Kristen Sailer	Ramsey County EMHS	EM Coordinator
Art McIntyre	Saint Paul/Ramsey County Public Health	EM Planner
Kurt Frison	Vadnais Heights Fire Department	Fire Tech
Chris Hearden	Vadnais Heights Fire Department	Fire Tech
Lisa Dressler	U of M Department of Emergency Management	Director
Betsy Phillips	Saint Paul Emergency Management	EM Specialist
Dan Krier	North Saint Paul Fire Department	Fire Inspector
Dan Curley	City of Shoreview	Public Works Supt./Emergency Manager
Jeff Frid	City of Arden Hills	Public Works Supt./Emergency Manager
Scott Williams	Ramsey County ECC	Deputy County Manager
Gary Peterson	Minnesota HSEM	HSEM Region 6 Regional Program Coordinator
Lucy Angelis	Saint Paul Emergency Management	Deputy Director
Trevor Hamdorf	City of New Brighton Dept. of Public Safety	Deputy Director
Davita Petty	Saint Paul/Ramsey County Public Health	Program Analyst
Laura Anderson	Saint Paul/Ramsey County Public Health	Health Protection Manager
Matt Sather	Lake Johanna Fire Department	Deputy Chief/Emergency Manager
David Brosnahan	Roseville Fire Department	Assistant Fire Chief
Heather Butkowski	City of Lauderdale	City Administrator/EM

Name	Jurisdiction/Agency/ Organization	Title
Jerry Auge	Ramsey County Public Works	Maintenance/Construction Engineer
Justin Townsend	Ramsey Conservation District	Conservation Technician
Mark McCabe	Ramsey County Public Works	Director of Operations
Michael Reed	Ramsey County Environmental Health	Solid & Hazardous Waste Supervisor
Mike Richter	North Saint Paul Fire Department	Captain/Fire Inspector

Update of the plan began in July 2017. A total of two steering committee meetings were held to discuss the plans development, identify local hazard issues, formulate strategy recommendations, and review the draft mitigation action chart. Additional correspondence, including an individual mitigation survey were distributed to the committee and all municipalities in the county via e-mail. The general stages of the plan update included: initial data collection and update of the county data; update of the municipalities survey’s and hazards; review and update of the mitigation action chart, and identification of deleting old strategies and adding new strategies.

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

## 2.2 Review of Existing Plans, Capabilities & Vulnerabilities

Ramsey County and its local communities utilized a variety of planning documents to direct community development. These documents include a Comprehensive/Master Plan, Capital Improvements Plan, Emergency Operations Plan, Continuity of Operations Plan, etc. (see Appendix J for a full listing of plans and programs in place in Ramsey County). The planning process also incorporated the existing natural hazard mitigation elements from previous planning efforts. In addition, the 2014 Minnesota All-Hazard Mitigation Plan was consulted.

In the development of the Ramsey County Multi-Hazard Mitigation Plan, UMD consultants reviewed and incorporated a variety of planning documents that direct community development and influence land use decisions for the county and its jurisdictions. In addition, UMD consultants worked closely with the Ramsey County Emergency Management Coordinator, other key county staff, and local city officials to collect specific feedback on local mitigation capabilities and vulnerabilities that either support or hinder the ability to mitigate against hazards at the county and local level. Following is a summary of the assessment tools used to gather information on local capabilities and vulnerabilities during the planning process:

**Capabilities Assessment (hazard specific)** – In this assessment, detailed information was collected on current *Plans and Programs in Place* and *Program Gaps or Deficiencies* that currently exist to mitigate

destruction caused by each natural hazard addressed in the plan. This information was used to inform where there were current mechanisms in place to incorporate or implement mitigation measures (i.e., existing programs, plans or policies) and where there were areas that needed to be addressed (see *Section 4.4 Hazard Profiles*).

**Jurisdictional Questionnaires** – In this questionnaire, detailed information was collected from each jurisdiction in the county on: 1) Severe weather or disaster events & impacts that have occurred within the last 5 years; 2) Actions taken within the last 5 years that have helped to reduce local vulnerabilities to future disaster events; 3) Any changes within the last 5 years that have increased local vulnerabilities to future disaster events; and 4) Any concerns or specific ideas for mitigation projects to help reduce or eliminate risk resulting from future severe weather or disaster events. This information was used to inform Section 4, Risk Assessment and the development of local-level mitigation actions (see *Appendix L, Jurisdictional Questionnaires* and *Appendix G, Mitigation Actions by Jurisdiction*).

**Local Mitigation Capabilities Assessment (LMCA)** – In this assessment, detailed information was collected on key elements in place that help to accomplish mitigation in the community, including: 1) Plans, authorities, or policies; 2) Staff (organizational capacity); 3) Programs; and 4) Funding or other resources. Information was further collected on what program gaps or deficiencies exist that are a barrier to accomplishing mitigation in the community. This information was used to inform the development of local-level mitigation actions (see *Appendix K, Local Mitigation Capabilities Assessment* and *Appendix G, Mitigation Actions by Jurisdiction*).

### 2.3 Planning Process Timeline and Steps

To update the 2012 Ramsey County Multi-Hazard Mitigation Plan, UMD consultants worked in coordination with the Ramsey County Emergency Management Coordinator and members of the steering committee. The updated plan includes not only new data documenting the types of hazards faced by Ramsey County residents and emergency planning officials, but also new thinking about how to best address these hazards.

In July 2017, Ramsey County issued a news release inviting public feedback and participation for the MHMP update (for complete documentation, see *Appendix F: Public Outreach & Engagement Documentation*).

On July 12, 2017, the Geospatial Analysis Center hosted a kickoff meeting online that was attended by the Ramsey County Emergency Management Coordinator. The webinar included a project overview, GAC background, the roles and responsibilities of the Emergency Management Coordinator, contents of the Multi-Hazard Mitigation Plan, planning process and projected timeline (see *Appendix E* for webinar slides).

A steering committee meeting took place on November 3, 2017, at the Ramsey County Emergency Operations Center in Arden Hills, which included the Ramsey County MHMP steering committee and the UMD planning team. The steering committee was provided with an overview of the purpose, process and timeline for the Ramsey County Multi-Hazard Mitigation Plan update, as well as the role and responsibilities of steering committee members. Appendix E provides documentation of steering committee meeting summaries, including participant sign-in sheets and presentation slides.

Steering committee members were engaged in providing feedback on plans and programs in place as they relate to hazards facing the county, and they discussed potential mitigation actions to be added to the plan. This information was used to inform the development of mitigation strategies in the updated plan.

On April 24, 2018, members of the steering committee convened again with the UMD planning team to conduct a review and discussion of the draft mitigation action charts developed for Ramsey County and the city jurisdictions participating in the plan. See Appendix E for a full meeting summary.

To provide opportunity for public input, Ramsey County issued a second new release on December 12, 2018, inviting public review and feedback on the draft plan. The news release provided information on where the plan could be viewed, and comments submitted. The UMD Geospatial Analysis Center hosted a webpage to post the full draft Ramsey County MHMP, including excerpts of the Ramsey County Master Mitigation Action Chart, each of the jurisdictional mitigation action charts, and an electronic feedback form.

Appendix F provides documentation of the public outreach for feedback on the draft plan by Ramsey County and jurisdictions. The public feedback period for the draft plan was open from 12/12/2018 to 1/11/2019, for a total of 31 days.

*Table 2. Ramsey County Hazard Mitigation Update Meetings and Public Outreach*

Meeting Type	Date	Location
Public Outreach	7/2017	News release inviting public feedback and participation.
Kickoff Meeting	7/12/2017	Hosted online by GAC in Duluth
Steering Committee	11/3/2017	Ramsey County EOC, Arden Hills, MN
Steering Committee	4/24/2018	Ramsey County EOC, Arden Hills, MN
Public Outreach	12/12/2018 – 1/11/2019	Public review period for draft plan

At the close of the public outreach period, the UMD consultants worked with the Ramsey County Emergency Management Coordinator and members of the steering committee to incorporate comments from the public into the Multi-Hazard Mitigation Plan.

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

## Section 3 – Ramsey County Profile

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

### 3.1 General County Description

Ramsey County is in east central Minnesota. It is at the center of the Seven-County Metro Area. Four counties surround Ramsey County: Hennepin to the west, Dakota to the south, Washington to the east, and Anoka to the north. Of the 87 counties in the state of Minnesota, Ramsey County is geographically the smallest but is the largest in population. Ramsey County covers 170 square miles, and the county's estimated population in 2010 was 508,640. St. Paul is the county seat and the largest city in the county.

The cities located in Ramsey County are Arden Hills, Blaine, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North Saint Paul, Roseville, St. Anthony, St. Paul, Shoreview, Spring Lake Park, Vadnais Heights and White Bear Lake. White Bear Township is the only township in the county.

Ramsey County is dominated by the education/health services industry, with 29% of jobs in the county. Professional/business services and trade/transportation/utilities are also major components of the county's economy.

Ramsey County has many historic structures, sites and districts throughout the county. They are sometimes targeted for hazard mitigation strategies due to their unique, often irreplaceable, social value or cultural significance. For a complete listing, see *Appendix B: Ramsey County Critical Facilities*.

### 3.2 Environmental Characteristics

Ramsey County is primarily urban and developed. According to the Ramsey County Comprehensive Plan, only 8.3% of the county remains undeveloped, with land use primarily consisting of recreational, transportation, residential, multi-residential, commercial, industrial and mixed use.

### 3.3 Hydrography

Ramsey County contains approximately 18 square miles of surface water, or approximately 10% of the county's total area.

Impaired waters are an increasing problem as Ramsey County has many lakes, creeks and rivers that are on the Minnesota Pollution Control Agency Impaired Waters lists, including the Mississippi River, Rice Creek, Lambert Creek, Lake Owasso, Lake Johanna, Gervais Lake, East Vadnais Lake, Pleasant Lake, Turtle Lake, Goose Lake, White Bear Lake, Gilfillan Lake, Sucker Lake, Snail Lake, Valentine Lake, Phalen Lake, Kohlman Lake, Como Lake, Bennet Lake, Lake Josephine, among others (Minnesota Pollution Control Agency, 2018). Impaired waters have become a priority issue because they do not meet state water quality standards, they affect growth and health of communities and economies, and the Clean Water Act has a mandate requiring every state to address impairments. Impairments found in Ramsey County waters include fecal coliform, nutrient/eutrophication biological indicators, mercury in fish

tissue, perfluorooctane sulfonate (PFOS) in fish tissue, PCB in fish tissue, turbidity, and poor biological conditions according to aquatic macroinvertebrate bioassessments.

Basic hydrography in Ramsey County is mapped in Figure A-1 in Appendix A, while aquifer vulnerability (using 2011 data from the Minnesota Department of Agriculture) and public wells are mapped in Figure A - 14.

### **3.3.1 Groundwater**

Ramsey County is located over the Prairie Du Chien-Jordan Aquifer, which is the major source of groundwater for the Minneapolis & Saint Paul Twin Cities Metropolitan Area. Over the last 80 years, the level of the Prairie du Chien has steadily declined as the area has become more populated and the primary source of drinking water has shifted to groundwater (MPCA, 2018). Other aquifers that supply groundwater to Ramsey County are the St. Peter Aquifer, Franconia-Ironton-Galesville Aquifer and the Mt. Simon Aquifer.

The Prairie du Chien Group and Jordan Sandstone together form the most heavily used aquifer in the county. This aquifer is present throughout the county except in a narrow bedrock valley in the northwest (the Phalen channel), where the first bedrock is the St. Lawrence or Franconia Formation. The aquifer is overlain by the shaly basal part of the St. Peter Sandstone in much of the county. The Prairie du Chien Group is composed predominantly of dolostone; water flows mainly through fractures, joints, and solution cavities. Its total thickness is about 120 to 130 feet. The Jordan Sandstone (70 to 100 feet thick) consists of highly permeable, fine- to coarse-grained quartzose sandstone, and most water movement is intergranular. Despite their difference in rock type, the Prairie du Chien Group and Jordan Sandstone function as a single aquifer because no regional confining bed separates them. Locally, however, small water-level differences may exist, owing to relatively impermeable beds of shale of limited extent.

In general, the groundwater flows from areas with the highest hydraulic head in northeastern Ramsey County toward the Mississippi River. This flow pattern indicates that the Prairie du Chien-Jordan aquifer discharges into the river. The flow pattern may be altered by localized pumping of high-capacity wells, especially during the summer when heavy demands are placed on it. The Prairie du Chien-Jordan aquifer is a confined aquifer except for the southeastern corner of the county.

### **3.3.2 Lakes**

There are 82 lake basins in Ramsey County, 23 of which are accessible to the public for recreational use.

### **3.3.3 Rivers**

The Mississippi originates from Lake Itasca, stretching all the way to the Gulf of Mexico, and forms a portion of the southern border of Ramsey County. The Minnesota River originates from Big Stone Lake and connects to the Mississippi in the southwest corner of Ramsey County.

### **3.3.4 Wetlands**

Due to the urbanization of Ramsey County, few natural wetlands remain. According to the Ramsey Conservation District Comprehensive Plan, over 80% of Ramsey County's pre-settlement wetlands have been destroyed. Wetlands provide critical water quality and flood control, recharge groundwater, and provide habitat for wildlife. The plan notes that the Jones wetland in New Brighton is biologically

impaired according to aquatic plant and aquatic macroinvertebrate bioassessments and is surficially connected to Pike Lake and Long Lake. Protecting the remaining wetlands in the county is one of Ramsey Conservation District's high priorities.

### 3.4 Karst Geology

Closed depressions and the resulting sinkholes are common when limestone bedrock has eroded, which is referred to as karst development. Karst development occurs from thick, soluble areas of underground limestone dissolve over time, forming sinkholes. Ramsey County Parks realized on June 20, 2014 that there was a sinkhole in the median of Highway 61, just south of the intersection of County Road B and Highway 61. This was following heavy rains during the previous 24 hours.

In June of 2016, a resident reported that a sinkhole on city park property behind her residence had become quite large. Originally, she noticed it to be a foot wide and a foot deep. About a week later, it was three feet wide and much deeper.

### 3.5 Climate

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

January is the coldest month on average in St. Paul, with an average low of 6° F. The lowest temperature ever recorded in the city occurred in February of 1996, when it fell to -32° F. December and January are the snowiest months, with December averaging 11 inches and January averaging 12 inches of snow (Intellicast, 2018).

July is the hottest month on average in St. Paul, with an average high of 83° F. The highest temperature ever recorded there occurred in 1988, when it rose to 105° F (Intellicast, 2018).

#### 3.5.1 Climate Change

Minnesota's climate is currently changing in ways that are pushing us to adapt to weather patterns and extreme events that pose major threats to our health, homes, environment and livelihoods. These events cost our state millions in property loss, damaged infrastructure, disrupted business, medical care and support services, and put residents and responders at risk. Understanding how our weather is changing now and into the future will help planners and decision-makers in emergency management and supporting fields extend our progress in climate adaptation and lead to more resilient communities (MDH, 2018).

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

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

predictions are difficult to make, as changes may vary depending on geographical location, even within Minnesota. Intense study of these topics is ongoing.

In August 2018, the Minnesota Department of Health Climate & Health Program published “Planning for Climate & Health Impacts in Metro Minnesota: Emergency Management Considerations for HSEM Region 6.” This report is one of a series of custom climate profile reports produced for each of the six HSEM regions in the state for reference to climate change projection data, impacts, and considerations for emergency management and preparedness professionals in this HSEM region.

### Climate Data Trends

Over 50 years of storm data on record document that Minnesota has experienced an increase in the number and strength of weather-related natural disasters, particularly those related to rising temperatures and heavy downpours.

According to the 2015 Minnesota Weather Almanac,

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

Temperature and precipitation projections below are taken from the Minnesota Department of Health Region 6 profile. Appendix M provides the full MDH profile for Region 6, which includes Ramsey County. The information in this report was used to help inform the updated risk assessments in Section 4 – Risk Assessment of this plan for natural hazards and their relationship to climate change.

### Temperature

*The continued rise in winter temperatures will result in less snow pack, which will increase chances for grassland/wildfires as well as drought. The warmer winter temperatures will also have major consequences for our ecosystems, including native and invasive species, whose growth, migration, and reproduction are tied to climate cues. The increase in Lyme disease across Minnesota is also likely influenced in part by the loss of our historical winters, due to a longer life-cycle period for ticks. Freeze-thaw cycles are likely to increase as well, damaging roads, power lines and infrastructure, and causing hazardous travel conditions. By mid-century our average summer highs will also see a substantial rise, coupled with an increase in more severe, prolonged heat waves that can contribute to drought and wildfires and pose a serious health threat, particularly to children and seniors (MDH, 2018).*

### Precipitation

*There has been an increase in total average as well as heavy precipitation events, with longer periods of intervening dry spells. Our historical rainfall patterns have changed substantially, giving rise to larger, more frequent heavy downpours. Minnesota’s high-density rain gauge network has captured a nearly four-fold increase in “mega-rain” events just since the year 2000, compared to the previous three decades. Extreme rainfall events increase the probability of disaster-level flooding and new research suggests a recent increase in precipitation-triggered landslide activity in the metro region. However, there*

is also an increased probability that by mid-century heavy downpours will be separated in time by longer dry spells, particularly during the late growing season. Over the past century, the Midwest hasn't experienced a significant change in drought duration. However, the average number of days without precipitation is projected to increase in the future, leading Minnesota climate experts to state with moderate -to-high confidence that drought severity, coverage, and duration are likely to increase in the state. Modeling future precipitation amounts and patterns is less straight-forward compared to temperature. Some climate models do a better job than others representing rainfall for the Midwest, and available data sources only provide average estimates on a monthly scale, masking the spikes in extremes that trigger flood and drought disasters (MDH, 2018).

### 3.6 Demographics

St. Paul is the largest city in Ramsey County (pop. 285,068) and the designated county seat. There are 17 cities and one township within the county.

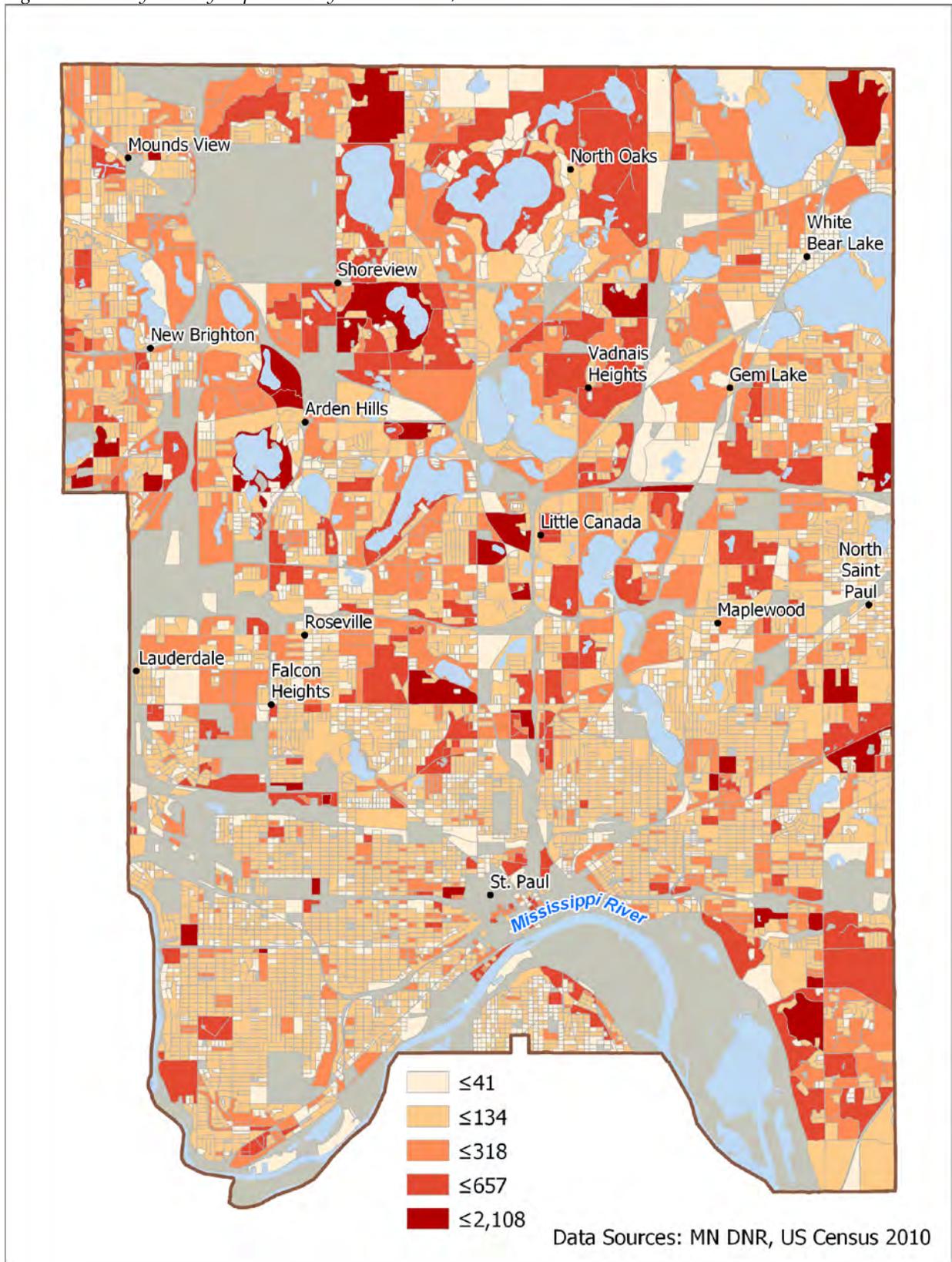
Table 3 summarizes population by community according to the 2010 U.S. Census. Figure 1 shows Ramsey County population density by census block.

Table 3. Ramsey County Population by Community, 2010

Community	2010 Population	% of County
Arden Hills	9,552	1.88
Blaine	Unknown	Unknown
Falcon Heights	5,321	1.05
Gem Lake	393	0.08
Lauderdale	2,379	0.47
Little Canada	9,773	1.92
Maplewood	38,018	7.47
Mounds View	12,155	2.39
New Brighton	21,456	4.22
North Oaks	4,469	0.88
North St. Paul	11,460	2.25
Roseville	33,660	6.62
St. Anthony	3,070	0.60
St. Paul	285,068	56.05
Shoreview	25,043	4.92
Spring Lake Park	178	0.03
Vadnais Heights	12,302	2.42
White Bear Lake	23,394	4.60
White Bear Township	10,949	2.15
<b>Total</b>	<b>508,640</b>	

Source: U.S. Census Bureau, 2010

Figure 1. Ramsey County Population by Census Block, 2010



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

In 2010, Ramsey County had a population of 508,640 residents, with an average population density of 3,341 persons per square mile of land area. St. Paul, the largest city in the county and the county seat, had a population of 285,068.

Ramsey County’s population is gradually increasing, rising 4.7% between 1990 and 2010. Since 1940, the population has risen by 64%. Table 4 below shows the population change in Ramsey County between 1940 and 2010.

Table 4. Ramsey County Population Change (1940-2010)

1940	1950	1960	1970	1980	1990	2000	2010	Change 1940-2010	Change 2000-2010
309,935	355,332	422,525	476,255	459,784	485,765	511,035	508,640	+64%	-0.5%

Source: U.S. Census Bureau, 2010

Ramsey County’s population is projected to grow by 28% between 2015 and 2050. Table 5 below shows population projections for Ramsey County until 2050.

Table 5. Ramsey County Population Projections (2015-2050)

2015	2020	2025	2030	2035	2040	2045	2050	Projected Change 2015-2050
539,144	567,959	593,842	616,408	637,002	655,410	672,286	688,964	+28%

Source: Minnesota State Demographic Center, 2017

### 3.7 Economy

Ramsey County is dominated by the education/health services industry, with 29% of jobs in the county. Professional/business services and trade/transportation/utilities are also major components of the county’s economy.

The number of jobs in the county rose by a mere 0.2% between 2007 and 2017. Table 6 provides an overview of the annual average employment by major industry sector in Ramsey County.

Table 6. Annual Average Employment by Major Industry Sector, Ramsey County

Industry	Number of Jobs (2007)	Number of Jobs (2017)
Natural Resources and Mining	NA	112
Construction	NA	11,950
Manufacturing	30,050	27,943
Trade, Transportation, Utilities	56,072	47,173
Information	NA	8,218
Financial Activities	24,980	21,276
Professional /Business Services	52,187	51,331
Education and Health Services	79,646	96,282
Leisure and Hospitality	28,012	29,729
Public Administration	25,741	26,640
Other Services	11,941	11,394
<b>Total Number of Jobs:</b>	<b>331,262</b>	<b>332,051</b>

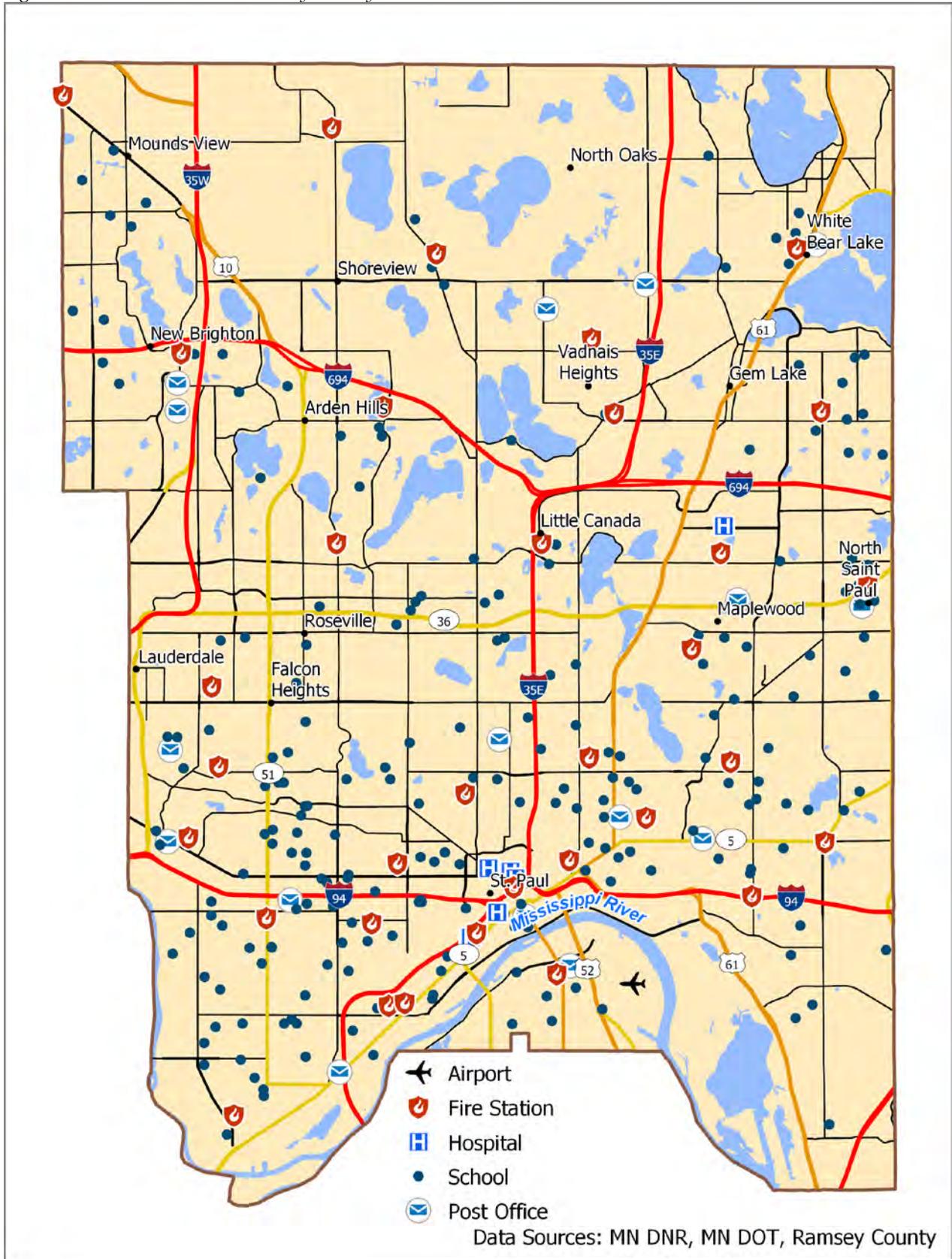
Source: Minnesota Dept. of Employment and Economic Development. Note: data discrepancies between segment values and totals exist due to data suppression for confidentiality.

According to 2016 ACS 5-year estimates, the median household income in Ramsey County was \$57,717, compared to a Minnesota average of \$63,217. The percent of the county’s population living below the poverty level was 15.9%, compared to 10.8% for the state of Minnesota.

### 3.8 Community Services & Infrastructure

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

Figure 2. Critical Facilities in Ramsey County



### **3.8.1 Health Care Providers**

There are 7 hospitals in Ramsey County: 1 in Maplewood (HealthEast St. John's Hospital), and 6 in St. Paul (HealthEast Bethesda Hospital, Regions Hospital, United Hospital, HealthEast St. Joseph's Hospital, Gillette Children's Specialty Healthcare and Children's Hospital and Clinics of MN – St. Paul).

In addition, the county contains 30 nursing homes, 8 hospice facilities and 50 supervised living facilities. See Appendix B for a complete listing of healthcare facilities. Figure A - 13 in Appendix A depicts health services within Ramsey County.

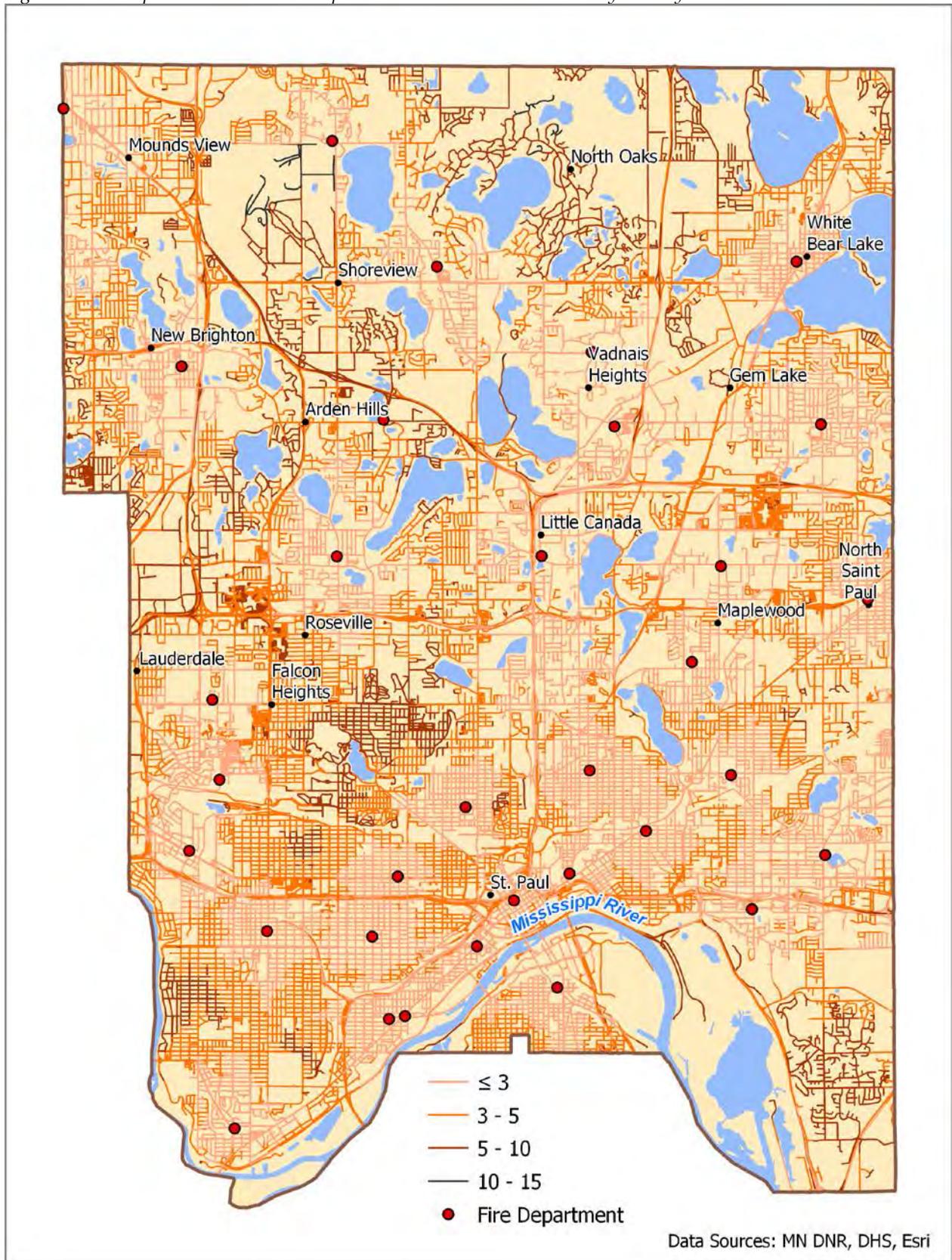
### **3.8.2 Public Safety Providers/Government Services**

The Sheriff's Office is centrally located at the Law Enforcement Center in St. Paul. Ramsey County Water Patrol is in Little Canada and Ramsey County Sheriff Patrol is in Arden Hills.

There are 20 police departments within Ramsey County, 11 of which are in St. Paul. Figure A - 4 in Appendix A depicts government and emergency facilities, including city halls, fire departments, police departments, the Sheriff's Office, Ramsey County Water Patrol and Ramsey County Sheriff Patrol.

Figure 3 shows fire departments and fire response times in Ramsey County. These drive times were created using the ArcGIS Network Analyst extension and Esri's Business Analyst. The user may note discrepancies between MnDOT road data and the map in this document; Network Analyst requires a seamlessly-connected data source to perform the calculations for drive times, which Business Analyst provides but MnDOT does not. The Business Analyst data was used for this reason. According to this model, all communities in the county are within 15 minutes of a fire department.

Figure 3. Fire Departments and Fire Response Times in Minutes in Ramsey County



### **3.8.3 Utilities/Communications**

Energy providers in the county include Connexus Energy Co-op, Xcel Energy, NuStar Energy LP, District Energy, Magellan Midstream Partners LP and Koch Pipeline Company LP.

Established in 2004, the Allied Radio Matrix for Emergency Response (ARMER) Program, administered in coordination with the Minnesota Statewide Radio Board, manages the implementation of a 700/800 megahertz (MHz) shared digital trunked radio communication system. In Ramsey County, there are 8 ARMER towers (Figure A - 5).

### **3.8.4 Transportation**

The county transportation system is composed of roads, highways, airports, public transit, railroads and trails (Figure A - 6). The system is designed to serve all residents, businesses, industries and tourists. With the release of the 1990 Census, Ramsey County was designated as a fully urbanized county; this urbanization process began over 100 years ago and developed into today's transportation system. Ramsey County Public Works is currently responsible for maintaining 293 miles of county roads, over 140 bridges, 30,000 signs and over 360 signal systems (Ramsey County Public Works, 2018).

Between 1950 and 1990, over 500 miles of metropolitan highways were built in the Twin Cities. Interstate highways in Ramsey County include I-94, I-694, I-35E and I-35W. Access to this system has been, and will continue to be, a major attraction for residential, commercial and industrial development in the county (Ramsey County Public Works, 2018).

The Ramsey County Regional Railroad Authority works on transit development projects in the county, to improve mobility and transportation affordability, mitigate traffic congestion and enhance environmental quality. The authority also oversees St. Paul's Union Depot, which is a transport facility for bicycles, pedestrians, Amtrak, car rental services, light rail transit and bus lines.

There are multiple railroads throughout the county, which are operated by the following companies: Burlington Northern Santa Fe (BNSF), Minnesota Commercial Railway (MNCR), Soo Line Railroad (SOO) and Union Pacific (UP).

Public transit is available in the county through Metro Mobility and Metro Transit. Metro Mobility is a public transit service for certified riders who cannot use regular fixed-route buses due to a disability or health condition. Metro Transit offers a network of buses, light rail and commuter trains, in addition to resources for those who carpool, vanpool, walk or bike. They added a light-rail link between downtown Minneapolis and downtown St. Paul in 2014.

There are two airports within Ramsey County: the St. Paul Downtown Airport (Holman Field) and Benson Airport. The St. Paul Downtown Airport is located just across the Mississippi River from downtown St. Paul and is one of several reliever airports in the Twin Cities, operated by the Metropolitan Airports Commission. It is the metro area's main facility for general aviation aircraft. The airport has 3 runways: Runway 14-32 (6,491' x 150'); Runway 13-31 (4,004' x 150'), and Runway 9-27 (3,642' x 100'). There are 87 aircraft based at the airport, and over 40,000 takeoffs and landings annually. A floodwall was installed in 2008 to protect the facility against riverine flooding.

The Benson Airport is owned by White Bear Township, and permission is required prior to landing. There is one turf runway (2,000' x 75'), and 25 aircraft are based at the field. There is an average of 88 aircraft operations per week. There are no night operations at the airport.

### **3.9 Land Use and Ownership**

Ramsey County is primarily urban and developed. According to the Ramsey County Comprehensive Plan, only 8.3% of the county remains undeveloped, with land use primarily consisting of agricultural, recreational, transportation, residential, multi-residential, commercial, industrial and mixed use.

According to the 2012 U.S. Census of Agriculture, 97 farms exist in the county, covering 723 acres. Of this farming land, 55% is cropland. The number of farms in the county increased by 223% between 2007 and 2012, while the number of acres farmed decreased by 23% (Census of Agriculture, 2012).

According to Minnesota DNR data, there are only 2 feedlots in the county.

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

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

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## Section 4 – Risk Assessment

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

Basing risk assessments on the best information available is important in developing effective mitigation actions that benefit communities. Geographic Information System (GIS) tools are not only helpful in producing maps, but they also show structures at risk and may determine damage estimates for potential hazard scenarios. MN Homeland Security and Emergency Management (HSEM) mitigation staff encourages the use of GIS tools in risk assessments because they produce good information to be used in the risk assessment process. In recognition of the importance of planning in mitigation activities, FEMA created **Hazards USA Multi-Hazard (Hazus)**, a powerful GIS-based disaster risk assessment tool. This tool enables communities to predict estimated losses from floods, hurricanes and other related phenomena and to measure the impact of various mitigation practices that might help reduce those losses. Hazus was used by UMD Geospatial Analysis Center staff in the flood hazard risk assessment (see section 4.4.5).

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

### 4.1 Hazard Identification/Profile

#### 4.1.1 Hazard Identification

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

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

Natural hazards are identified in the FEMA publication “Multi-Hazard Identification and Risk Assessment – A Cornerstone of the National Mitigation Strategy,” also known as MHIRA. FEMA Region V developed a list based on state mitigation plans in the region. Table 7 lists the natural hazards included in the 2014 Minnesota State Hazard Mitigation Plan.

*Table 7. FEMA MHIRA Natural Hazards in the 2014 Minnesota State Hazard Mitigation Plan*

Flooding	Hail	Drought
Dam/Levee Failure	Lightning	Extreme Heat
Wildfire*	Winter Storms	Extreme Cold

Windstorms	Erosion	Earthquakes
Tornadoes	Land Subsidence (Sinkholes & Karst)	

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

#### 4.1.2 Vulnerability Assessment by Jurisdiction

As part of the plan update process, the steering committee reviewed, updated and ranked the hazards faced by residents of Ramsey County, updated the existing mitigation actions published in the 2012 Multi-Hazard Mitigation Plan, and proposed new mitigation actions.

To engage in this process, the committee drew on many data sources. First, the committee examined the hazards identified in the 2012 Hazard Mitigation Plan (Table 8). The natural hazards that pose risk to Ramsey County were discussed and adjusted to reflect the definitions of natural hazards used in the 2014 Minnesota State Hazard Mitigation Plan. This was done to assure that the risks faced by Ramsey County were categorized the same way as the priority hazards established by the State of Minnesota.

Table 8. Hazards identified in the 2012 Ramsey County Multi-Hazard Mitigation Plan

Natural Hazards			
Severe Winter Storms	Severe Thunderstorms	Tornadoes	Lightning
Extreme Temperatures	Hailstorms	Wildfires	Flooding
Drought	Rockslides	Epidemics/Pandemics (is not addressed by consultant)	Dam Failure

While the focus of this MHMP is on natural hazards, planning took place with the understanding that many technological hazards could occur because of natural disasters (i.e. disruption in electrical service due to freezing rain causing problems for both utility corporations and vulnerable populations dependent on electricity for heat). Ramsey County EMHS staff updated *Appendix N Technological Hazards* using subject matter experts and current research and are incorporated in this planning effort.

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

Ramsey County ranked hazards based on a Calculated Priority Risk Index, or CPRI, as part of the development of their 2017-2018 Threat Hazard Identification and Risk Assessment (THIRA). These rankings were considered by the steering committee in the process of ranking hazards for the MHMP update. The methodology of the CPRI is outlined below.

#### 4.1.3 Calculated Priority Risk Index

The vulnerability assessment builds upon the previously developed hazard information by identifying the community assets and development trends and intersecting them with the hazard profiles to assess the

potential amount of damage that could be caused by each hazard event. A summary of Calculated Priority Risk Index (CPRI) categories and risk levels is shown in Table 9.

*Definitions of CPRI Categories*

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

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

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

**Duration** – relates to the actual amount of time that an incident may take place over time.

*Table 9. Summary of Calculated Priority Risk Index (CPRI) Categories and Risk Levels*

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

<b>Warning Time</b>	Less than 6 hours	Less than 6 hours	4	15%
	6 to 12 hours	6 to 12 hours	3	
	12 to 24 hours	12 to 24 hours	2	
	More than 24 hours	More than 24 hours	1	
<b>Duration</b>	Brief	Up to 6 hours	1	10%
	Intermediate	Up to 1 day	2	
	Extended	Up to 1 week	3	
	Prolonged	More than 1 week	4	

The hazard rankings for the Ramsey County MHMP update (Table 10) were based upon review of 1) hazard rankings in the past MHMP, 2) hazard rankings in the Calculated Priority Risk Index (CPRI) conducted by the county, and 3) group review and discussion during the MHMP steering committee meetings and public meetings.

Table 10. Hazard Ranking for 2018 MHMP Update

Natural Hazards	MHMP Hazard Ranking
Severe Summer Storms (Thunderstorms, Lightning, Hailstorms, Windstorms, Tornadoes)	High
Severe Winter Storms (blizzards, heavy snow, ice storms)	High
Flash Flood & Riverine Flood	Moderate
Extreme Heat & Extreme Cold	Moderate
Drought	Moderate
Erosion / Land Subsidence (Sinkholes & Karst)	Low [rockslides]
Wildfire	Low
Dam Failure	Low

**4.1.4 Hazard Profiling Concept of Planning**

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

**4.1.5 GIS and Risk Assessment**

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

FEMA’s Hazus tool in ArcGIS was used to estimate the damages incurred for a 100-year flood and for general asset assessment. Hazus also generates aggregated loss estimates for the entire county due to a 100-year flood. Aggregate inventory loss estimates, which include building stock analysis, are based upon the assumption that building stock is evenly distributed across each census block. Therefore, it is possible that overestimates of damage will occur in some areas while underestimates will occur in other areas. Total losses tend to be more reliable over larger geographic areas (groups of many blocks) than for individual census blocks. It is important to note that Hazus is not intended to be a substitute for detailed engineering studies.

**4.1.6 National Centers for Environmental Information (NCEI) Records**

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

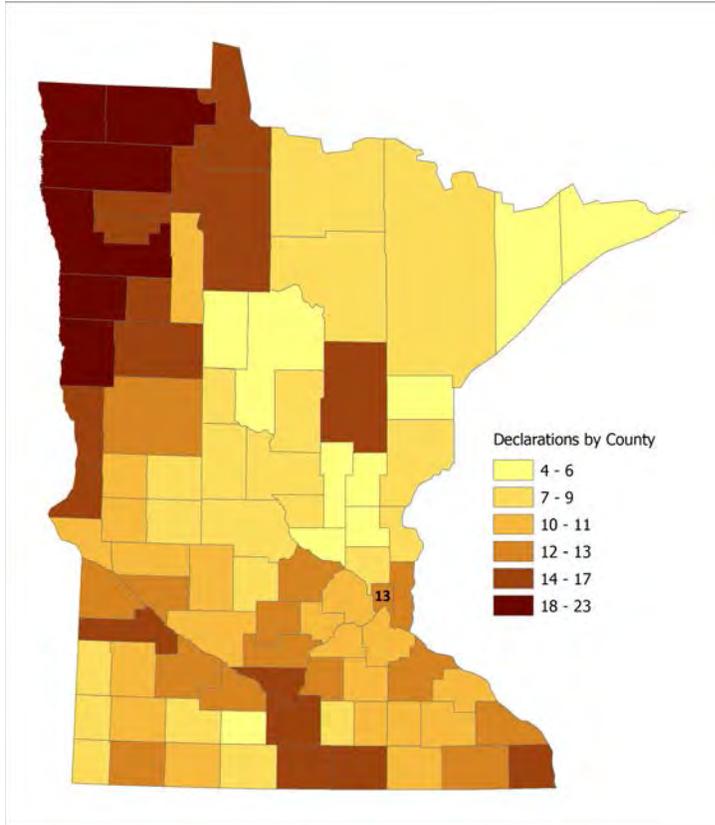
The NCEI data included 446 reported events in Ramsey County between 1950 and April 2018. However, some weather event categories only had available data going back as recent as 1996. No records before 1950 were available. A summary table of events related to each hazard type is included in the hazard profile sections that follow. A full table listing all events, including additional details, is included in Appendix C. NCEI hazard categories used in this plan are listed in Table 11.

*Table 11. National Centers for Environmental Information Historical Hazards*

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

### 4.1.7 FEMA Major Disaster Declarations

Figure 4. FEMA-Declared Disasters and Emergencies in Minnesota, 1957-July 2018



Another historical perspective is derived from FEMA-declared disasters. 13 major disaster and 3 emergency declarations in Ramsey County have been made between 1957 and July 2018 (Figure 4)

Table 12 and Table 13 show the details of the disasters including payments for Public Assistance (PA) and Individual Assistance (IA), listed under the flooding and severe storm profiles. No declarations were made for the other storms listed in the NCEI database. Reviewing the federal payments for damages from the declared disasters is a way of correlating the impact from the NCEI report.

Table 12. FEMA-Declared Major Disasters in Ramsey County (1953-July 2018)

Incident	Declaration Date and Disaster Number	Incident Period	Total PA Obligated by FEMA for Disaster in Minnesota	Total PA Obligated by FEMA for Disaster in Ramsey County	Individual Assistance in Minnesota	Individual Assistance in Ramsey County
Severe Storms, Straight-line Winds, Flooding, Landslides, and Mudslides	7/21/2014 DR-4182	6/11/2014 – 7/11/2014	\$39,694,513	\$2,003,319	None	None
Severe Storms, Flooding	5/10/2011 DR-1982	3/16/2011 – 5/25/2011	\$20,774,419	\$973,313	None	None
Flooding	4/19/2010 DR-1900	3/1/2010 – 4/26/2010	\$12,721,044	\$444,955	None	None
Flooding	5/16/2001 DR-1370	3/23/2001 – 7/3/2001	\$34,907,042	\$1,310,081	\$3,650,492	Yes, amount unknown
Severe Storms, Flooding, Tornadoes	6/27/2000 DR-1333	5/17/2000 – 7/26/2000	\$11,285,948	\$886,650	Yes, amount unknown	None

Incident	Declaration Date and Disaster Number	Incident Period	Total PA Obligated by FEMA for Disaster in Minnesota	Total PA Obligated by FEMA for Disaster in Ramsey County	Individual Assistance in Minnesota	Individual Assistance in Ramsey County
Severe Storms, Straight-Line Winds, Tornadoes	6/23/1998 DR-1225	5/15/1998 – 6/28/1998	Yes, Amount Unknown	Yes, Amount Unknown	None	None
Flooding	8/25/1997 DR-1187	6/28/1997 – 7/27/1997	Yes, Amount Unknown	Yes, Amount Unknown	Yes, Amount Unknown	Yes, Amount Unknown
Severe Storms, Flooding	4/8/1997 DR-1175	3/21/1997 – 5/24/1997	Yes, Amount Unknown	Yes, Amount Unknown	Yes, Amount Unknown	Yes, Amount Unknown
Severe Storms, Tornadoes, Flooding	6/11/1993 DR-993	5/6/1993 – 8/25/1993	Yes, Amount Unknown	Yes, Amount Unknown	Yes, Amount Unknown	Yes, Amount Unknown
Severe Storms, Tornadoes, Flooding	8/6/1987 DR-797	7/20/1987 – 8/5/1987	Yes, Amount Unknown	Yes, Amount Unknown	Yes, Amount Unknown	Yes, Amount Unknown
Severe Storms, Tornadoes, Hail, Flooding	7/8/1978 DR-560	7/8/1978	Yes, Amount Unknown	Yes, Amount Unknown	Yes, Amount Unknown	Yes, Amount Unknown
Flooding	4/18/1969 DR-255	4/18/1969	Yes, Amount Unknown	Yes, Amount Unknown	Yes, Amount Unknown	Yes, Amount Unknown
Flooding	4/11/1965 DR-188	4/11/1965	Yes, Amount Unknown	Yes, Amount Unknown	Yes, Amount Unknown	Yes, Amount Unknown

\* Data provided by MN HSEM in September 2016, and downloaded from <https://www.fema.gov/openfema-dataset-registration-intake-and-individuals-household-program-v1> and <https://www.fema.gov/openfema-dataset-disaster-declarations-summaries-v1> on 2/16/2018. Values are estimates collected at the time of the disaster.

Table 13. FEMA-Declared Emergencies in Ramsey County (1974-July 2018)

Incident	Declaration Date and Disaster Number	Incident Period	Individual Assistance in Minnesota	Public Assistance (all affected areas)
Flooding	3/19/2010 EM-3310	3/1/2010-4/26/2010	Unknown	Yes, Amount Unknown
Minnesota Hurricane Katrina Evacuation	9/13/2005 EM-3242	8/29/2005-10/01/2005	\$0	\$2,470,003.23
Drought	6/17/1976 EM-3013	6/17/1976	Unknown	Yes, Amount Unknown

\* Data downloaded from <https://www.fema.gov/openfema-dataset-disaster-declarations-summaries-v1> on 8/16/2018. Values are estimates collected at the time of the disaster.

Ramsey County was also part of a State Disaster Declaration in 2018 (SD-027), due to a slope failure on April 28, 2018 in St. Paul on Wabasha Street. The declaration was declared on July 11, 2018 total estimated damages to be \$1,096,085.

Table 14 depicts the historical projects in Ramsey County resulting from hazard mitigation funding.

Table 14. Historical Hazard Mitigation Funding (HMGP and PDM) in Ramsey County

Year	Project Description	Sub-Grantee	Federal Share
1997	Snow Fence Research (HMGP)	Board of Water and Soil Resources	\$24,000
1997	BWSR – Snow Fence Study (HMGP)	Board of Water and Soil Resources	\$47,254
1997	Acquisition of 9 residential properties (HMGP)	City of St. Paul	\$569,775
1998	Electric Line Conversion (HMGP)	City of North St. Paul	\$112,500
1999	MPR Generator (HMGP)	Minnesota Public Radio	\$52,500
2010	MHMP Update (HMGP)	Ramsey County	\$31,188
2016	City of St. Paul Comprehensive 5-Year All Hazard Mitigation Plan Review (PDM)	St. Paul Department of Emergency Management	\$73,219
<b>Total HMGP/PDM Funding – Ramsey County</b>			<b>\$910,436</b>

\*Data downloaded from <https://www.fema.gov/media-library/assets/documents/28323> and <https://www.fema.gov/media-library/assets/documents/103341> on 9/5/2018.

## 4.2 Vulnerability Assessment

### 4.2.1 Asset Inventory

A 2010 essential facility dataset (schools, medical facilities, fire stations, and police stations compiled from state and county sources) was used to override the default Hazus input database. Other critical facilities identified by the county were geocoded and overlaid with the Hazus flood model output.

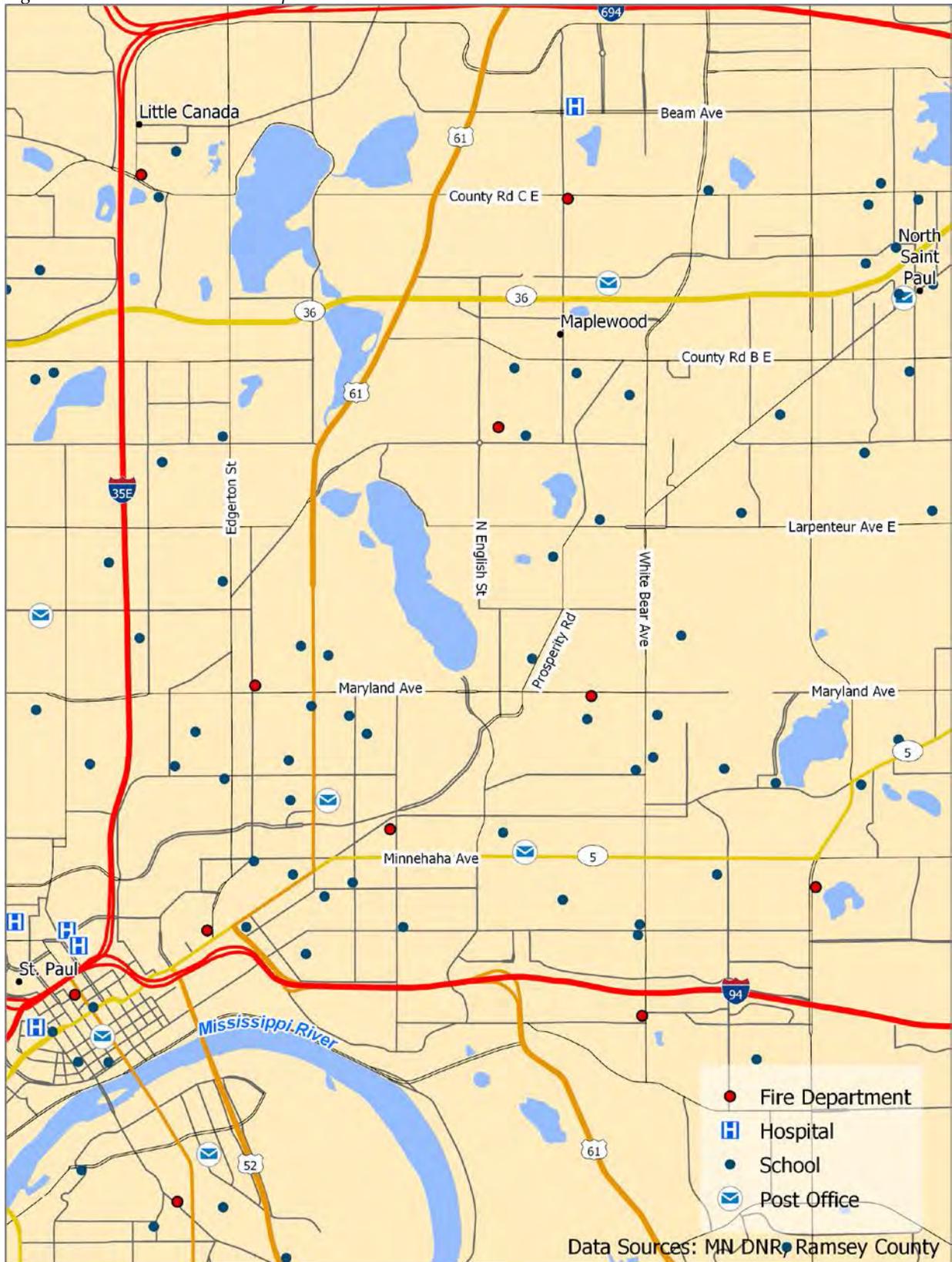
For the purposes of this plan, critical infrastructure and key resources were defined by Ramsey County. Table 15 below identifies the critical facilities that were included in the analysis. Essential facilities are a subset of critical facilities. Names and locations of all critical facilities are listed in Appendix B. Figure 5 below maps the critical facilities in Maplewood, while Figure 6 depicts critical facilities in Roseville.

Table 15. Ramsey County Critical Infrastructure and Facilities

Infrastructure Type	Number of Facilities
Agriculture and Food	57
Banking and Finance	72
Chemical and Hazardous Materials	198
Commercial Facilities	167
Communications	43
Dams	7
Emergency Services	130
Energy	9

Infrastructure Type	Number of Facilities
Government Facilities	460
Healthcare and Public Health	967
Manufacturing	20
Postal and Shipping	10
Transportation	74
Water	121
Historic Properties	113

Figure 5. Critical Facilities in Maplewood





### 4.2.2 Facility Replacement Costs

Ramsey County-specific building data was sourced from the parcel tax databases and parcel polygon data included building valuations and occupancy class. Structure values for each parcel were aggregated within each parcel and assigned to the parcel centroid point. Records were aggregated to the relevant census administrative boundaries for the flood hazard analysis. This process also provided total facility replacement costs and total building exposure by general occupancy class (defined by Hazus tools). The total estimated building exposure for Ramsey County is shown in Table 16.

Table 16. Ramsey County Total Building Exposure

General Occupancy	Parcels Containing Structures	Total Building Exposure
Agriculture	9	\$3,897,000
Commercial	3,743	\$5,073,026,000
Education	328	\$2,591,880,000
Government	531	\$1,435,393,000
Industrial	1,117	\$1,324,280,000
Religious/Non-Profit	783	\$934,922,000
Residential	147,439	\$29,446,264,000
<b>Total:</b>	<b>153,950</b>	<b>\$40,809,662,000</b>

### 4.3 Future Development

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

There have been some changes in development, settlement patterns, and commercial land use patterns in Ramsey County since the last Multi-Hazard Mitigation Plan (2012). Ramsey County and the city of Arden Hills have completed a significant land purchase with the United States Army. That land, now known as the Rice Creek Commons, has been in the very early stages of development with some minor re-rerouting of Rice Creek and some road construction. The creek re-route will be kept primarily within the country park property. Infrastructure construction is expected to begin in 2019, residential and commercial development is set to begin in 2020.

As residential and continued population growth occurs in Ramsey County, so does the demand for housing and increased potential to be vulnerable to hazard events. As stated earlier in the plan the population growth has slowly increased by 7.7% from 2010 census while the number of housing units increased by more than 59%. 14 manufactured homes parks are located throughout the county.

The Ramsey County Emergency Management Coordinator will work to keep the jurisdictions covered by the Multi-Hazard Mitigation Plan engaged and informed during the plan’s cycle. By keeping jurisdictional leaders actively involved in the monitoring, evaluation and update of the MHMP, they will

keep their local governments aware of the hazards that face their communities and how to mitigate those hazards through planning and project implementation. Each jurisdiction has identified mitigation strategies they will seek to implement in their communities (see *Appendix G: Mitigation Actions by Jurisdiction*). Jurisdictions will include considerations for hazard mitigation in relation to future development when updating local comprehensive plans or other plans that may influence development.

Section 6 of this plan further outlines the process by which Ramsey County will address the maintenance of this plan, including monitoring, evaluation, and update of the plan, as well as implementation and continued public involvement.

## 4.4 Hazard Profiles

As part of the risk assessment, each natural hazard that poses risk to the county was independently reviewed for its past hazard history, relationship to climate change, and jurisdictional vulnerability to future events. A capabilities assessment was also conducted to review the plans and programs that are in place or that are lacking (program gaps or deficiencies) for the implementation of mitigation efforts.

### 4.4.1 Tornadoes

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

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

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

### Tornado History in Ramsey County

According to the NCEI, 7 tornadoes were reported in Ramsey County between 1950 and April of 2018, causing one death, 168 injuries, and \$225,770,000 dollars in reported property damage. Tornado classification ranged from F0/EF0 to F4 on the EF/F Scale.

The most recent tornado in Ramsey County occurred on July 17, 2015, when an EF-0 tornado touched down in the northwest portion of North Oaks, near Charley Lake. The tornado moved to the southern side of Deep Lake, where the highest numbers of toppled and snapped trees occurred. Some trees fell on houses, vehicles, and other structures, and the NCEI reported \$500,000 in property damage.

In May of 2011, an EF-0 tornado crossed through Ramsey County near Spring Lake. Most of the damage was due to sporadic trees being blown down.

An F1 tornado in May 1998 touched down in Roseville, before traveling north through Shoreview, North Oaks and Lino Lakes before lifting near Blaine. 7 houses were destroyed, and 102 severely damaged. The damage from the tornado, along with widespread hail, reached \$150 million.

Figure 7. Roseville Tornado of 1981 (Melby, 2013)



In June of 1981 an F3 tornado injured 60 people and killed 1. Wind speeds as high as 160 mph were recorded (Figure 7). The Lt. Governor activated 120 National Guard military police to prevent looting of damaged businesses and homes in Roseville. The NCEI reports \$25 million in property damage.

An F4 tornado occurred in May of 1965, resulting in 108 injuries and

\$25 million in property damage.

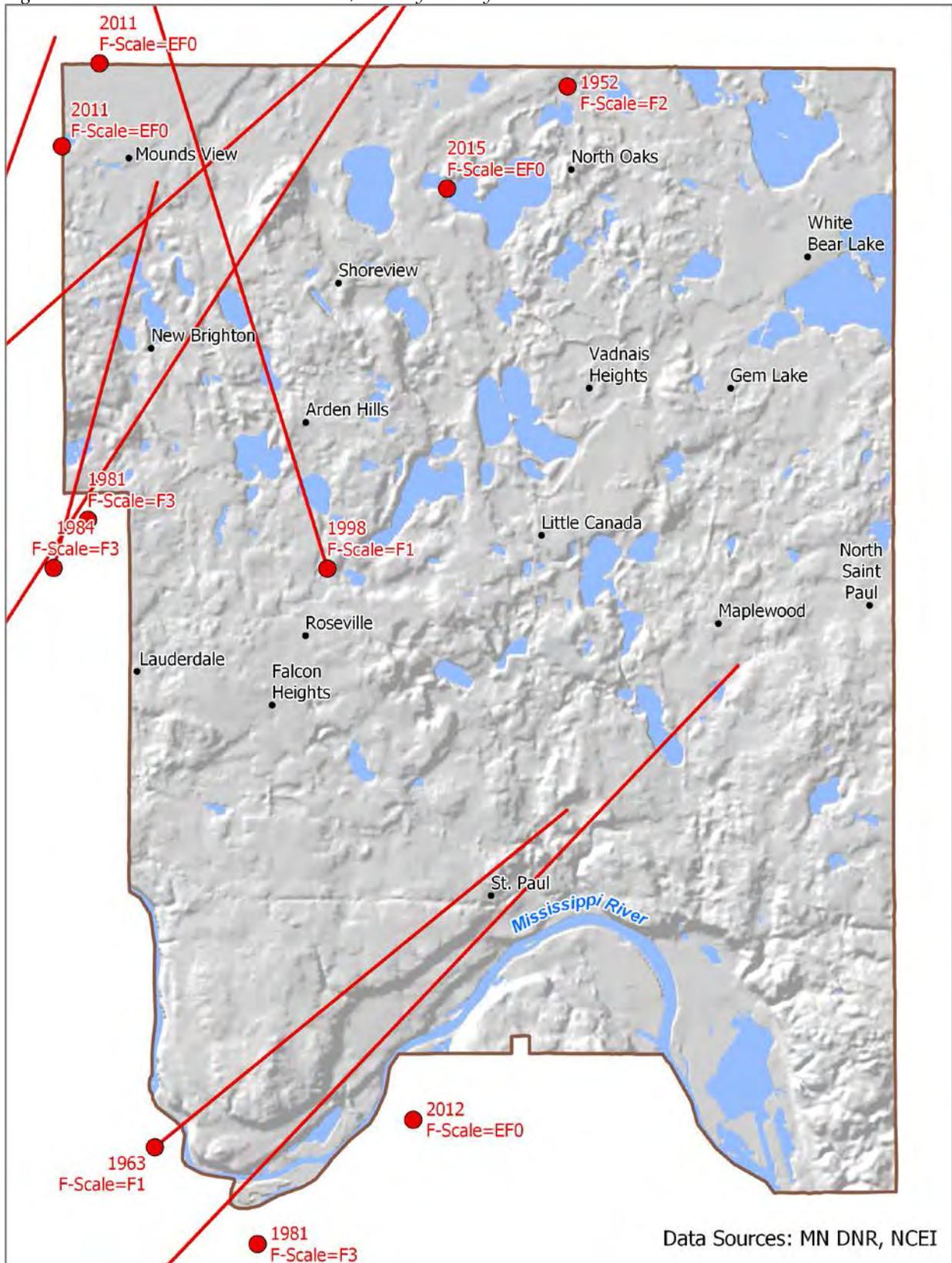
Figure 8 below shows tornado touchdown points and tracks in Ramsey County. Historic tornado events in the county are listed in Table 17.

Table 17. Historic Tornado Events in Ramsey County, 1950-April 2018

Location or County	Date	Magnitude	Deaths	Injuries	Property Damage
North Oaks	7/18/2015	EF0	0	0	\$500,000
Mounds View	5/22/2011	EF0	0	0	\$20,000
Roseville	5/15/1998	F1	0	0	\$150,000,000
Ramsey Co.	4/26/1984	F3	1	0	\$25,000,000
Ramsey Co.	6/14/1981	F3	1	60	\$25,000,000
Ramsey Co.	6/28/1979	F1	0	0	\$250,000
Ramsey Co.	5/6/1965	F4	6	108	\$25,000,000

Source: National Centers for Environmental Information

Figure 8. Tornado Touchdowns and Paths, Ramsey County



## Tornadoes and Climate Change

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

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

The earliest reported tornado in Minnesota occurred on March 6, 2017, when 2 tornadoes touched down in southern Minnesota, which was 12 days earlier than the previous record. The Zimmerman tornado occurred 115 miles further north than the previous record from 1968. According to State Meteorologist Paul Huttner, “Those records fit seasonally and geographically with longer term climate trends pushing weather events earlier in the season and further northward” (Huttner, MPR News, 2017).

The state of Wisconsin has recorded 3 tornadoes in January and 6 in December during the period of 1844-2013 (National Weather Service Weather Forecast Office, 2014) including a January tornado in 2008.

## Vulnerability

The county has experienced a tornado event in 7 of the 67 full years on record. According to these statistics, there is a 10% chance of a tornado affecting Ramsey County each year. The vulnerability of each jurisdiction to severe summer storms has not changed due to any development in the last 5 years.

## Plans and Programs in Place

*Ramsey County Emergency Operations Plan, Ramsey County COOP/COG Plan; Ramsey County Multijurisdictional Hazard Mitigation Plan, THIRA* – Ramsey County maintains several different plans including an Emergency Operations Plan, a Ramsey County COOP/COG Plan and the Ramsey County Multijurisdictional Hazard Mitigation Plan which are designed as guides for emergency and/or recovery operations. These plans are intended to assist key county/municipal officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.

*Public Warning and Notification* – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Ramsey County utilizes the Everbridge Mass Notification System, the Integrated Public Alert and Warning System (IPAWS), Wireless Emergency Alerts (WEA), Ramsey County Emergency Management and Homeland Security Facebook page, and local news media. Ramsey County promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. Local television & radio stations assist with sharing public information. Ramsey County Emergency Communications Center has recently upgraded

its siren system to be fully functional with the use of polygon-based warnings. Tornado warnings issued by the National Weather Service will automatically sound sirens inside or very near the polygon.

*Summer Weather Watches/Advisories/Warnings* – Summer storm watches, advisories, warnings are initiated by the National Weather Service. The emergency warning system is activated by the dispatch center as directed. Ramsey County Emergency Communications Center’s Outdoor Warning Siren procedure can be viewed here: <https://www.ramseycounty.us/residents/emergency-response-preparedness/emergency-preparedness-management/preparing-disaster>. Residents are also encouraged to receive warnings by NOAA weather radio, Wireless Emergency Alerts and other means. Ramsey County has COOP/COG plans in place.

*Outdoor Warning Sirens* – There are 91 outdoor warning sirens deployed around Ramsey County. Of these 91 sirens, 55 are in suburban Ramsey County and 36 are in Saint Paul. In 2015, Ramsey County Emergency Communications Center started a project to integrate two separate outdoor warning siren systems into a single, county-wide system using Federal Signal’s CommanderOne system. Under the direction of and with funding from the Ramsey County Emergency Communications Center, Federal Signal first conducted and completed a sound propagation study and a thorough inventory of siren systems in municipal Ramsey County (Saint Paul upgraded all their sirens to compatible versions). This information was shared with all the municipalities and those that own outdoor warning sirens upgraded those sirens that required it. As of June 2018, all upgraded sirens were installed and are on line with the CommanderOne system. All the sirens in Ramsey County are activated by Ramsey County Emergency Communications Center. Sirens are activated when the National Weather Service notifies Ramsey County Emergency Communications Center that there are high winds or tornado conditions that pose risk to public safety. Sirens may also be activated for other situations such as a hazardous materials incident under the direction of an Incident Commander.

*Skywarn Program* – Ramsey County Emergency Management and Homeland Security offers Skywarn training in conjunction with the National Weather Service on an annual basis to local public safety personnel, Ramsey County employees and residents that wish to be trained as volunteers. Skywarn spotters help to keep our local municipalities safe by providing timely and accurate reports of severe weather to our local National Weather Service office. Ramsey County Emergency Management and Homeland Security monitors local Skywarn nets and relays information to appropriate persons as needed.

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

*School Closings* – The major school districts within Ramsey County have school closing policies and communications plans in place if inclement weather or temperatures create a hazardous situation for students or staff. School districts also use local mass media to relay information.

*Severe Weather Shelters* – The state requires shelters for manufactured home parks with 10 or more manufactured homes per MN Statute 327.20. Ramsey County has 14 manufactured homes parks. Of these parks, 12 have indicated they have shelters, one has stated it does not and one is in an unknown

status meaning that the shelter may or may not exist, and if it does, it may or may not be habitable. It is also unknown with all the parks whether the existing shelters have capacity needed for populations present. Given that this has become an issue with local media of late, Ramsey County Emergency Management and Homeland Security will, in cooperation/coordination with other partners, place an emphasis on this activity. See KSTP News Story here: <http://kstp.com/news/mobile-home-park-severe-weather-storm-shelter-minnesota-law-nowhere-to-hide-chetek-wisconsin/4564189/?cat=5>

*Aboveground Power Lines* – Much of the power lines in the county are aboveground and subject to damage from ice storms, wind, and falling tree limbs resulting in power outages. Ramsey County and municipalities will work with power utilities to prioritize burying power lines to critical facilities.

### Program Gaps or Deficiencies

*Aboveground Power Lines* – Much of the power lines in the county are aboveground and subject to damage from ice storms, wind, and falling tree limbs resulting in power outages. Ramsey County and municipalities will work with power utilities to prioritize burying power lines.

*Backup Power* – Not all county or municipal facilities have backup power to critical facilities in the event of a severe winter storm that results in an extended power loss.

*Communications* – Everbridge’s open subscription service was made available to the public in September 2016 (<https://www.ramseycounty.us/alerts>). However, not all residents have subscribed to or follow our Facebook page to receive important messages. Additionally, there are translation services for only three languages (Spanish, Somali, and Hmong). There are over 100 identified languages spoken in Ramsey County, and more than 50 are spoken preferentially in the home. Ramsey County Emergency Management and Homeland Security will, in cooperation/coordination with other partners, place an emphasis on increasing citizen subscription to Everbridge.

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#### 4.4.2 Windstorms

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

Severe winds can damage and destroy roofs, toss manufactured homes off their pier foundations, and tear light-framed homes apart. There are several different types of windstorms. A “downburst” is defined as a strong downdraft with an outrush of damaging winds on or near the earth’s surface.

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

### Windstorm History in Ramsey County

Ramsey County frequently experiences winds blowing at over 50 knots (Figure 9). According to NCEI records, there have been 147 thunderstorm/high wind events reported between 1950 and April 2018, with wind speeds of up to 86 knots. These winds can inflict damage to buildings and in some cases, overturn high-profile vehicles. This dataset recorded 12 injuries and over \$25 million in property damage since 1950.

In June of 2017, two people were trapped when a tree fell on them during a windstorm in St. Paul. Minor injuries were reported.

The most recent wind event causing property damage occurred in July of 2016. Trees toppled onto vehicles in the Como, Midway and Highland Park areas of St. Paul. Property damage was approximately \$25,000, and 138,000 people were without power during the storm.

In November of 2012, \$50,000 of property damage was reported in Ramsey County due to severe winds of up to 56 knots. Most of the damage was the result of trees landing on cars, houses and sheds.

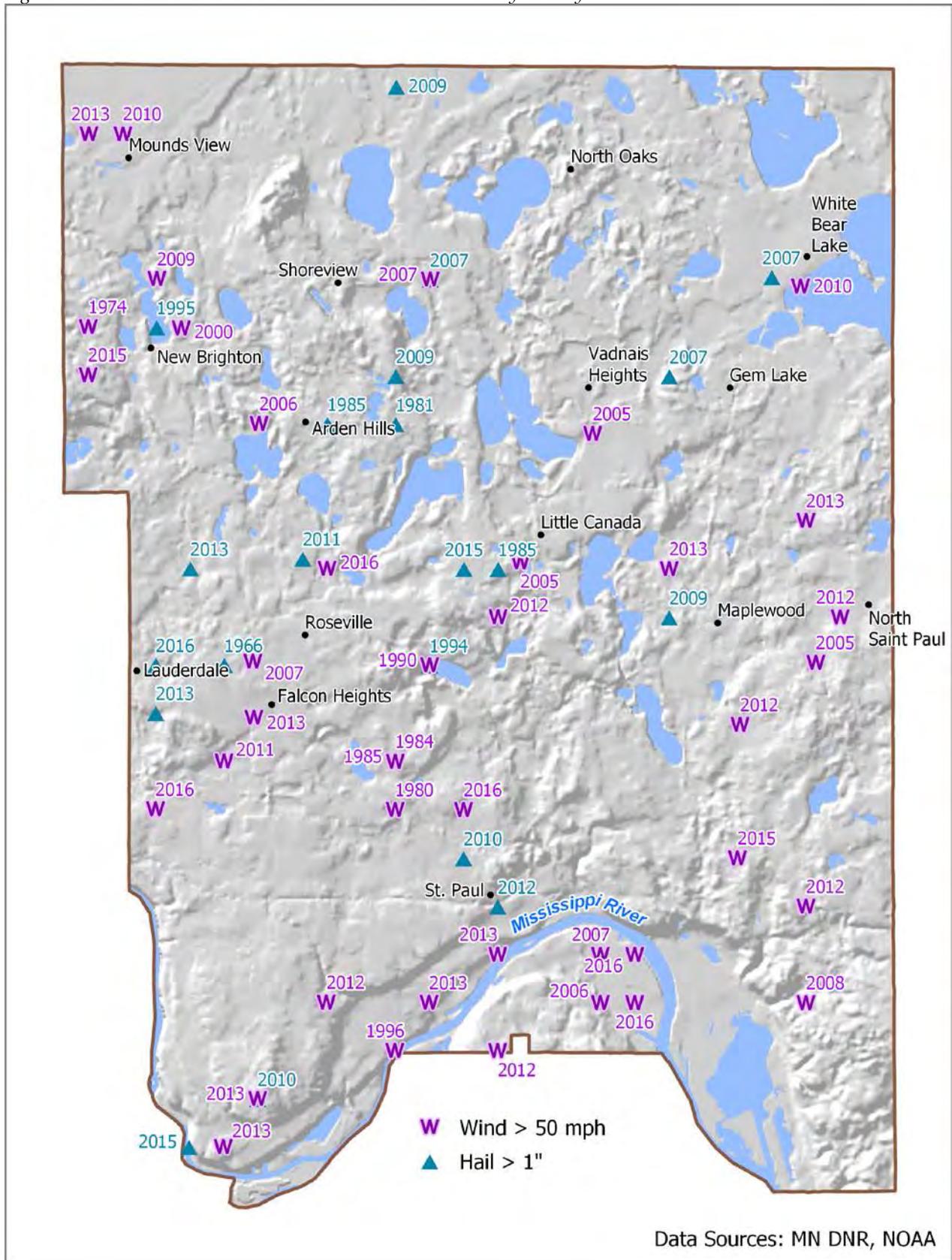
Winds blowing at 61 knots in June of 2012 blew down a large swath of trees from the Highland Park area toward Randolph Avenue. Property damage was \$50,000.

Severe thunderstorms with wind blowing at 60 knots downed 4,000 trees in the neighborhoods of St. Anthony, Como and Phalen in August of 2007. One home was destroyed when a tree fell on it, and one man was injured by a window crashing in on him. Part of the grandstand’s roof at the State Fair was blown off, and dozens of vendor booths were damaged. XCEL Energy reported 250,000 outages in the metro region. Property damage estimates were not recorded by the NCEI.

Wind and hail in Ramsey County on September 21, 2005 caused \$25 million in property damage. Many homes were destroyed by falling trees, and the roof of a mobile home in Mounds View was blown off. Roads were blocked throughout the county. One person died in Mounds View while clearing their property, and a child was injured in New Brighton from a falling limb.

In May of 1998, a derecho caused severe damages in Ramsey County, and in particular Highland Park, a neighborhood in St. Paul. Wind speeds reached 100 mph, damaging 2,000 homes and felling thousands of trees. Damages exceeded \$48 million (Seeley M. , 2015).

Figure 9. Most Recent Severe Wind and Hail Storms in Ramsey County



## Windstorms and Climate Change

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

## Vulnerability

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

## Plans and Programs in Place

*Ramsey County Emergency Operations Plan, Ramsey County COOP/COG Plan; Ramsey County Multijurisdictional Hazard Mitigation Plan, THIRA* – Ramsey County maintains several different plans including an Emergency Operations Plan, a Ramsey County COOP/COG Plan and the Ramsey County Multijurisdictional Hazard Mitigation Plan which are designed as guides for emergency and/or recovery operations. These plans are intended to assist key county/municipal officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.

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#### **4.4.3 Lightning**

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

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

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

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

#### **Lightning History in Ramsey County**

The NCEI has recorded just 3 lightning events in Ramsey County, two of which occurred in 2005 and one of which occurred in 1998. In August of 2005, lightning struck a home and a nearby tree on

Whitaker Street. The bolt damaged electrical equipment and split the tree in two. One piece of the tree then crashed through one of the home's windows. Total property damage was not recorded by the NCEI.

In June of 2005, lightning struck a home on Timberline Trail. The home caught fire, and sheetrock fell upon a person lying in bed.

In August of 1998, one man died under a tree when lightning struck it.

### Lightning and Climate Change

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

### Vulnerability

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

### Plans and Programs in Place

*Ramsey County Emergency Operations Plan, Ramsey County COOP/COG Plan; Ramsey County Multijurisdictional Hazard Mitigation Plan, THIRA* – Ramsey County maintains several different plans including an Emergency Operations Plan, a Ramsey County COOP/COG Plan and the Ramsey County Multijurisdictional Hazard Mitigation Plan which are designed as guides for emergency and/or recovery operations. These plans are intended to assist key county/municipal officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.

*Public Warning and Notification* – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Ramsey County utilizes the Everbridge Mass Notification System, the Integrated Public Alert and Warning System (IPAWS), Wireless Emergency Alerts (WEA), Ramsey County Emergency Management and Homeland Security Facebook page, and local news media. Ramsey County promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. Local television & radio stations assist with sharing public information. Ramsey County Emergency Communications Center has recently upgraded its siren system to be fully functional with the use of polygon-based warnings. Tornado warnings issued by the National Weather Service will automatically sound sirens inside or very near the polygon.

*Summer Weather Watches/Advisories/Warnings* – Summer storm watches, advisories, warnings are initiated by the National Weather Service. The Emergency warning system is activated by the dispatch center as directed. Ramsey County Emergency Communications Center's Outdoor Warning Siren procedure can be viewed here: <https://www.ramseycounty.us/residents/emergency-response-preparedness/emergency-preparedness-management/preparing-disaster>. Residents are also encouraged to receive warnings by NOAA weather radio, Wireless Emergency Alerts and other means. Ramsey County has COOP/COG plans in place. Ramsey County also uses both the county website and social media to broadcast information to employees.

*Outdoor Warning Sirens* – There are 91 outdoor warning sirens deployed around Ramsey County. Of these 91 sirens, 55 are in suburban Ramsey County and 36 are in Saint Paul. In 2015, Ramsey County Emergency Communications Center started a project to integrate two separate outdoor warning siren systems into a single, county-wide system using Federal Signal’s CommanderOne system. Under the direction of and with funding from the Ramsey County Emergency Communications Center, Federal Signal first conducted and completed a sound propagation study and a thorough inventory of siren systems in municipal Ramsey County (Saint Paul upgraded all their sirens to compatible versions). This information was shared with all the municipalities and those that own outdoor warning sirens upgraded those sirens that required it. As of June 2018, all upgraded sirens were installed and are on line with the CommanderOne system. All the sirens in Ramsey County are activated by Ramsey County Emergency Communications Center. Sirens are activated when the National Weather Service notifies Ramsey County Emergency Communications Center that there are high winds or tornado conditions that pose risk to public safety. Sirens may also be activated for other situations such as a hazardous materials incident under the direction of an Incident Commander.

*Skywarn Program* – Ramsey County Emergency Management and Homeland Security offers Skywarn training in conjunction with Metro Skywarn on an annual basis to local public safety personnel, Ramsey County employees and residents that wish to be trained as volunteers. Metro Skywarn spotters help to keep our local municipalities safe by providing timely and accurate reports of severe weather to our local National Weather Service office. Ramsey County Emergency Management and Homeland Security monitors local Skywarn nets and relays information to appropriate persons as needed.

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

*School Closings* – The major school districts within Ramsey County have school closing policies and communications plans in place if inclement weather or temperatures create a hazardous situation for students or staff. School districts also use local mass media to relay information.

*Severe Weather Shelters* – The state requires shelters for manufactured home parks with 10 or more manufactured homes per MN Statute 327.20. Ramsey County has 14 manufactured homes parks. Of these parks, 12 have indicated they have shelters, one has stated it does not and one is in an unknown status meaning that the shelter may or may not exist, and if it does, it may or may not be habitable. It is also unknown with all the parks whether the existing shelters have capacity needed for populations present. Given that this has become an issue with local media of late, Ramsey County Emergency Management and Homeland Security will, in cooperation/coordination with other partners, place an emphasis on this activity. See KSTP News Story here: <http://kstp.com/news/mobile-home-park-severe-weather-storm-shelter-minnesota-law-nowhere-to-hide-chetek-wisconsin/4564189/?cat=5>

*Aboveground Power Lines* – Much of the power lines in the county are aboveground and subject to damage from ice storms, wind, and falling tree limbs resulting in power outages. Ramsey County and municipalities will work with power utilities to prioritize burying power lines to critical facilities.

### Program Gaps or Deficiencies

*Aboveground Power Lines* – Much of the power lines in the county are aboveground and subject to damage from ice storms, wind, and falling tree limbs resulting in power outages. Ramsey County and municipalities will work with power utilities to prioritize burying power lines.

*Backup Power* – Not all county or municipal facilities have backup power to critical facilities in the event of a severe winter storm that results in an extended power loss.

*Communications* – Everbridge’s open subscription service was made available to the public in September 2016 (<https://www.ramseycounty.us/alerts>). However, not all residents have subscribed to or follow our Facebook page to receive important messages. Additionally, there are translation services for only three languages (Spanish, Somali, and Hmong). There are over 100 identified languages spoken in Ramsey County, and more than 50 are spoken preferentially in the home. Ramsey County Emergency Management and Homeland Security will, in cooperation/coordination with other partners, place an emphasis on increasing citizen subscription to Everbridge.

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#### 4.4.4 Hail

Hailstorms are a product of severe thunderstorms. Hail is formed when strong updrafts within the storm carry water droplets above the freezing level, where they remain suspended and continue to grow larger, until their weight can no longer be supported by the winds. Hailstones can vary in size, depending on the strength of the updraft. The NWS uses the following descriptions when estimating hail sizes: pea size is ¼-inch, marble size is ½-inch, dime size is ¾-inch, quarter size is 1-inch, golf ball size is 1 ¾-inches, and baseball size is 2 ¾-inches. Individuals who serve as volunteer “storm spotters” for the NWS are located throughout the state and are instructed to report hail dime size (¾-inch) or greater. Hailstorms can occur throughout the year; however, the months of maximum hailstorm frequency are typically between May and August. Although hailstorms rarely cause injury or loss of life, they can cause significant property damage.

#### Hail History in Ramsey County

The NCEI has recorded 179 hail events in Ramsey County between 1950 and April 2018. While no deaths or injuries have been recorded due to these events, they did cause over \$7 million in property damage.

The most recent hailstorm with recorded property damage in the county occurred in September of 2010. Hail the size of half dollars fell in the Highland Park area of St. Paul, northeast across the city. \$5 million in property damage was recorded.

In July of 2009, hail was reported from Maplewood southeast across North St. Paul. Minor damage was noted near the intersection of Century Avenue and Holloway Avenue.

A hailstorm caused severe damage at the University of Minnesota St. Paul campus in May of 2001. The damage estimate for the county as a whole was \$2 million.

Hail is a concern in Ramsey County due to the damage it can inflict on property. Table 18 shows storms producing hail greater than 1 inch in diameter in Ramsey County.

Table 18. Storms producing hail greater than 1-inch diameter in Ramsey County, 1950-April 2018

Date	Hail Size (inches)	Injuries	Date	Hail Size (inches)	Injuries	Date	Hail Size (inches)	Injuries
6/11/2017	1.5	0	8/13/2007	1.5	0	5/7/1988	2.5	0
5/16/2017	1.5	0	8/13/2007	1.75	0	7/20/1987	1.75	0
8/16/2016	1.5	0	8/13/2007	2	0	8/16/1986	1.75	0
6/29/2015	1.5	0	8/13/2007	2.5	0	8/5/1986	1.75	0
5/3/2015	1.25	0	7/8/2007	1.5	0	5/12/1986	1.5	0
5/31/2013	1.25	0	7/24/2006	1.5	0	5/9/1985	1.25	0
5/31/2013	1.25	0	6/20/2005	1.75	0	5/9/1985	1.75	0
5/19/2012	1.75	0	5/1/2001	1.25	0	5/9/1985	1.75	0
7/19/2011	1.25	0	7/7/2000	1.5	0	7/23/1981	1.75	0
7/19/2011	1.25	0	7/7/2000	1.75	0	6/23/1981	1.75	0
9/21/2010	1.5	0	7/7/2000	2	0	9/19/1980	1.5	0
6/25/2010	1.75	0	8/9/1998	1.25	0	7/10/1979	1.75	0
7/24/2009	1.25	0	7/14/1995	1.5	0	6/26/1979	1.75	0
7/24/2009	1.5	0	5/30/1994	1.75	0	7/12/1978	2.5	0
7/24/2009	1.75	0	8/31/1989	1.75	0	7/8/1966	1.75	0
8/13/2007	1.5	0	5/7/1988	1.75	0	6/23/1962	1.75	0

Source: National Centers for Environmental Information

### Hail and Climate Change

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

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

### Vulnerability

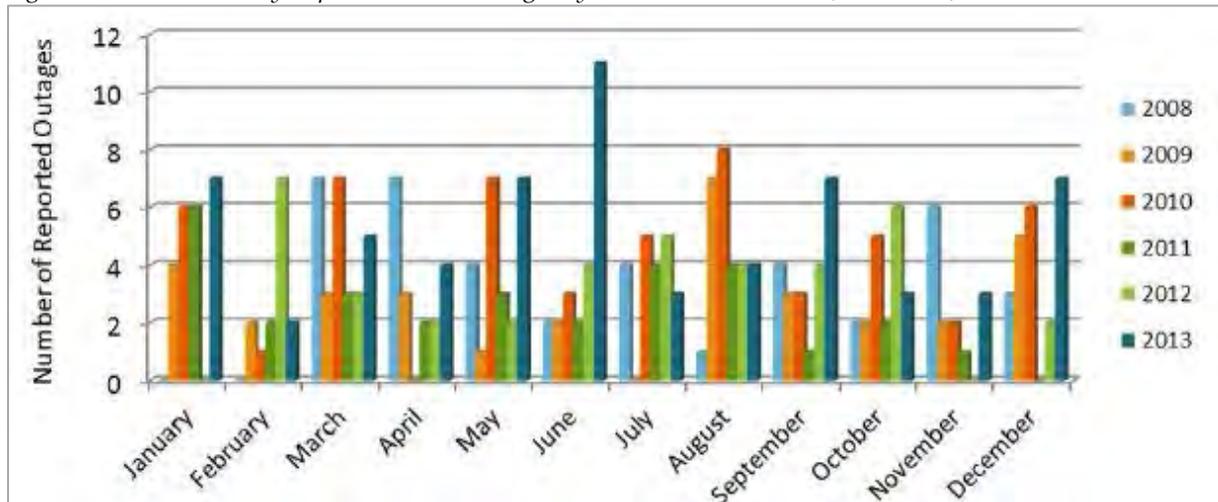
Summer storms affect Ramsey County each year, so there is a 100% probability that the county and its jurisdictions will be affected. According to the 67-full year NCEI record, there is a 54% chance of a significant hailstorm any year in Ramsey County and a 40% chance in each year that there will be a hailstorm that produces hail greater than 1 inch in size.

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

### Severe Summer Storms and Electrical Outages

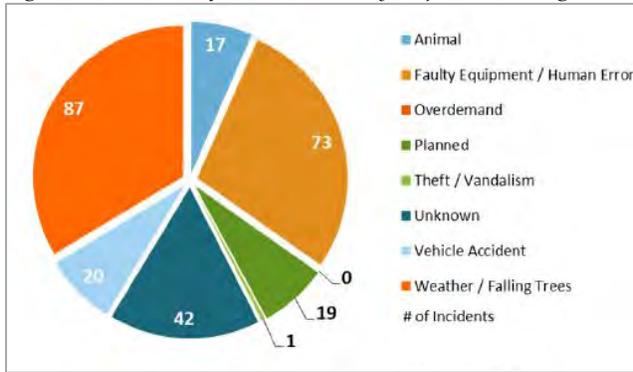
According to NOAA data, the natural hazards that caused the greatest overall property loss in Minnesota between 1996 and 2014 were thunderstorms and lightning, at \$86.3 million per year. The state also experienced 23 electric transmission outages from 1992 to 2009, 5 of which were due to heat waves and thunderstorms. On average, the number of people affected annually by all electric outages during 2008 to 2013 in Minnesota was 449,995, with a high of 1,460,810 in 2011 (U.S. Department of Energy, 2015). Figure 10 below shows the seasonality of electric outages by month for the years 2008-2013, and Figure 11 shows the causes of outages in the state between 2008 and 2013, with the largest cause being weather/falling trees.

Figure 10. Electric Utility Reported Power Outages by Month in Minnesota (2008-2013)



Source: U.S. Department of Energy, 2015

Figure 11. Causes of Electric-Utility Reported Outages in Minnesota (2008-2013)



Source: U.S. Department of Energy, 2015

### Plans and Programs in Place

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systems in municipal Ramsey County (Saint Paul upgraded all their sirens to compatible versions). This information was shared with all the municipalities and those that own outdoor warning sirens upgraded those sirens that required it. As of June 2018, all upgraded sirens were installed and are on line with the CommanderOne system. All the sirens in Ramsey County are activated by Ramsey County Emergency Communications Center. Sirens are activated when the National Weather Service notifies Ramsey County Emergency Communications Center that there are high winds or tornado conditions that pose risk to public safety. Sirens may also be activated for other situations such as a hazardous materials incident under the direction of an Incident Commander.

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*Aboveground Power Lines* – Much of the power lines in the county are aboveground and subject to damage from ice storms, wind, and falling tree limbs resulting in power outages. Ramsey County and municipalities will work with power utilities to prioritize burying power lines to critical facilities.

### Program Gaps or Deficiencies

*Aboveground Power Lines* – Much of the power lines in the county are aboveground and subject to damage from ice storms, wind, and falling tree limbs resulting in power outages. Ramsey County and municipalities will work with power utilities to prioritize burying power lines.

*Backup Power* – Not all county or municipal facilities have backup power to critical facilities in the event of a severe winter storm that results in an extended power loss.

*Communications* – Everbridge is not yet rolled out to private citizens yet. Not all residents have subscribed to or follow our Facebook page to receive important messages. Additionally, there are translation services for only three languages (Spanish, Somali, and Hmong). There are over 100 identified languages spoken in Ramsey County, and more than 50 are spoken preferentially in the home.

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#### **4.4.5 Flash Flood and Riverine Flood**

Flooding is a significant natural hazard throughout the United States. The type, magnitude, and severity of flooding are functions of the amount and distribution of precipitation over a given area, the rate at which precipitation infiltrates the ground, the geometry and hydrology of the catchment, and flow dynamics and conditions in and along the river channel. Upstream floods, also called flash floods, occur in the upper parts of drainage basins and are generally characterized by periods of intense rainfall over a short duration. These floods arise with very little warning and often result in locally intense damage, and sometimes loss of life, due to the high energy of the flowing water. Flood waters can snap trees, topple buildings, and easily move large boulders or other structures. Six inches of rushing water can upend a person; another 18 inches might carry off a car. Generally, upstream floods cause damage over relatively localized areas, but they can be quite severe. Urban flooding is a type of upstream flood, which involves the overflow of storm drain systems and can be the result of inadequate drainage combined with heavy rainfall or rapid snowmelt. Upstream or flash floods can occur at any time of the year in Minnesota, but they are most common in the spring and summer. 15 flash flood events have been recorded in Ramsey County since 1997.

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

floods, generally providing ample warning for people to move to safe locations and, to some extent, secure some property against damage.

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

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

### Flood History in Ramsey County

A significant amount of work has been done in past years in the county related to riverine flooding. Therefore, it has since decreased. Flash flooding, however, has been increasing.

In June of 2014, parts of Minnesota received 10-12 inches of rain from the 14<sup>th</sup> to the 23<sup>rd</sup>, which was 400-600% above normal. In the Twin Cities, it was the wettest start of the year on record since 1871. The Minnesota State Emergency Operations Center was activated, and the Governor declared a State of Emergency for 35 counties. The St. Paul airport deployed a flood wall, resulting in the closure of two of its runways. Floodwaters covered Harriet Island. Estimated total damages in Ramsey County was \$1.9 million. The event resulted in a Presidential Disaster Declaration (DR-4182), which included Ramsey County. The total Public Assistance obligated by FEMA to the county was \$2 million.

Several highways and roads experienced significant flash flooding in July of 2011, when there was up to four feet of standing water in northern portions of the county. Property damage was estimated at \$500,000.

In March of 2010, there were numerous flooding issues due to the flood crest on the Mississippi River in Ramsey County. Communities from Mendota Bridge to Hastings on the river were hardest hit. NCEI damage estimates were \$2.4 million.

On September 20, 2007, a flash flood occurred in South Maplewood on Battle Creek, when two inches of rain fell in one hour. A few boys were playing in the creek, and a thirteen-year-old boy died when he was swept under a dam. Six homes were flooded, and a retaining wall blew out in the Swede Hollow neighborhood. The NCEI reported \$200,000 in property damage.

Table 19. Ramsey County Historical Floods, 1997-April 2018

Location or County	Date	Type	Deaths	Injuries	Property Damage
St. Paul	9/17/2015	Flash Flood	0	0	unknown
St. Paul	6/18/2014	Flood	0	0	\$1,900,000
Falcon Heights	6/21/2013	Flash Flood	0	0	unknown

Location or County	Date	Type	Deaths	Injuries	Property Damage
St. Paul	6/21/2013	Flash Flood	0	0	<i>unknown</i>
New Brighton	8/16/2011	Flash Flood	0	0	<i>unknown</i>
White Bear Lake	7/16/2011	Flash Flood	0	0	\$500,000
Little Canada	8/10/2010	Flash Flood	0	0	<i>unknown</i>
St. Paul	6/26/2010	Flash Flood	0	0	<i>unknown</i>
St. Paul	3/20/2010	Flood	0	0	\$2,400,000
St. Paul	9/20/2007	Flash Flood	1	0	\$200,000
Countywide	10/4/2005	Flash Flood	0	0	<i>unknown</i>
Ramsey Co.	10/4/2005	Flood	0	0	<i>unknown</i>
North Portion	9/21/2005	Flash Flood	0	0	<i>unknown</i>
Ramsey Co.	6/20/2005	Flash Flood	0	0	\$2,000
St. Paul	6/25/2003	Flash Flood	0	0	<i>unknown</i>
Vadnais Heights	7/28/2002	Flash Flood	0	0	<i>unknown</i>
Ramsey Co.	5/1/2001	Flood	0	0	<i>unknown</i>
Ramsey Co.	4/1/2001	Flood	0	0	<i>unknown</i>
Roseville	9/2/2000	Flash Flood	0	0	<i>unknown</i>
St. Paul	7/1/1997	Flash Flood	0	1	<i>unknown</i>
Ramsey Co.	4/4/1997	Flood	0	0	<i>unknown</i>

Source: National Centers for Environmental Information

The National Oceanic and Atmospheric Administration (NOAA) Advanced Hydrologic Prediction Service provides information from gauge locations at points along various rivers across the United States. Three NOAA gauging stations are in Ramsey County, listed in Table 20 below, along with data on their highest-recorded gauge heights.

Table 20. Historical Flood Crests for USGS Gauging Stations in Ramsey County

Historical Flood Crests for Mississippi River at St. Paul, MN		Historical Flood Crests for Mississippi River at South St. Paul, MN		Historical Flood Crests for Rice Creek in Mounds View, MN	
Date	Height (Feet)	Date	Height (Feet)	Date	Height (Feet)
4/16/1965	26.01	4/29/2001	703.04	6/19/2014	12.25
4/15/1969	24.52	4/18/2001	703.03	8/16/2011	11.17
4/18/2001	23.76	4/13/1997	702.90	5/24/2012	10.49
4/30/2001	23.20	6/26/2014	700.94	5/19/2013	10.43
4/13/1997	22.37	6/25/1993	699.98	3/22/2010	9.55
4/16/1952	22.02	3/30/2011	698.95	7/6/2015	9.45
6/26/2014	20.13	3/24/2010	698.56	unknown	unknown
6/26/1993	19.15	7/02/2013	694.84	unknown	unknown
3/29/2011	19.02	6/03/2012	694.02	unknown	unknown
4/16/1951	18.79	4/01/2009	693.87	unknown	unknown

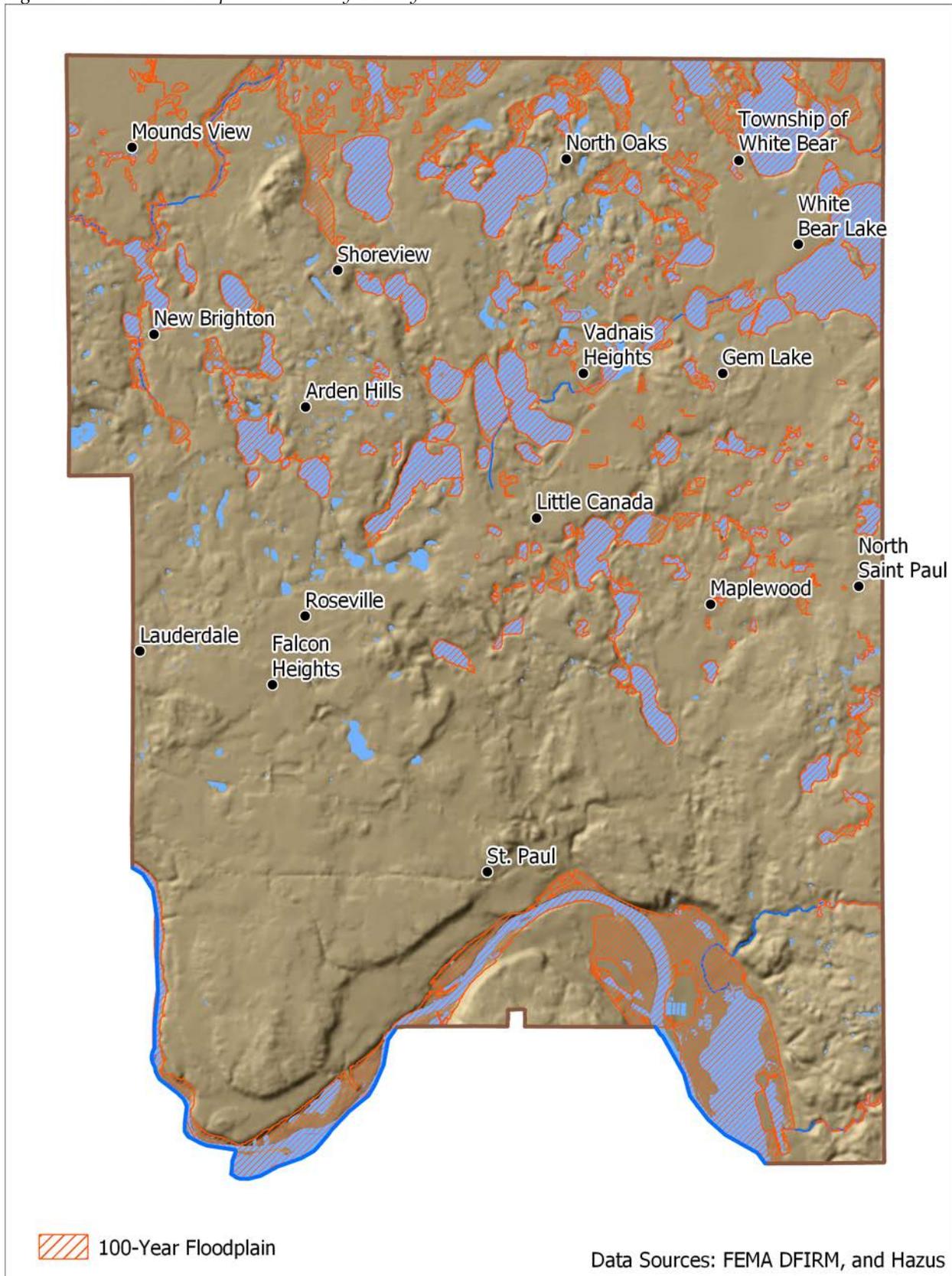
Source: NOAA

### Vulnerability and Hazus Hazard Analysis

The University of Minnesota Duluth Geospatial Analysis Center (GAC) performed the hazard risk assessment for 100-year floods using the Hazus GIS tool (FEMA).

FEMA’s Hazus 4.2 in ArcGIS 10.5.1 was used to estimate the potential losses incurred for a 100-year flood event in Ramsey County using a Digital Flood Insurance Rate Map (DFIRM). A 10-meter Digital Elevation Model (DEM) was used to create a flood depth grid. The resulting 100-year floodplain boundary is shown in Figure 12.

Figure 12. 100-Year Floodplain in Ramsey County



Ramsey County specific building data was sourced from the parcel tax and spatial databases to include building valuations, occupancy class, square footage, year built, and number of stories. GIS data layers named CDSTL\_AttributedParcelPoly, CDSTL\_AttributedParcelPoint, and STRUCT\_Building were obtained from the county to locate buildings within the county. The resulting spatial dataset included 166,407 unique parcel numbers; 153,950 of these records were identified as having building values and were used in the analyses.

In cases where values were missing, values were assigned based on best practices from values in the other variables and from the region. The data were then assigned to one parcel centroid, or building location, which served as a surrogate for each parcel's buildings to aggregate to the associated census block for use in the Hazus model.

According to the Ramsey County general building stock (derived from the county's parcel data and imported to the Hazus model), the Hazus model estimates there are 153,950 parcels with buildings in the region with a total value (excluding contents) of \$40.8 billion (2010 dollars). Approximately 95.77% of the buildings (and 72.16% of the building value) are associated with residential housing. The Hazus model estimates 1,294 parcels' buildings will be at least moderately damaged (>10% damage). 159 buildings are estimated to be completely destroyed.

The estimated total economic loss from the flood is \$907.55 million dollars. Building-related losses are broken into 2 categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include temporary living expenses for people displaced from their homes because of the flood. The estimated total building-related losses is \$478.64 million dollars. 47% of the estimated losses are related to business interruption in the region. Residential occupancies make up 28.29% of the total loss.

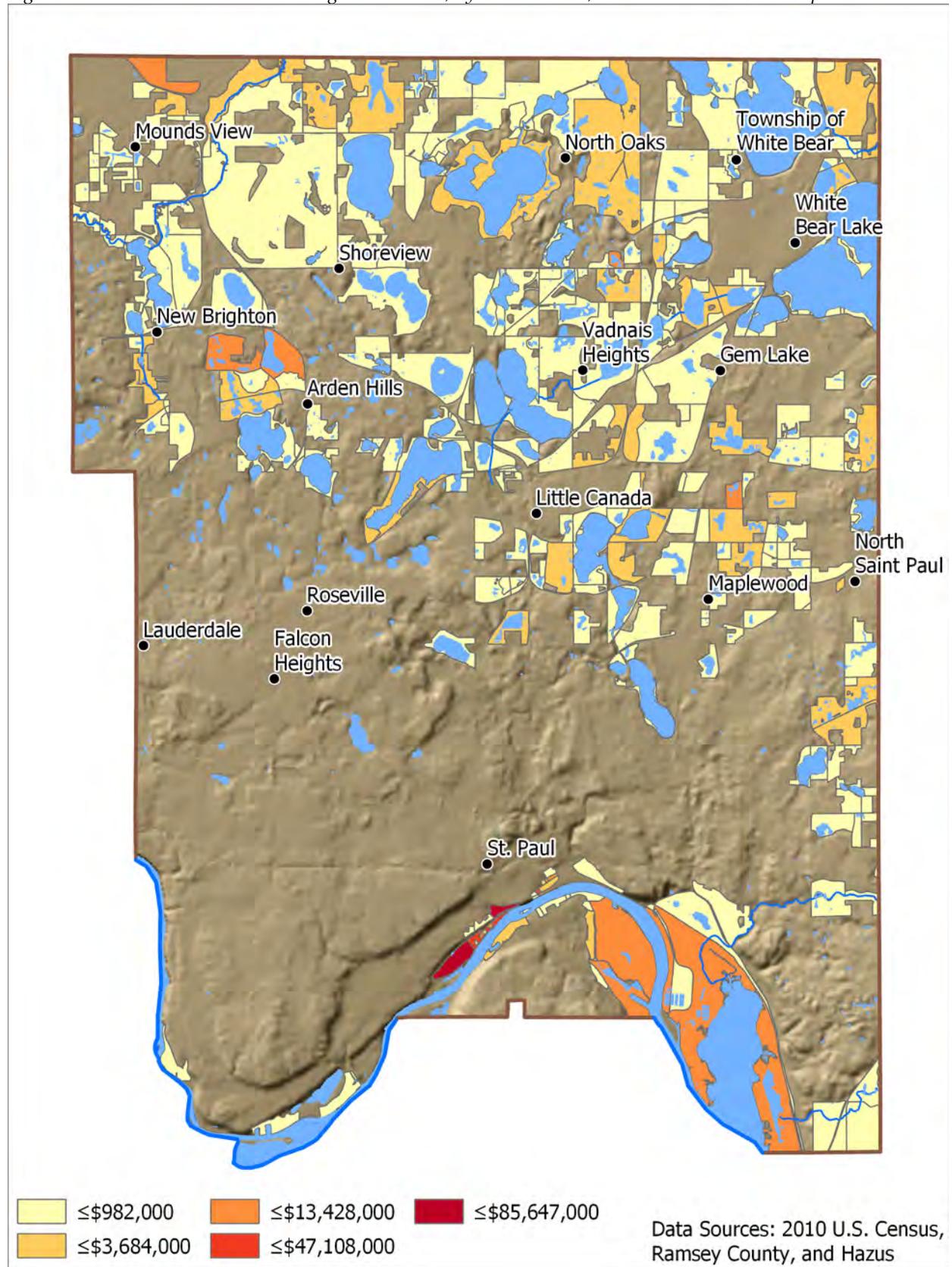
The reported building counts should be interpreted as degrees of loss rather than an exact number of buildings exposed to flooding. These numbers were derived from aggregate building inventories, which are assumed to be dispersed evenly across census blocks. Hazus requires that a predetermined amount of square footage of a typical building sustain damage to produce a damaged building count. If only a minimal amount of damage to buildings is predicted, it is possible to see zero damaged building counts while also seeing economic losses.

The total estimated number of damaged buildings (parcels as a surrogate), total building losses, and total economic losses for the 100-year flood are shown in Table 21. The distribution of economic losses for Ramsey County is depicted in Figure 13.

Table 21. Ramsey County Total Economic Loss from 100-Year Flood

General Occupancy	Total Parcels	Parcels with Damaged Buildings	Total Building Exposure	Total Economic Loss	Building Loss
Agricultural	9	0	\$3,897,000	\$50,000	\$9,000
Commercial	3,743	14	\$5,073,026,000	\$301,508,000	\$36,173,000
Education	328	0	\$2,591,880,000	\$65,518,000	\$1,950,000
Government	531	0	\$1,435,393,000	\$236,021,000	\$30,371,000
Industrial	1,117	3	\$1,324,280,000	\$36,412,000	\$8,998,000
Religious/Non-Profit	783	0	\$934,922,000	\$11,288,000	\$447,000
Residential	147,439	1,525	\$29,446,264,000	\$256,756,000	\$139,105,000
<b>Total</b>	<b>153,950</b>	<b>1,542</b>	<b>\$40,809,662,000</b>	<b>\$907,553,000</b>	<b>\$217,053,000</b>

Figure 13. Estimated Economic Building-Related Loss, by Census Block, within the 100-Year Floodplain



Excluding St. Paul (because St. Paul has its own Multi-Hazard Mitigation Plan and is not included as a jurisdiction in this plan), the three most populated cities in Ramsey County with a potential economic loss are displayed in Figure 14, Figure 15 and Figure 16.

Figure 14. 100-Year Flood Building-Related Loss Estimates, by Census Block, Maplewood

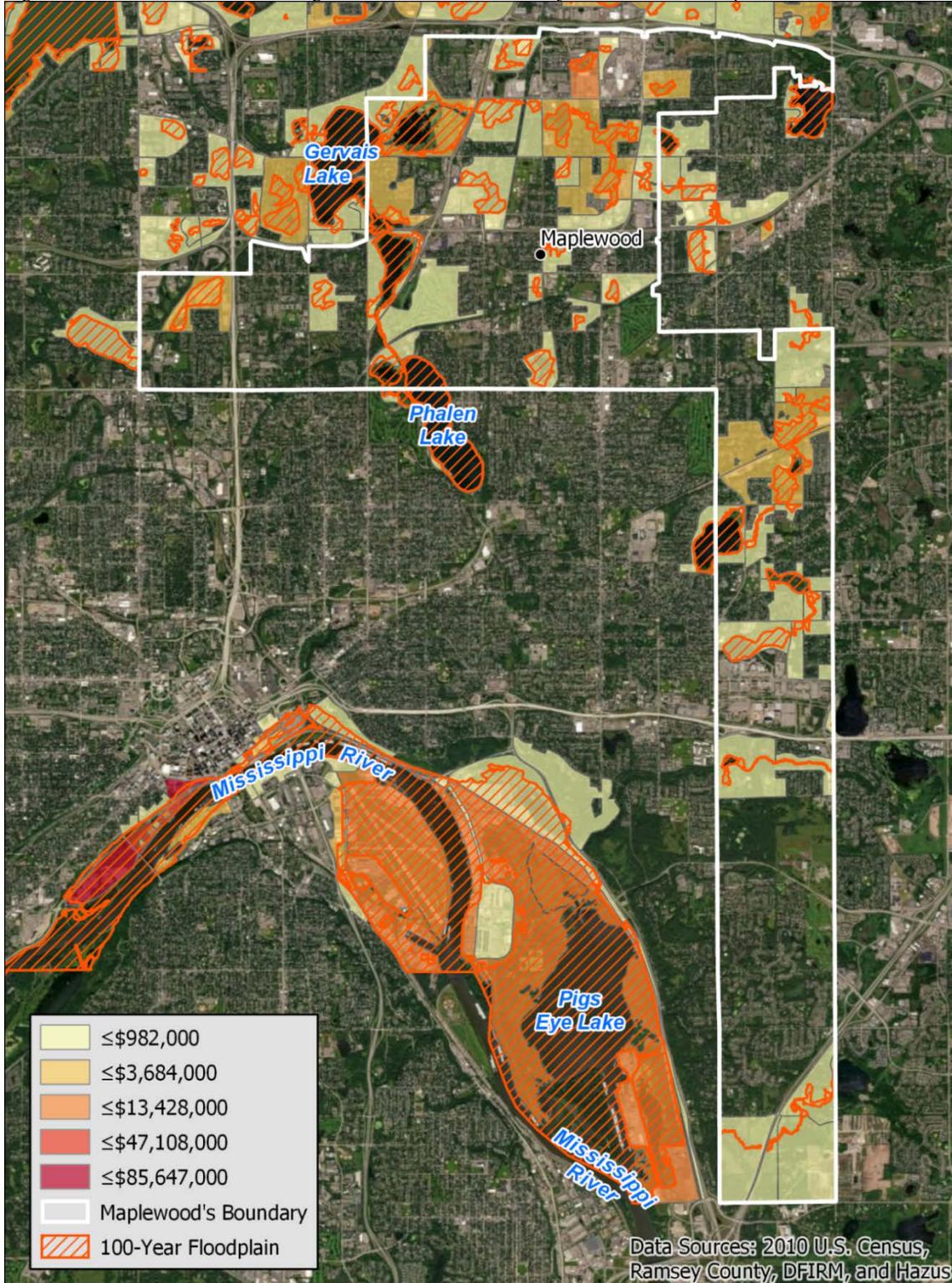


Figure 15. 100-Year Flood Building-Related Loss Estimates, by Census Block, Roseville

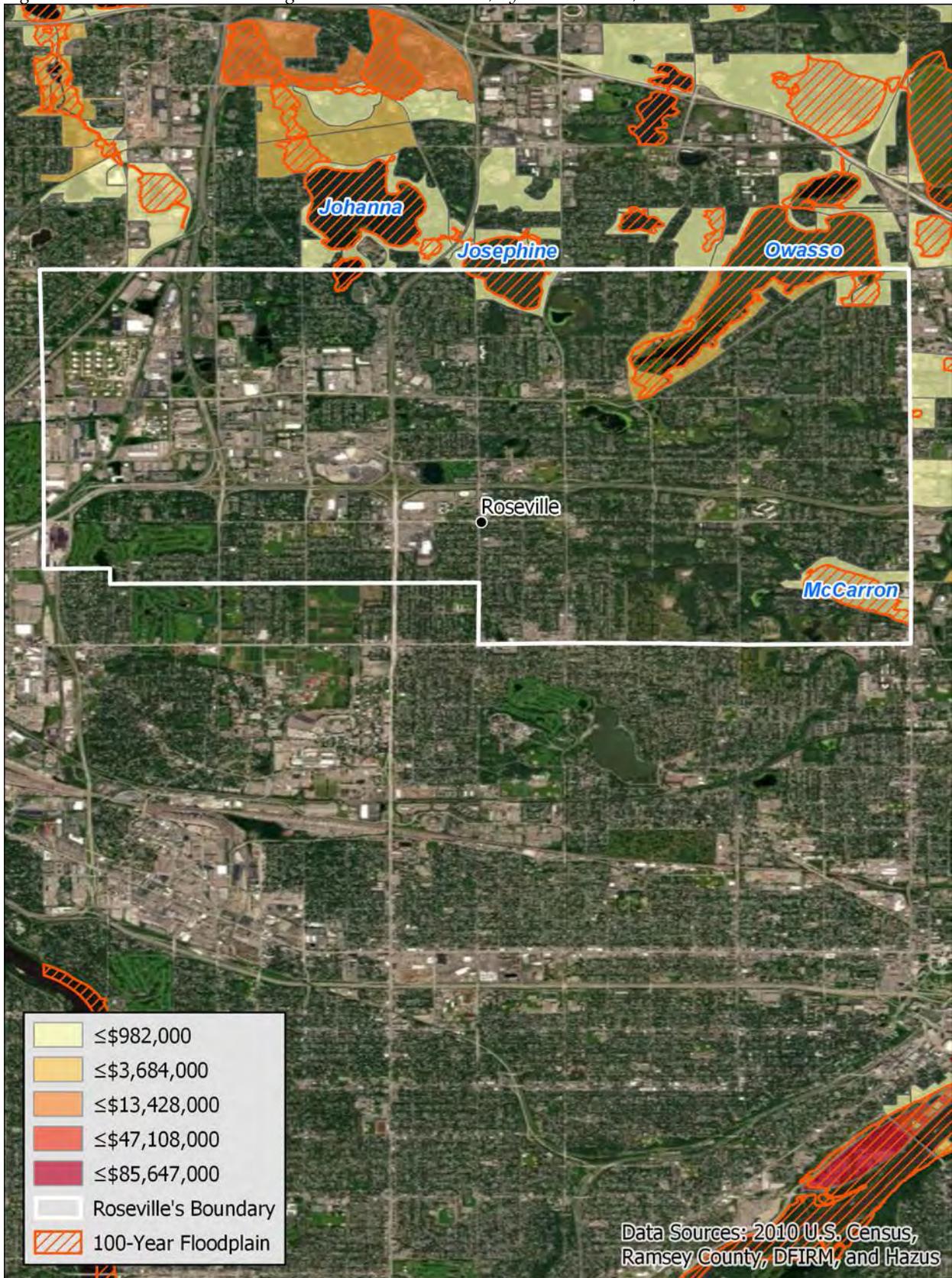
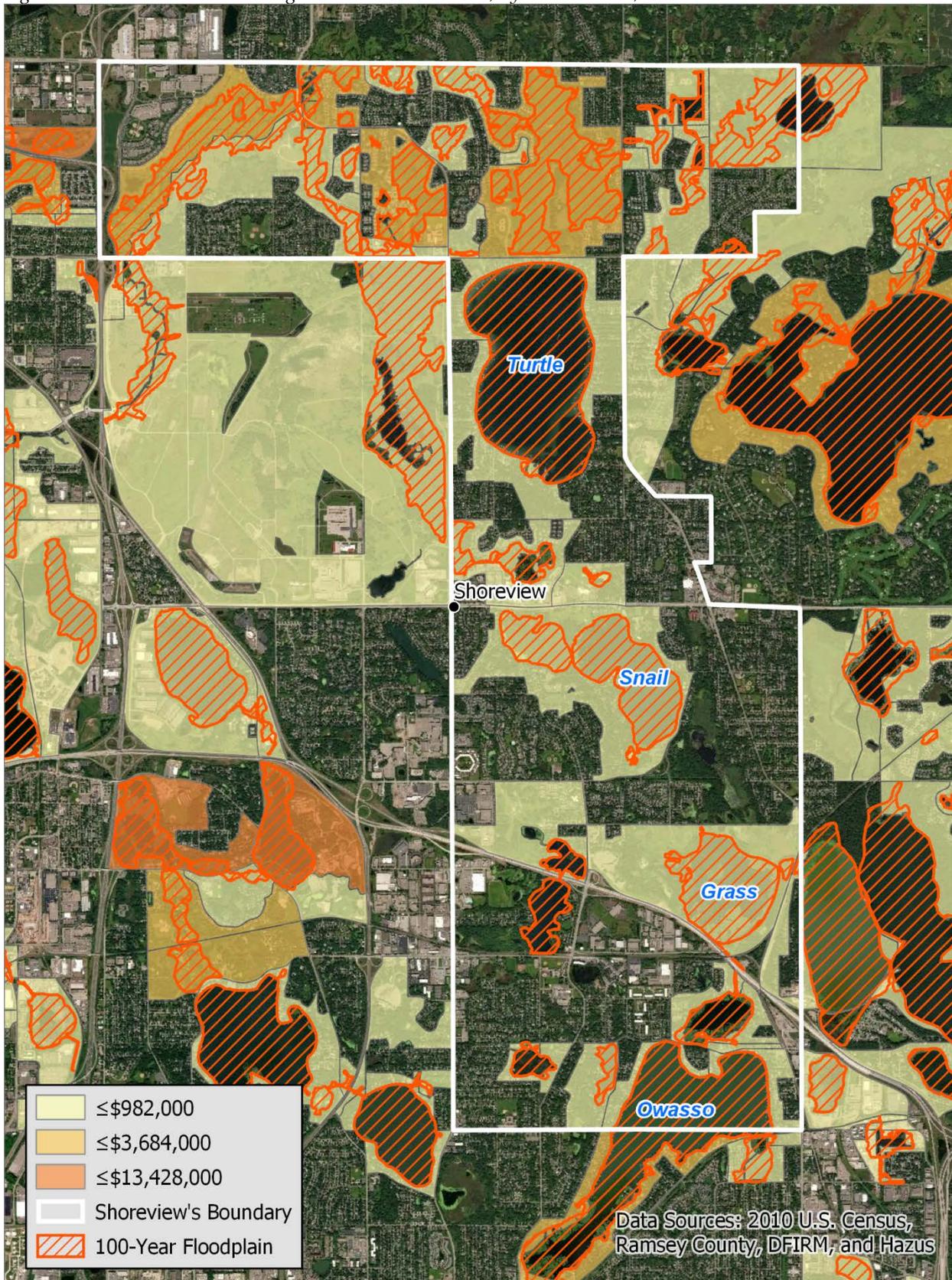


Figure 16. 100-Year Flood Building-Related Loss Estimates, by Census Block, Shoreview



Census blocks of concern should be reviewed in more detail to determine the actual location and proximity of facilities with respect to the flood hazard areas. The aggregate losses reported in this study may be overstated since values are distributed evenly across a census block. Although census blocks within the city limits of St. Paul were not included in this ranking, (because St. Paul has its own hazard mitigation plan and the city’s jurisdiction is not included in the Ramsey County plan), 12 census blocks within St. Paul’s city limits have total estimated losses greater than \$4,756,000.

The 3 census blocks with the greatest estimated loss values (calculated by adding the total value of the buildings + the value of the buildings’ contents located within a census block), which contain parcels with buildings located within the floodplain, are listed in Table 22. These potentially high loss census blocks, used for the loss estimation and the Hazus output floodplain, are shown in Figure 17, Figure 18 and Figure 19. In some cases, the assets of value may not fall in the floodplain in the same proportion that the floodplain covers the entire census block. For this reason, some potential losses may be overstated.

Table 22. Census Blocks with the greatest estimated losses in the 100-Year Floodplain

Census Block Number	Total Estimated Loss (Building’s Value & Contents)	Location
271230424012022	\$5,839,000	Maplewood
271230406012032	\$4,550,000	White Bear Township
271230409012003	\$4,328,000	Mounds View

An additional analysis was performed to identify the 10 parcels, excluding those in St. Paul, with the highest values (building + contents) that contain at least one building which intersect the 100-year floodplain. Some of the parcels are in one of the 3 census blocks with the greatest estimated loss; these parcels are labeled accordingly. The results of this analysis are shown in Table 23.

Table 23. Ramsey County Properties with Highest Building/Contents Value with Potential Building Flood Damage

Parcel ID	Total Value of Building(s) + Building’s Contents on Parcel	Class Description	Building Area (ft <sup>2</sup> )
053023210010	\$232,329,400	Commercial - Retail Trade	2,071,476
072922310012	\$36,725,400	Commercial - Retail Trade	327,448
032922110008	\$32,859,000	Residential - Multi-dwellings (5 to 9 units)	27,265
293023220001	\$23,975,100	Residential - Multi-dwellings (5 to 9 units)	19,894
112922230006	\$18,580,200	Residential - Multi-dwellings (5 to 9 units)	15,417
083023210045	\$15,217,950	Residential - Multi-dwellings (5 to 9 units)	12,627
223022240002	\$9,738,900	Residential - Multi-dwellings (5 to 9 units)	8,081
223022210009	\$7,966,800	Residential - Multi-dwellings (5 to 9 units)	6,611
032922110050	\$7,263,200	Government - General Services	18,479
022922220017	\$5,803,000	Commercial - Retail Trade	51,740
<b>Total</b>	<b>\$390,458,950</b>		

Figure 17. Census Block #271230424012022 and 100-Year Floodplain in Maplewood

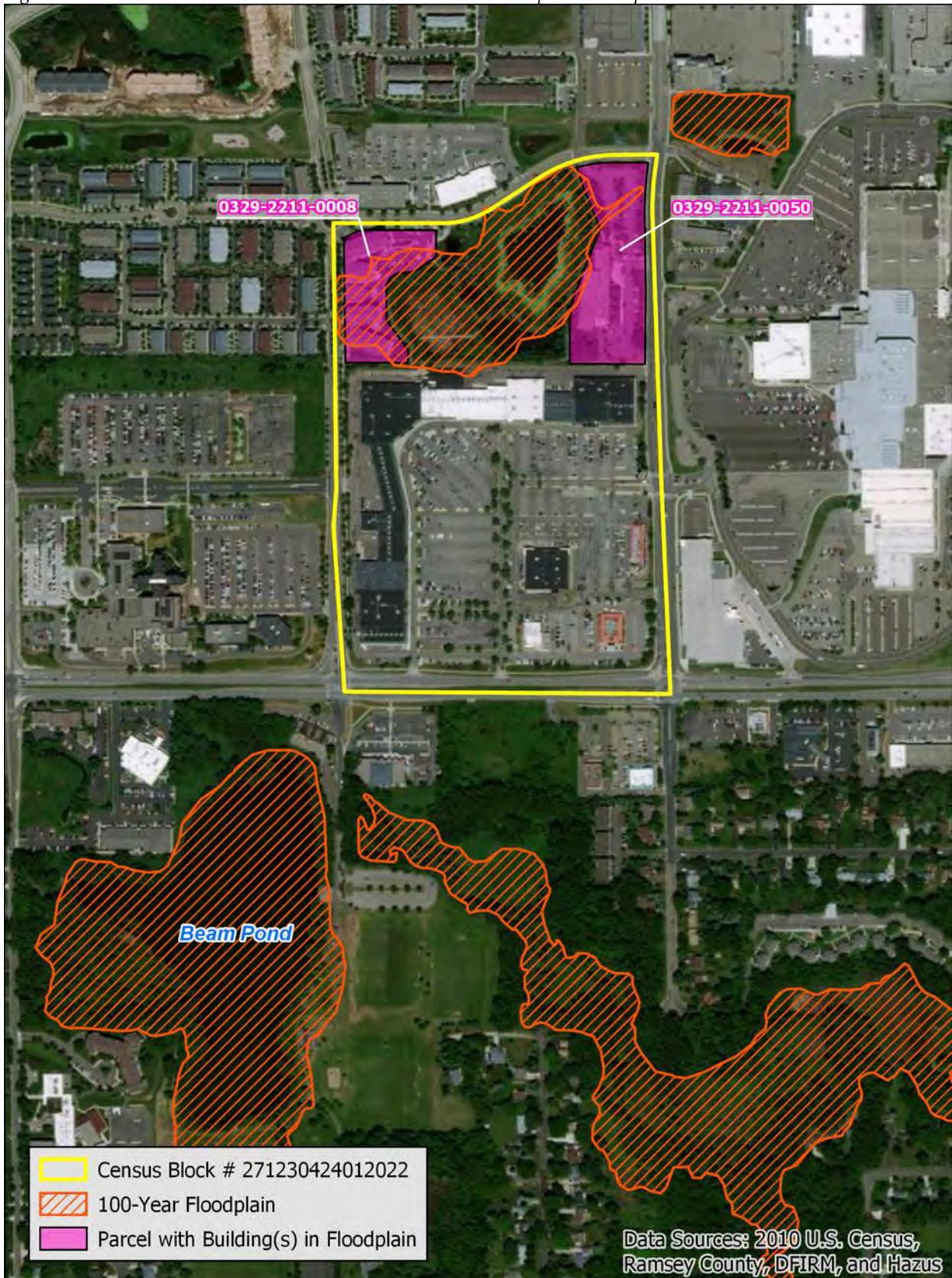
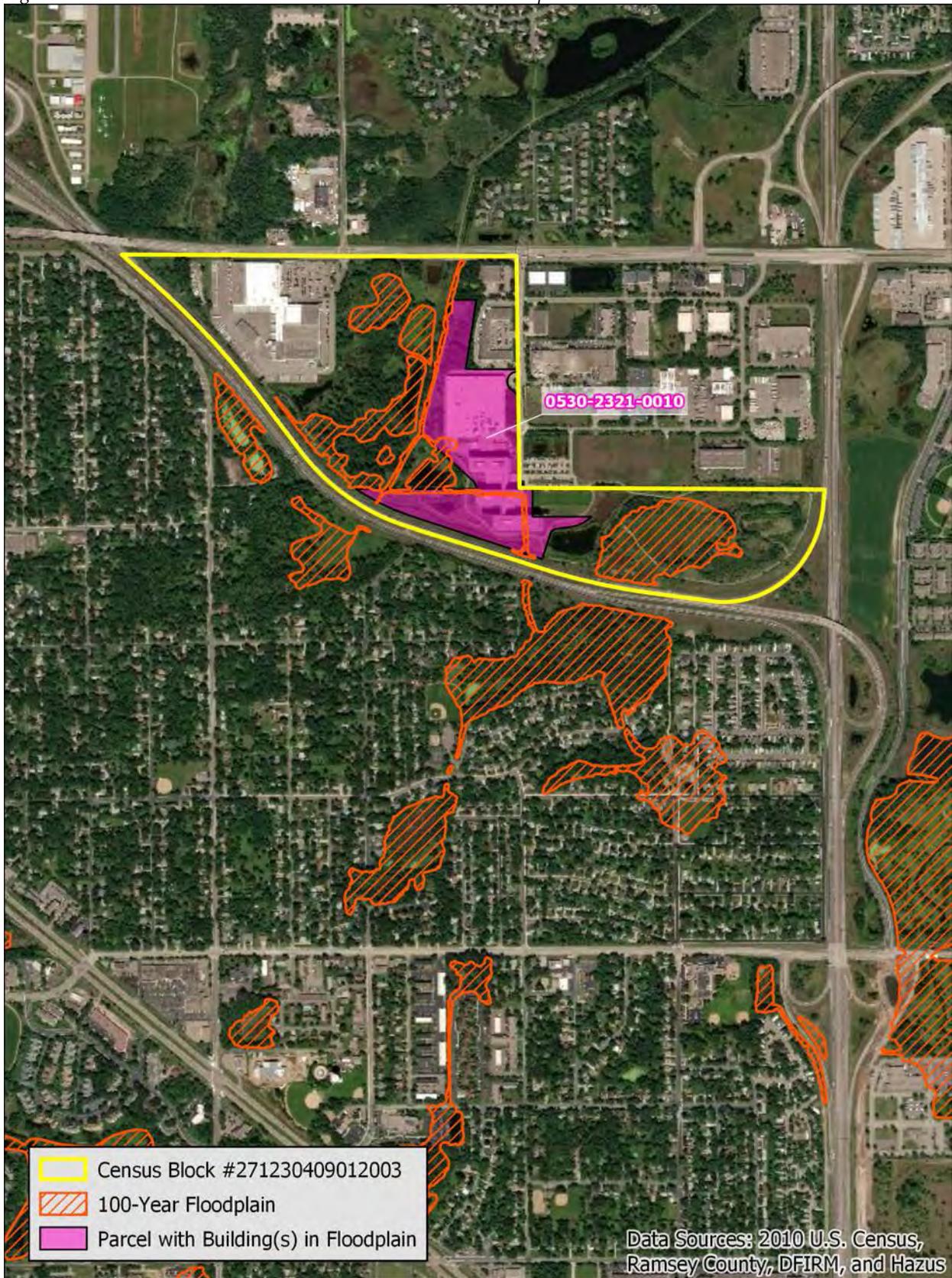


Figure 18. Census Block #271230406012032 and 100-Year Floodplain in White Bear Township



Figure 19. Census Block #271230409012003 and 100-Year Floodplain in Mounds View



### *Hazus Essential Facility Loss Analysis*

Essential facilities encounter the same impacts as other buildings within the flood boundary: structural failure, extensive water damage to the facility, and loss of facility functionality (i.e. a damaged police station will no longer be able to serve the community). However, none of Ramsey County's essential facilities (care facilities, fire stations, police stations and schools) included in the Hazus analysis are located within the flood boundary.

### *Hazus Shelter Requirement Analysis*

Hazus estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. Hazus also estimates those displaced people that may require accommodations in temporary public shelters. The model estimates 2,015 households may be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, the model estimates 342 people (out of a total population of 508,640) may seek temporary shelter in public shelters.

### *Hazus Debris Generation Analysis*

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

The model estimates that a total of 16,961 tons of debris will be generated. Of the total amount, Finishes comprises 61% of the total, Structural comprises 23% of the total, and Foundation comprises 16%. If the debris tonnage is converted into an estimated number of truckloads, it would require 679 truckloads (@25 tons/truck) to remove the debris generated by the flood.

### *Flooding and Climate Change*

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

Southeastern Minnesota has experienced three 1000-year floods in the past decade: in September 2004, August 2007 and September 2010 (Meador, 2013). The 2004 flood occurred when parts of south-central Minnesota received over 8 inches of precipitation. Faribault and Freeborn counties received over 10 inches in 36 hours. The deluge led to numerous reports of stream flooding, urban flooding, mudslides

and road closures (MN DNR, 2004). During the 2007 event, 15.10 inches fell in 24 hours in Houston County, the largest 24-hour rainfall total ever recorded by an official National Weather Service reporting location. The previous Minnesota record was 10.84 inches in 1972. The resulting flooding from the 2007 rainfall caused 7 fatalities (MN DNR, 2007). In September 2010, a storm on the 22-23<sup>rd</sup> resulted in more than 6 inches of rain falling over 5,000 square miles in southern Minnesota. Rainfall totals of more than 8 inches were reported in portions of 10 counties. The heavy rain, falling on soils already sodden from a wet summer, led to numerous reports of major rural and urban flooding. For many monitoring locations in southern Minnesota, stream discharge resulting from the deluge was the highest ever seen during an autumn flood (Minnesota Climatology Working Group, 2010).

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

### Plans and Programs in Place

*Ramsey County Emergency Operations Plan, Ramsey County COOP/COG Plan; Ramsey County Multijurisdictional Hazard Mitigation Plan, THIRA* – Ramsey County maintains several different plans including an Emergency Operations Plan, a Ramsey County COOP/COG Plan and the Ramsey County Multijurisdictional Hazard Mitigation Plan, which are designed as guides for emergency and/or recovery operations. These plans are intended to assist key county/municipal officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.

*Public Warning and Notification* – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Ramsey County utilizes the Everbridge Mass Notification System, the Integrated Public Alert and Warning System (IPAWS), Wireless Emergency Alerts (WEA), Ramsey County Emergency Management and Homeland Security Facebook page, and local news media. Ramsey County promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. Local television & radio stations assist with sharing public information. Ramsey County Emergency Communications Center has recently upgraded its siren system to be fully functional with the use of polygon-based warnings. Tornado warnings issued by the National Weather Service will automatically sound sirens inside or very near the polygon.

*Flood Watches/Advisories/Warnings* – Flood watches, advisories or warnings are issued by the National Weather Service. Ramsey County has COOP/COG plans in place. Ramsey County also uses both the county website and social media to broadcast information to employees.

*Severe Weather Awareness Week* – Ramsey County helps promote and participates in the National Weather Service’s “Severe Weather Awareness Week” held in April each year. One of the days is dedicated to floods and flood education. The event provides education to residents on the dangers of severe weather, including flooding, and how to properly deal with it.

*National Flood Insurance Program (NFIP)* – The National Flood Insurance Program (NFIP) is a federal program created by Congress to mitigate future flood losses nationwide through sound, community-enforced building and zoning ordinances and to provide access to affordable, federally-backed flood insurance protection for property owners. The NFIP is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods. Participation in the NFIP is based on an agreement between local communities and the federal government that states that if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction in Special Flood Hazard Areas (SFHAs), the federal government will make flood insurance available within the community as a financial protection against flood losses. North Oaks is the only city in Ramsey County not participating in the NFIP (Table 24).

Table 24. Ramsey County Participation in the NFIP

Community Name	Participation in the National Flood Insurance Program (NFIP)?		Current FIRM Date
Arden Hills	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
Blaine (Anoka & Ramsey)	Participating in NFIP	FEMA Mapped High Risk Areas	12/17/2015
Falcon Heights	Participating in NFIP	No FEMA Mapped High Risk Areas	6/4/2010
Gem Lake	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
Lauderdale	Participating in NFIP	No FEMA Mapped High Risk Areas	6/4/2010
Little Canada	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
Maplewood	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
Mounds View	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
New Brighton	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
North Oaks	NOT Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
North Saint Paul	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
Roseville	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
Saint Anthony Village (Hennepin & Ramsey)	Participating in NFIP	No FEMA Mapped High Risk Areas	11/4/2016
Saint Paul	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
Shoreview	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
Spring Lake Park (Anoka & Ramsey)	Participating in NFIP	FEMA Mapped High Risk Areas	12/16/2015
Vadnais Heights	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
White Bear Lake (Ramsey & Washington)	Participating in NFIP	FEMA Mapped High Risk Areas (NSFHA in Washington – 2/3/2010)	6/4/2010
White Bear Township	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010

*Wellhead Protection Plan* – Municipalities that use well water have and maintain a Wellhead Protection Plan. This plan presents the actions that will be taken to manage potential contamination sources that may present a risk to the quality of the community’s drinking water.

*Watershed Management Organizations* – There are six watershed management organizations that serve Ramsey County: Ramsey Conservation District, Ramsey-Washington Metro Watershed District, Vadnais Lake Area Watershed Management Organization, Capitol Region Watershed District, Rice Creek Watershed District, and the Lower Mississippi River Watershed Management Organization. Each

organization has some type of governance and technical assistance program that aids landowners and local governments for managing conservation issues including controlling or fixing erosion, practices that moderate runoff, or practices that build resiliency.

### Program Gaps & Deficiencies

*Increasing Culverts and Raising Roads* – Ramsey County Public Works Department is responsible for the maintenance and construction of County State Aid Highways and County Roads, which include 293 miles of roadway and 92 bridges. Municipalities or watersheds also hold some responsibility for certain drainage systems. Ramsey County will need to assess who is responsible for these areas.

*Community Rating System* – Ramsey County EMHS will explore enrollment in the Community Rating System (CRS) with municipalities.

*Vulnerable Structure Identification* – Ramsey County EMHS will identify critical infrastructure and vulnerable structures within floodplains and promote applicable flood-proofing measures with owners or municipalities.

*Backup Power* – Not all county or municipal facilities have backup power to critical facilities in the event of a severe flood event storm that results in an extended power loss.

*Communications* – Everbridge’s open subscription service was made available to the public in September 2016 (<https://www.ramseycounty.us/alerts>). However, not all residents have subscribed to or follow our Facebook page to receive important messages. Additionally, there are translation services for only three languages (Spanish, Somali, and Hmong). There are over 100 identified languages spoken in Ramsey County, and more than 50 are spoken preferentially in the home. Ramsey County Emergency Management and Homeland Security will, in cooperation/coordination with other partners, place an emphasis on increasing citizen subscription to Everbridge.

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

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

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

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

them at risk. Because of the blinding potential of heavy snowstorms, drivers are also at risk of collisions with snowplows or other road traffic.

Figure 20. Armistice Day Blizzard, 1940



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

alternative heating methods by residents.

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

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

Communications and power can be disrupted for days while utility companies work to repair extensive damage. Ice forming on exposed objects generally ranges from a thin glaze to coatings more than 1 inch thick. Even small accumulations of ice on sidewalks, streets and highways may cause extreme hazards to Ramsey County motorists and pedestrians. Sleet does not stick to trees and wires, but sleet of enough thickness does cause hazardous driving conditions. Heavy sleet is a relatively rare occurrence, defined as an accumulation of ice pellets covering the ground to a depth of 1/2-inch or more.

Ice and sleet storms typically occur from October through April. The NWS notes that over 85% of ice storm-related deaths are the result of traffic accidents. The NCEI has recorded 1 ice storm in Ramsey County, in January of 1996. No deaths or injuries were reported.

Observing winter storm watches and warnings and adequate preparation can lessen the impact of blizzards in Minnesota. Technical advances made in transportation, including safer vehicles and improved construction and maintenance of roads, have also contributed to the decline in deaths related to blizzards. Historical estimates of dollar losses associated with blizzards were not available for the purposes of this analysis. However, costs incurred by state and local government for snow removal associated with disaster declaration DR-1158 (January 1997) totaled over \$27,300,000 dollars. Blizzards

rank 9<sup>th</sup> out of the 10 natural hazards economically impacting Minnesota according to the statewide risk analysis. The chance that another winter storm affecting Ramsey County will occur is highly probable.

### Severe Winter Storm History in Ramsey County

The total of notable events defined as heavy snows, blizzards, winter weather, ice storms and winter storms in Ramsey County recorded by the NCEI for the period from 1996 to April 2018 is 63. The NCEI did not record any deaths, injuries or property damage for these events.

An overview of some of the recent notable winter storms can be found in Table 25 below.

Table 25. Notable Winter Weather Events in Ramsey County

Date	Type	Cost	Deaths	Injuries	Description
4/13/2018	Winter Storm	<i>unknown</i>	0	0	Multiple waves of winter precipitation occurred, including sleet and snow, resulted in total snowfall amounts of 16-20".
1/22/2018	Winter Storm	<i>unknown</i>	0	0	8-12" of snow fell across the county.
2/2/2016	Winter Storm	<i>unknown</i>	0	0	10-13" of snow fell, resulting in 175 flights canceled or delayed at the Minneapolis-St. Paul International Airport.
12/9/2012	Winter Storm	<i>unknown</i>	0	0	12-16" of snow were reported across the county.
12/31/2011	Winter Weather	<i>unknown</i>	0	0	Heavy, wet snow fell during the holiday, resulting in numerous accidents across the county.
2/20/2011	Winter Storm	<i>unknown</i>	0	0	Lightning was observed by several people, amidst a storm that brought 12-16" of snow.
12/10/2010	Winter Storm	<i>unknown</i>	0	0	This was the biggest snowstorm since the Halloween Blizzard of 1991, and the average snowfall in Ramsey County was 18".
1/19/2001	Heavy Snow	<i>unknown</i>	0	0	8" of snow was recorded at the Twin Cities International Airport.
1/12/2000	Heavy Snow	<i>unknown</i>	0	0	9" of snow fell at the Twin Cities International Airport, and the Minnesota Highway Patrol responded to over 325 crashes in the Twin Cities – however, most were minor without injuries.
1/17/1996	Ice Storm	<i>unknown</i>	0	0	Up to 1" of ice accumulated over much of the Minneapolis/St. Paul region, resulting in significant tree damage and power outages. More than 180,000 metro residents were without power, and 5 Red Cross shelters were open to assist people who were forced from their homes due to lack of heat.

### Severe Winter Storms and Climate Change

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

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

### Vulnerability

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

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

### Severe Winter Storms and Electrical Outages

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

### Plans and Programs in Place

*Ramsey County Emergency Operations Plan, Ramsey County COOP/COG Plan; Ramsey County Multijurisdictional Hazard Mitigation Plan, THIRA* – Ramsey County maintains several different plans including an Emergency Operations Plan, a Ramsey County COOP/COG Plan and the Ramsey County Multijurisdictional Hazard Mitigation Plan which are designed as guides for emergency and/or recovery operations. These plans are intended to assist key county/municipal officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.

*Public Warning and Notification* – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Ramsey County utilizes the Everbridge Mass Notification System, the Integrated Public Alert and Warning System (IPAWS), Wireless Emergency Alerts (WEA), Ramsey County Emergency Management and Homeland Security Facebook page, and local news media. Ramsey County promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. Local television & radio stations assist with sharing public information. Ramsey County Emergency Communications Center has recently upgraded

its siren system to be fully functional with the use of polygon-based warnings. Tornado warnings issued by the National Weather Service will automatically sound sirens inside or very near the polygon.

*Winter Weather Watches/Advisories/Warnings* – Winter weather watches, advisories or warnings are issued by the National Weather Service. Ramsey County has COOP/COG plans in place. Ramsey County also uses both the county website and social media to broadcast information to employees.

*Winter Hazard Awareness Week* – Ramsey County helps promote and participates in the National Weather Service’s “Winter Hazard Awareness Week” held in November each year. The event provides education for residents on the dangers of winter weather and how to properly deal with it.

*School Closings* – The major school districts within Ramsey County have school closing policies and communications plans in place if inclement weather or temperatures create a hazardous situation for students or staff. School districts also use local mass media to relay information.

*Snow Removal* – Ramsey County and its municipalities complete the snow removal from all county and municipal roads and dispense salt/sand as needed. MNDOT will remove the snow from Interstate and State Highways as well as disperse salt/sand as needed. Municipalities have snow emergency plans and ordinances in place.

*Backup Power* – The Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner’s Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power. Ramsey County and municipalities continue to assess what critical facilities need backup power.

### Program Gaps or Deficiencies

*Aboveground Power Lines* – Much of the power lines in the county are aboveground and subject to damage from ice storms, wind, and falling tree limbs resulting in power outages. Ramsey County and municipalities will work with power utilities to prioritize burying power lines.

*Backup Power* – Not all county or municipal facilities have backup power to critical facilities in the event of a severe winter storm that results in an extended power loss.

*Communications* – Everbridge’s open subscription service was made available to the public in September 2016 (<https://www.ramseycounty.us/alerts>). However, not all residents have subscribed to or follow our Facebook page to receive important messages. Additionally, there are translation services for only three languages (Spanish, Somali, and Hmong). There are over 100 identified languages spoken in Ramsey County, and more than 50 are spoken preferentially in the home. Ramsey County Emergency Management and Homeland Security will, in cooperation/coordination with other partners, place an emphasis on increasing citizen subscription to Everbridge.

#### 4.4.7 Extreme Cold

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

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

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

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

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

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

### Extreme Cold History in Ramsey County

January is the coldest month on average in St. Paul, with an average low of 6° F. The lowest temperature ever recorded in the city occurred in February of 1996, when it fell to -32° F. December and January are the snowiest months, with December averaging 11 inches and January averaging 12 inches of snow (Intellicast, 2018).

According to the NCEI, in January of 2018, wind chills near -35° F occurred, resulting in 1 death. A man was found in St. Paul who had died from exposure.

In December of 2016, a woman froze to death in St. Paul, outside of her apartment building when the wind chill dropped to -19° F.

Wind chill values dropped below -35° F for several hours in Ramsey County in January of 2014, during a prolonged period of cold. Propane supplies in the region became very low, leading to the Governor declaring a Peacetime State of Emergency. Earlier in the month the Governor cancelled all public-school classes in the state due to extreme wind chills. It was the first such closing in 17 years.

Two men died in Ramsey County in January of 2009, when the wind chill fell below -35° F.

### Extreme Cold and Climate Change

Although climate research indicates that Minnesota’s average winter lows are rising rapidly, and our coldest days of winter are now warmer than we have ever recorded (NCEI, 2018), cold temperatures have always been a part of Minnesota’s climate and extreme cold events will continue. An increase in extreme precipitation or storm events such as ice storms as the climate changes could lead to a higher risk of residents being exposed to cold temperatures during power outages or other storm-related hazards during extreme cold.

### Vulnerability

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

Within Ramsey County the risk of extreme cold does not vary geographically. Citizens living in climates such as these must always be prepared for situations that put their lives or property at risk. It is not always the depth of the cold, but an unprepared individual with a vehicle breakdown or lack of a personal winter safety kit that are at risk. The vulnerability of each jurisdiction to extreme cold has not changed due to any development in the last 5 years.

### Plans and Programs in Place

*Ramsey County Emergency Operations Plan, Ramsey County COOP/COG Plan; Ramsey County Multijurisdictional Hazard Mitigation Plan, THIRA* – Ramsey County maintains several different plans including an Emergency Operations Plan, a Ramsey County COOP/COG Plan and the Ramsey County Multijurisdictional Hazard Mitigation Plan, which are designed as guides for emergency and/or recovery operations. These plans are intended to assist key county/municipal officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.

*Public Warning and Notification* – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Ramsey County utilizes the Everbridge Mass Notification System, the Integrated Public Alert and Warning System (IPAWS), Wireless Emergency Alerts (WEA), Ramsey County Emergency Management and Homeland Security Facebook page, and local news media. Ramsey County promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. Local television & radio stations assist with sharing public information. Ramsey County Emergency Communications Center has recently upgraded its siren system to be fully functional with the use of polygon-based warnings. Tornado warnings issued by the National Weather Service will automatically sound sirens inside or very near the polygon.

*School Closings* – The major school districts within Ramsey County have school closing policies and communications plans in place if inclement weather or temperatures create a hazardous situation for students or staff. School districts also use local mass media to relay information.

*Mass Care Shelter Facilities* – A period of extreme cold coupled with a major power outage may require emergency sheltering for those in need. Saint Paul/Ramsey County Public Health has designated shelter facilities that have agreements with the American Red Cross.

*Winter Hazard Awareness Week* – Ramsey County helps promote and participates in the National Weather Service’s “Winter Hazard Awareness Week” held in November each year. The event provides education for residents on the dangers of winter weather and how to properly deal with it.

### Program Gaps or Deficiencies

*Generators for Backup Power to Shelter Facilities* – Not all shelter locations have backup power generators. In the event of a power outage during a period of extreme heat or extreme cold, designated shelters must be ready to provide either temporary or extended periods of sheltering for those in need if there is an extended loss of power.

*Power Restoration* – Ramsey County EMHS needs to work with utilities to develop prioritized power restoration plans.

*Communications* – Everbridge’s open subscription service was made available to the public in September 2016 (<https://www.ramseycounty.us/alerts>). However, not all residents have subscribed to or follow our Facebook page to receive important messages. Additionally, there are translation services for only three languages (Spanish, Somali, and Hmong). There are over 100 identified languages spoken in Ramsey County, and more than 50 are spoken preferentially in the home. Ramsey County Emergency Management and Homeland Security will, in cooperation/coordination with other partners, place an emphasis on increasing citizen subscription to Everbridge.

#### 4.4.8 Extreme Heat

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

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

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

### Extreme Heat History in Ramsey County

July is the hottest month on average in St. Paul, with an average high of 83° F. The highest temperature ever recorded there occurred in 1988, when it rose to 105° F (Intellicast, 2018).

According to the NCEI, in July of 2015, several observations across Ramsey County measured heat indices over 105° F for two days in a row. The highest heat index value was 116° F.

Heat indices of 105° F occurred in August of 2013, during the Minnesota State Fair. 216 people required treatment due to heat-related illnesses. 10 people required transport to local hospitals. Minneapolis schools also cancelled outdoor athletic practices during this period of extreme heat.

The following is taken from the 2018 Report: Planning for Climate & Health Impacts in Metro Minnesota: Emergency Management Considerations for HSEM Region 6 (MDH, 2018):

Minneapolis experienced its most humid day on record and tied the all-time record for a heat index (119 degrees) during the Extreme Heat Wave of 2011. The magnitude and persistence of high dew point temperatures and heat index values led meteorologists to label the event a “humidity storm”. In the metro area, temperatures soared both day and night – two days hit a maximum 100 degrees and 12 more reached 90 degrees, while a record of 80 degrees was set for nighttime lows. Due to the urban heat island effect, temperatures in the metro region are often higher compared to less urban surrounding areas, usually an average of 2 degrees higher. However, during heat waves this temperature difference can spike to as much as 9 degrees. Ultraviolet (UV) monitoring showed dangerously elevated levels of radiation during the heat wave, which can lead to acute and chronic effects on the skin, eyes, and immune system, including skin cancer and cataracts. The average UV index for July 2011 (9.7) was the highest for any July since 1994. The UV index for days during peak heat intensity were above 10, a level associated with a very high risk of serious health effects.

### Extreme Heat and Climate Change

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

Statistics from NOAA show that there are more human fatalities each year due to heat waves than from floods, lightning, tornadoes and winter storms. Many cities have responded by creating Heat Wave Response Plans to ensure that those in marginal health without air conditioning can obtain the relief and

care they need, and the Minnesota Department of Health developed the Extreme Heat Toolkit to help educate at-risk populations on how to reduce risks associated with heat waves (Seeley M. , 2015).

Population projections show a sizable increase in children alongside a substantial increase in seniors in the Metro Region. Children and seniors have a reduced physical capacity to adjust to and cope with high heat and are often partially dependent on others to ensure their personal safety and well-being, characteristics that contribute to increased vulnerability. In addition, children often spend more time engaged in physical activity outdoors, while seniors on limited incomes may struggle to pay for air-conditioning. Rising electricity usage may also lead to power disruption or even prolonged outages, which can have further negative health effects (MDH, 2018).

### Vulnerability

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

### Plans and Programs in Place

*Ramsey County Emergency Operations Plan, Ramsey County COOP/COG Plan; Ramsey County Multijurisdictional Hazard Mitigation Plan, THIRA* – Ramsey County maintains several different plans including an Emergency Operations Plan, a Ramsey County COOP/COG Plan and the Ramsey County Multijurisdictional Hazard Mitigation Plan, which are designed as guides for emergency and/or recovery operations. These plans are intended to assist key county/municipal officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.

*Public Warning and Notification* – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Ramsey County utilizes the Everbridge Mass Notification System, the Integrated Public Alert and Warning System (IPAWS), Wireless Emergency Alerts (WEA), Ramsey County Emergency Management and Homeland Security Facebook page, and local news media. Ramsey County promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. Local television & radio stations assist with sharing public information. Ramsey County Emergency Communications Center has recently upgraded its siren system to be fully functional with the use of polygon-based warnings. Tornado warnings issued by the National Weather Service will automatically sound sirens inside or very near the polygon.

*School Closings* – The major school districts within Ramsey County have school closing policies and communications plans in place if inclement weather or temperatures create a hazardous situation for students or staff. School districts also use local mass media to relay information.

*Mass Care Shelter Facilities* – A period of extreme heat coupled with a major power outage may require emergency sheltering for those in need. Ramsey County Libraries can provide extended hours of operation to remain open to the public. Most libraries are located on major bus lines. Saint Paul/Ramsey County Public Health has designated shelter facilities that have agreements with the American Red Cross.

*Severe Weather Awareness Week* – Ramsey County helps promote and participates in the National Weather Service’s “Severe Weather Awareness Week” held in April each year. The event provides education for residents on the dangers of severe weather and how to properly deal with it.

## Program Gaps or Deficiencies

*Vulnerable Populations* – Identify and map populations vulnerable to extreme heat.

*Heat Planning* – Develop a heat emergency plan containing water cache, air-conditioned locations (day shelters, night shelters), and a public education campaign covering heat exhaustion, heat cramps and heat stroke signs and symptoms. Shelter planning should include homeless and low-income areas.

*Generators for Backup Power to Shelter Facilities* – Not all shelter locations have backup power generators. In the event of a power outage during a period of extreme heat or extreme cold, designated shelters (primarily schools) must be ready to provide either temporary or extended periods of sheltering for those in need if there is an extended loss of power.

*Communications* – Everbridge’s open subscription service was made available to the public in September 2016 (<https://www.ramseycounty.us/alerts>). However, not all residents have subscribed to or follow our Facebook page to receive important messages. Additionally, there are translation services for only three languages (Spanish, Somali, and Hmong). There are over 100 identified languages spoken in Ramsey County, and more than 50 are spoken preferentially in the home. Ramsey County Emergency Management and Homeland Security will, in cooperation/coordination with other partners, place an emphasis on increasing citizen subscription to Everbridge.

### 4.4.9 Drought

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

### Drought History in Ramsey County

Ramsey County experienced its worst drought in the 1930s and again experienced drought conditions in 1976. To date, agricultural losses have been the primary losses associated with drought, as no critical facilities have sustained any damage or functional downtime due to dry weather conditions. Because of the extremely unpredictable nature of drought (including duration), reliably calculating a recurrence interval is difficult.

Ramsey County experienced a severe drought between July 2008 and June 2010. However, the county did not experience any economic or other negative impact from this drought.

The hazard rank for drought in Ramsey County is medium. Sustained drought can cause severe economic stress to the agricultural interests in Ramsey County and the entire state. The potential negative effects of sustained drought are numerous. In addition to an increased threat of wildfires,

drought can affect municipal and industrial water supplies, stream-water quality, water recreation facilities, hydropower generation, as well as agricultural and forest resources.

### Drought and Climate Change

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

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

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

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

In May of 2015, over 90% of Minnesota was undergoing severe or moderate drought, due to low snow levels during the 2014-2015 winter and dry spring weather, with precipitation deficits totaling 3-6 inches below average across much of the state since October 2014. Water levels on streams, lakes and wetlands were below average, and wildfires were common during April of 2015. Blowing soil was also reported due to high winds and the dried-out landscape (MN DNR, 2015).

### Vulnerability

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

### Plans and Programs in Place

*Ramsey County Groundwater Protection Plan* – The current Ramsey County Groundwater Protection Plan was prepared in accordance with Minnesota Statutes 103B.255, through identification of existing and potential problems or opportunities for protection, management, and development of water resources and related land resources. This plan was developed under guidance from both municipal and watershed district representation.

*MN Drought Response Plan* – The State of Minnesota has a statewide drought response plan in place. The plan was prepared by the Minnesota DNR. Saint Paul Regional Water Services also has plans in place.

*Wellhead Protection Plan* – Municipalities that use well water have and maintain a Wellhead Protection Plan. This plan presents the actions that will be taken to manage potential contamination sources that may present a risk to the quality of the community’s drinking water.

### Program Gaps or Deficiencies

*Communications* – Everbridge’s open subscription service was made available to the public in September 2016 (<https://www.ramseycounty.us/alerts>). However, not all residents have subscribed to or follow our Facebook page to receive important messages. Additionally, there are translation services for only three languages (Spanish, Somali, and Hmong). There are over 100 identified languages spoken in Ramsey County, and more than 50 are spoken preferentially in the home. Ramsey County Emergency Management and Homeland Security will, in cooperation/coordination with other partners, place an emphasis on increasing citizen subscription to Everbridge.

*Public Education* – Develop an education and public awareness campaign (i.e., for water conservation measures and wildfire safety during periods of drought).

#### 4.4.10 Wildfire

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

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

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

Topography affects the movement of air and fire over the ground surface. The slope and shape of terrain can change the rate of speed at which the fire travels. Weather affects the probability of wildfire and has a significant effect on its behavior. Temperature, humidity and wind affect the severity and duration of wildfires.

Homes threatened by wildfire are primarily those located in the “wildland-urban interface.” This is the zone where homes and subdivisions have been in wildland areas where natural wildfires can have an

impact. While wildfires are necessary for healthy ecosystems, they burn whatever fuel is in their path, whether vegetation or buildings.

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

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

### Wildfire History in Ramsey County

The Minnesota DNR responded to 13 wildfires in Ramsey County between 1985 and March of 2017, all of which were human-caused, burning a total of 120 acres. These include fires not only on state lands, but also rural private lands for which there is not another agency with primary responsibility. Wildfires that are not included in this data are those that occur on federal lands and those that are responded to by local fire departments. The largest fire burned 27 acres in 2008 in Vadnais Heights. Its cause was the burning of piled debris. These fires are mapped in Figure 21.

The second largest fire occurred on April 6, 2000, burning 25 acres between North Oaks and White Bear Lake. The cause of the fire was due to arson.

The only other notably large fire burned through 20 acres of Little Canada. The cause of the fire was from arson as well.

According to MN DNR data, there are 6,366 acres of peat in Ramsey County. Peat is partially decayed plant matter found in ancient bogs and swamps. Minnesota has approximately 6 million acres of peatland, the highest total acreage in the contiguous United States. Peat fires are deep-rooted fires that burn underground, lasting for weeks, months, or even years. They can smolder during winter months beneath the snow, surfacing again in the spring to burn above ground. Peat ignites when its moisture content is low, and then it supports combustion rather than flame. Once started, combustion is persistent because peat contains oxygen and needs little or no outside oxygen to continue burning. Peat's insulating qualities mean the fire loses little heat. As the peat dries, it becomes water repellent. These factors result in long-lasting fires that require extensive operations to extinguish. However, peat fires have not been an issue in Ramsey County.

Wildfire has been ranked as a low hazard for the purposes of this plan.

### Wildfire and Climate Change

Temperatures are predicted to rise in the state, which could lead to more extreme heat events and associated wildfire risks. As Minnesota's climate changes, weather fluctuations between drought and extreme rain events and increasing temperatures will result in changes to forest composition and/or

distribution. These fluctuations can lead to dry conditions that may cause increased fire risk in both grassland and forest environments.

### Vulnerability

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



## Plans and Programs in Place

*Ramsey County Emergency Operations Plan, Ramsey County COOP/COG Plan; Ramsey County Multijurisdictional Hazard Mitigation Plan, THIRA* – Ramsey County maintains several different plans including an Emergency Operations Plan, a Ramsey County COOP/COG Plan and the Ramsey County Multijurisdictional Hazard Mitigation Plan, which are designed as guides for emergency and/or recovery operations. These plans are intended to assist key county/municipal officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.

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*Fire Departments* – There are 12 fire departments located in Ramsey County. Each department is responsible for wildfires within their department boundaries; however, they often work together on larger fires, including wildfires.

*Mutual Aid Agreements* – All the municipal fire departments in Ramsey County have mutual aid agreements with each contiguous department that borders their respective fire district, including those in adjoining counties. Written mutual aid agreements are on file with each city.

*DNR Information and Training* – DNR maintains current statewide map information on seasonal wildfire risks, however, Ramsey County is primarily an urban area. Ramsey County Fire Departments do not participate in DNR wildfire training.

*Burning Permits/Restrictions* – Burn permits are regulated by the fire departments in Ramsey County. An actual permit may or may not be required, however, each jurisdiction has rules/regulations available to all residents online.

*Fire Prevention Week* – Fire prevention is held annually each October. Most municipal fire departments participate and provide an opportunity for citizens to learn fire safety.

## Program Gaps or Deficiencies

*Water Access* – Not all areas of Ramsey County, particularly North Oaks, have good access to hydrants for fighting fires. Fire districts need to continue addressing the need for dry hydrants and water access.

### 4.4.11 Landslides and Soil Erosion

Erosion is the wearing away of land, such as the loss of a riverbank, beach, shoreline, or dune material. It is measured as the rate of change in the position or displacement of a riverbank or shoreline over a period. Short-term erosion typically results from periodic natural events, such as flooding, hurricanes, storm surges, and windstorms, but may be intensified by human activities. Long-term erosion is a result

of multi-year impacts such as repetitive flooding, wave action, sea level rise, sediment loss, subsidence, and climate change. Death and injury are not typically associated with erosion; however, major incidents of erosion, such as landslides, can destroy buildings and infrastructure (FEMA, 2013).

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

The river bluffs around the Twin Cities have a high risk of natural landslides in the spring, when ice thaws within the bluff and destabilizes rock (Stanley, 2018).

### Soil Erosion/Landslides History in Ramsey County

On April 28, 2018, an estimated 400,000 pounds of rock and soil came loose on the bluff to cover Wabasha Street between Plato Boulevard and Cesar Chavez Street. After having an engineering firm study the slope, city officials decided to build a 12-foot-high retaining wall that will run about 250 feet along Wabasha Street. Ramsey County will receive \$766,770 from the state’s disaster-assistance fund to help with these repair costs (Stanley, 2018).

Figure 22. Landslide in Lilydale in 2013



On May 22<sup>nd</sup>, 2013, two children were killed in a landslide in Lilydale Regional Park along the Mississippi River. The incident was preceded by several weeks of heavy rain, which inundated the soils around the area (Figure 22). The children were part of a school group looking for fossils. A group of four children were walking on a path on the edge of a bluff when the path collapsed beneath them. Two students died and another two were injured. Two firefighters were also injured (Gottfried, 2013).

In 2011, a 20-foot boulder crashed through Bread, Coffee & Cake, a bakery in St. Paul located beneath a bluff near the Wabasha caves, south of downtown. When the owner arrived to bake on an April morning at 2:30 a.m., the place was demolished, and gas fumes lingered. The city condemned the building (Jenkins, 2011).

### Soil Erosion/Landslides and Climate Change

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

In Minnesota, the wettest days are getting wetter. This can contribute to increased erosion in many locations due to flooding and saturation of soils. Reduced ice cover on lakes and shorelines (due to

warmer temperatures) could potentially expose shorelines to increased erosion or damage during weather events when they previously may have been covered with ice (National Climate Assessment Development Advisory Committee, 2013).

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

### Vulnerability

Figure A - 27 in Appendix A maps soil erodibility in Ramsey County using the Soil Erodibility Factor (K-Factor), which is a quantitative description of soil’s inherent erodibility, by measuring the susceptibility of soil particles to shift due to rainfall and runoff. The Soil Erodibility Factor ranges in value from 0.02 to 0.69; however, all areas in Ramsey County are 0.37 or less. According to this model, the most erodible areas in Ramsey County are primarily on the east side of the county and around Lauderdale.

The sandy river bluffs in Ramsey County suffer erosion regularly, and intense or frequent rains exacerbate this issue. Waterways are prone to sediment pollution, threatening water and fish populations.

The vulnerability of each jurisdiction to erosion and landslides has not changed due to any development in the last 5 years.

### Plans and Programs in Place

*Ramsey Conservation District; watershed district plans* – Ramsey Conservation District and five other watershed districts coordinate erosion control efforts into their respective comprehensive planning areas. These agencies coordinate and provide one-on-one assistance to landowners on several State and Federal programs. These programs offer incentives and cost-share assistance to help landowners make changes in their management practices to positively impact soil and water quality. Examples of assistance provided to mitigate against erosion and water quality improvement include helping landowners learn about and install measures such as raingardens, and shore land or habitat restoration, and stream or lake bank stabilization.

### Program Gaps or Deficiencies

*Public Information & Education* – Unsure of the reach of the efforts of the information and education on the topics of erosion and water quality and what citizens can do about these problems. There is also a lack of information on what plans are out there, what help is available and what they can do about problems.

*Communications* – Everbridge’s open subscription service was made available to the public in September 2016 (<https://www.ramseycounty.us/alerts>). However, not all residents have subscribed to or follow our Facebook page to receive important messages. Additionally, there are translation services for only three languages (Spanish, Somali, and Hmong). There are over 100 identified languages spoken in Ramsey County, and more than 50 are spoken preferentially in the home. Ramsey County Emergency Management and Homeland Security will, in cooperation/coordination with other partners, place an emphasis on increasing citizen subscription to Everbridge.

*Vulnerable Areas* – Identify and map areas that are susceptible to both natural and manmade landslides or karst and develop plans or projects to place riprap or barriers where needed. Promote proper construction development or use of retaining walls where needed.

**4.4.12 Dam Failure**

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

**Dam Failure History in Ramsey County**

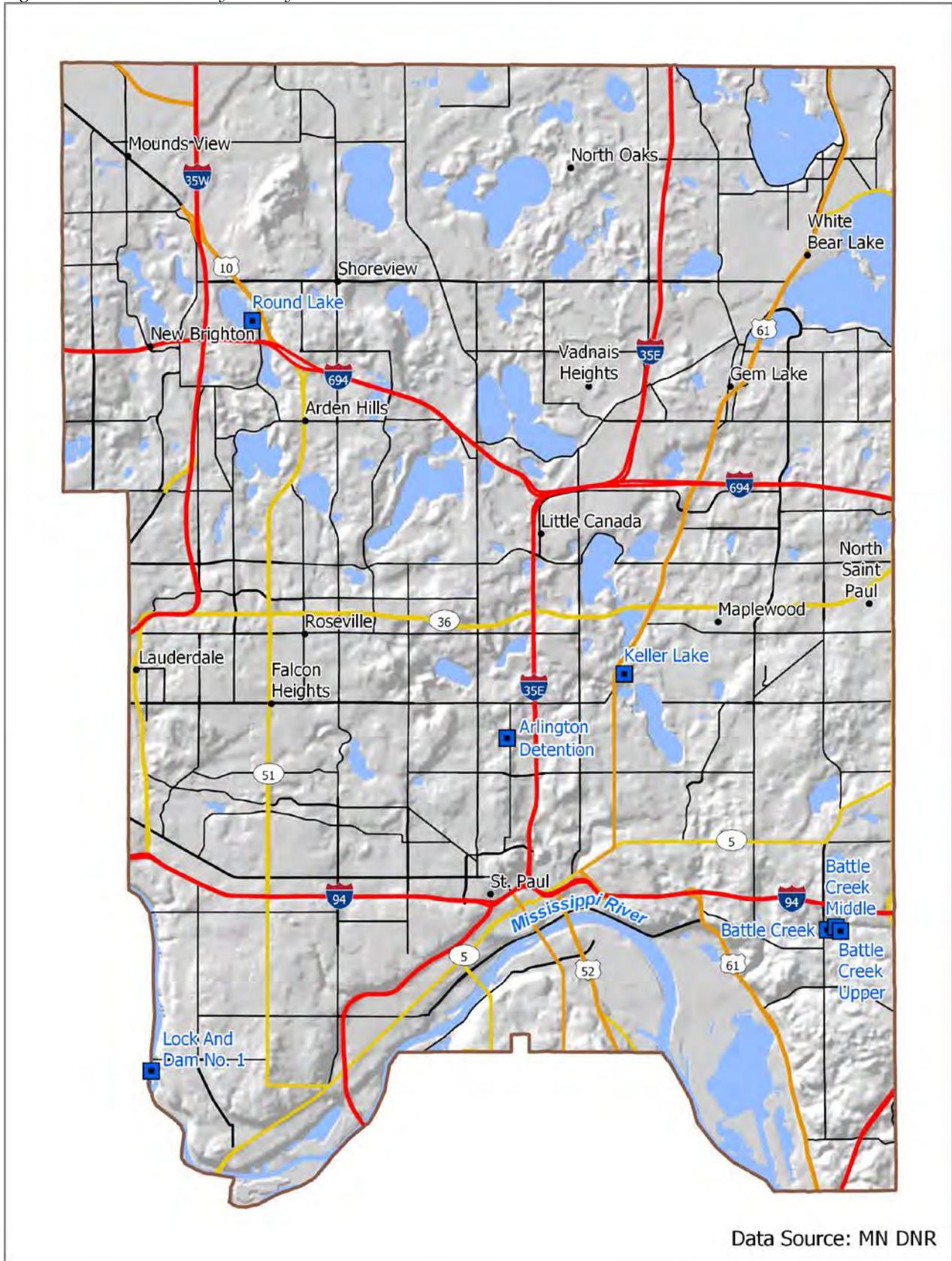
There have been no dam failures in Ramsey County in the past. There have been no known deaths, injuries, or property damage from dam or levee failures in the County. The effects on life and property in the area could be significant if a dam were to fail because of the nature of the built environment.

Table 26 below summarizes data on Ramsey County’s dams. They are also mapped in Figure 23. The dams with Emergency Actions Plans are Lock and Dam no. 1, Battle Creek, Battle Creek Middle and Battle Creek Upper. There are no levees in Ramsey County.

Table 26. Dam Data for Ramsey County (National Inventory of Dams & MN DNR)

<b>Name</b>	<b>Owner</b>	<b>River</b>	<b>Primary Purpose</b>	<b>Year Built</b>	<b>NID Height</b>	<b>Dam Type</b>
Arlington Detention	City of St. Paul	Phalen Creek tributary	Flood Control	1989	15'	Earth
Battle Creek	WD of Ramsey-Washington Metro	Battle Creek	Flood Control	1982	30'	Earth
Battle Creek Middle	WD of Ramsey-Washington Metro	Battle Creek	<i>Unknown</i>	1983	16'	<i>Unknown</i>
Battle Creek Upper	WD of Ramsey-Washington Metro	Battle Creek	<i>Unknown</i>	1983	18'	<i>Unknown</i>
Keller Lake	Ramsey County	Keller Creek	Other	1938	12'	Gravity
Round Lake	Federal Cartridge Corp.	Rice Creek tributary	Water Supply, Other	1960	10'	Other, Earth
Lock & Dam #1	USCOE & Ford Motor Co & Brookfield	Mississippi River	Hydroelectric	1917	51'	Concrete

Figure 23. Dams in Ramsey County



## Dam Failure and Climate Change

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

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

## Vulnerability

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

## Plans and Programs in Place

*Ramsey County Emergency Operations Plan, Ramsey County COOP/COG Plan; Ramsey County Multijurisdictional Hazard Mitigation Plan, THIRA* – Ramsey County maintains several different plans including an Emergency Operations Plan, a Ramsey County COOP/COG Plan and the Ramsey County Multijurisdictional Hazard Mitigation Plan, which are designed as guides for emergency and/or recovery operations. These plans are intended to assist key county/municipal officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.

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

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

*Minnesota Department of Natural Resources, Division of Waters – Dam Safety Program* – The Minnesota DNR Dam Safety Program and current dam safety regulations require the safe design, construction, operation, and maintenance of dams in Minnesota. The state program includes review of design plans and plans for proposed dams, safety inspections of existing dams, and repair of dams. Saint Paul Emergency Management has plans in place covering possible failure of the Ford Lock & Dam #1 located

at mile mark 848 on the Mississippi River. The Ramsey-Washington Metro Watershed District has plans in place to cover the dam at Battle Creek in Maplewood.

*U.S. Army Corps of Engineers* – The U.S. Army Corps of Engineers has plans in place for terroristic acts against the dams and flood control projects in the county.

*Public Warning and Notification* – In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Ramsey County utilizes the Everbridge Mass Notification System, the Integrated Public Alert and Warning System (IPAWS), Wireless Emergency Alerts (WEA), Ramsey County Emergency Management and Homeland Security Facebook page, and local news media. Ramsey County promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. Local television & radio stations assist with sharing public information. Ramsey County Emergency Communications Center has recently upgraded its siren system to be fully functional with the use of polygon-based warnings. Tornado warnings issued by the National Weather Service will automatically sound sirens inside or very near the polygon.

### Program Gaps or Deficiencies

*Communications* – Everbridge’s open subscription service was made available to the public in September 2016 (<https://www.ramseycounty.us/alerts>). However, not all residents have subscribed to or follow our Facebook page to receive important messages. Additionally, there are translation services for only three languages (Spanish, Somali, and Hmong). There are over 100 identified languages spoken in Ramsey County, and more than 50 are spoken preferentially in the home. Ramsey County Emergency Management and Homeland Security will, in cooperation/coordination with other partners, place an emphasis on increasing citizen subscription to Everbridge.

*Vulnerable Populations* – Review inundation mapping and identify both structures and the number of people in the inundation zone and promote enrollment in Everbridge.

*Vulnerable Dams* – Work with county, municipal and DNR officials to identify deficient dams and be informed for planning and development.

# Section 5 – Mitigation Strategy

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

## 5.1 Community Capability Assessment

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

- *Appendix J:* Lists the plans and programs in place in Ramsey County as related to hazard mitigation.
- *Appendix K:* As part of the Ramsey County MHMP update, the county, its cities, and townships were asked to participate in filling out a “Local Mitigation Capabilities Assessment” (LMCA) form to report on their current mitigation capabilities and program gaps. Appendix K lists the LMCA reports gathered for Ramsey County.

### 5.1.1 National Flood Insurance Program (NFIP)

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

Table 27 below shows which jurisdictions in Ramsey County participate in the National Flood Insurance Program (NFIP). Only the city of North Oaks does not participate in the NFIP. The only cities in the county that do not have FEMA mapped high risk areas are Falcon Heights, Lauderdale and Saint Anthony Village.

Table 27. Local Participation in the NFIP

Community Name	Participation in the National Flood Insurance Program (NFIP)?		Current FIRM Date
Arden Hills	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
Blaine (Anoka & Ramsey)	Participating in NFIP	FEMA Mapped High Risk Areas	12/17/2015

Community Name	Participation in the National Flood Insurance Program (NFIP)?		Current FIRM Date
Falcon Heights	Participating in NFIP	No FEMA Mapped High Risk Areas	6/4/2010
Gem Lake	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
Lauderdale	Participating in NFIP	No FEMA Mapped High Risk Areas	6/4/2010
Little Canada	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
Maplewood	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
Mounds View	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
New Brighton	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
North Oaks	NOT Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
North Saint Paul	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
Roseville	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
Saint Anthony Village (Hennepin & Ramsey)	Participating in NFIP	No FEMA Mapped High Risk Areas	11/4/2016
Saint Paul	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
Shoreview	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
Spring Lake Park (Anoka & Ramsey)	Participating in NFIP	FEMA Mapped High Risk Areas	12/16/2015
Vadnais Heights	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010
White Bear Lake (Ramsey & Washington)	Participating in NFIP	FEMA Mapped High Risk Areas (NSFHA in Washington – 2/3/2010)	6/4/2010
White Bear Township	Participating in NFIP	FEMA Mapped High Risk Areas	6/4/2010

Repetitive loss properties are defined as properties that have had 2 or more flood insurance claims of \$1,000 or more in any rolling 10-year period. Property owners are asked to consider mitigation activities such as acquisition, relocation, or elevation, among other options. FEMA’s Repetitive Loss (RL) properties strategy is to eliminate or reduce the damage to property and the disruption to life caused by repeated flooding of the same properties. Property owners are notified of their status by FEMA.

There are two repetitive loss properties in Ramsey County, both located in the City of Saint Paul. Four losses have been recorded between the two properties, with an average payment of \$10,610. None are classified as “Severe Repetitive Loss” (SRL). An SRL property is defined as a residential property that is covered under an NFIP flood insurance policy and:

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

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

### 5.1.2 Plans and Ordinances

Ramsey County and its incorporated communities have many plans and ordinances in place to ensure the safety of residents and the effective operation of communities, including a Comprehensive/Master Plan, Continuity of Operations Plan, Emergency Operations Plan and Capital Improvements Plan. In Section 4.4 of this plan (*Hazard Profiles*) a review of the plans and programs in place was included as related to each of the hazards addressed in the plan. See Appendix J for a list of all plans and programs in place in Ramsey County, and Appendix K for the local mitigation capabilities assessment reports.

## 5.2 Mitigation Goals

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

The goals and strategies being developed for the 2019 Minnesota State Hazard Mitigation Plan for natural hazards were adopted for use in the Ramsey County Plan (Table 28). This framework will allow for integration of the mitigation actions that are listed by Ramsey County and its jurisdictions into the state plan. The state will then be able to develop a statewide strategy that will benefit all of Minnesota.

Table 28. Goals that will be used in the 2019 Minnesota State Hazard Mitigation Plan

<b>Flooding Goal:</b> Reduce deaths, injuries, property loss and economic disruption due to all types of flooding (riverine, flash flooding, dam/levee failure)
<b>Wildfire Goal:</b> Reduce deaths, injuries, property loss, natural resource and economic disruption due to wildfire (forest, prairie, grass, and peat bogs).
<b>Windstorms Goal:</b> Reduce deaths, injuries, property loss, and economic disruption due to windstorms.
<b>Severe Winter Storms Goal:</b> Reduce deaths, injuries, property loss, and economic disruption due to severe winter storms (blizzard, ice, and ice storm).
<b>Lightning Goal:</b> Reduce deaths, injuries, property losses, loss of services, and economic disruption due to lightning.
<b>Tornado Goal:</b> Reduce deaths, injuries, property loss, and economic disruption due to tornadoes.
<b>Drought Goal:</b> Reduce economic loss and environmental impacts due to drought
<b>Extreme Heat Goal:</b> Reduce deaths, injuries, and economic disruption due to extreme heat.
<b>Extreme Cold Goal:</b> Reduce deaths, injuries, property loss, and economic disruption due to extreme cold.
<b>Landslide/Erosion Goal:</b> Reduce deaths, injuries, property loss, and economic disruption due to landslides and erosion.

## 5.3 Mitigation Actions and Project Strategies

The mitigation actions in this plan are summarized into 4 main strategy types, as described in the FEMA publications *Local Mitigation Planning Handbook* (2013) and *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* (2013). Also included are the new FEMA Climate Resilient Mitigation Actions (CRMA) released in 2016. Minnesota HSEM recommends the use of these mitigation strategies to be in alignment with the state plan and those recommended by FEMA. A fifth strategy type was determined by Minnesota HSEM for use within the state. They are listed in Table 29 below:

Table 29. Mitigation Strategies and Action Types

Mitigation Strategy	Description	Example Mitigation Actions
Local Plans and Regulations	<p>These actions include government authorities, policies, or codes, that influence the way land and buildings are developed and built.</p>	<ul style="list-style-type: none"> <li>• Comprehensive plans</li> <li>• Land use ordinances</li> <li>• Planning and Zoning</li> <li>• Building Codes and Enforcement</li> <li>• Floodplain ordinance</li> <li>• NFIP Community Rating System</li> <li>• Capital improvement programs</li> <li>• Open space preservation</li> <li>• Shoreline codes</li> <li>• Stormwater management regulations and master plans</li> </ul>
Structure and Infrastructure Projects	<p>These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure.</p> <p>This type of action also involves projects to construct manmade structures to reduce the impact of hazards.</p> <p>Many of these types of actions are projects eligible for funding through the FEMA Hazard Mitigation Assistance program.</p>	<ul style="list-style-type: none"> <li>• Acquisitions and elevations of structures in flood prone areas</li> <li>• Utility undergrounding</li> <li>• Structural retrofits</li> <li>• Floodwalls and retaining walls</li> <li>• Detention and retention structures</li> <li>• Culverts</li> <li>• Safe rooms</li> </ul>
Natural Systems Protection	<p>These are actions that minimize damage and losses and preserve or restore the functions of natural systems.</p>	<ul style="list-style-type: none"> <li>• Sediment and erosion control</li> <li>• Stream corridor restoration</li> <li>• Forest management</li> <li>• Conservation easements</li> <li>• Wetland restoration and preservation</li> </ul>
Education and Awareness Programs	<p>These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady or Firewise Communities. Although this type of mitigation reduces risk less directly than structural projects or regulation, it is an important foundation. A greater understanding and awareness of hazards and risk among local officials, stakeholders, and the public is more likely to lead to direct actions.</p>	<ul style="list-style-type: none"> <li>• Radio or television spots</li> <li>• Websites with maps and information</li> <li>• Real estate disclosure</li> <li>• Presentations to school groups or neighborhood organizations</li> <li>• Mailings to residents in hazard-prone areas.</li> <li>• StormReady</li> <li>• Firewise Communities</li> </ul>

Mitigation Strategy	Description	Example Mitigation Actions
Mitigation Preparedness and Response	This is a State of Minnesota mitigation strategy with the intent of covering preparation and actions that protect life and property during a natural disaster.	<ul style="list-style-type: none"> <li>• Emergency operations plan</li> <li>• Flood fight plans and preparedness</li> <li>• Dam emergency action plans</li> <li>• Warning</li> <li>• Backup power</li> <li>• Emergency capabilities</li> </ul>

In the review and discussion of selected mitigation strategies and actions, steering committee members and the public were asked to consider the ranking of mitigation actions by priority for implementation. Table 30 provides criteria that were taken into consideration in the process.

### 5.3.1 Hazard Mitigation Actions

Ramsey County and its included municipalities share a common Multi-Hazard Mitigation Plan and worked closely to develop it. Local leaders worked together with the Ramsey County Emergency Management Coordinator to ensure that the hazards and mitigation actions included in this plan are accurate and addressed in their jurisdictions. The jurisdictions responsible for each action are Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North Saint Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights and White Bear Lake.

Table 31 lists all mitigation actions for Ramsey County. Appendix G contains separate mitigation action tables for each jurisdiction. Each of these mitigation action charts detail the hazard, the mitigation action to address it, the priority ranking for implementation (1 = High Priority; 2 = Moderate Priority; 3 = Low Priority, see Table 30), its current stage of implementation, the timeframe for implementation going forward, the jurisdictions who have identified they will work to implement the action, the responsible parties to carry through with implementation, and comments on how the plan will be implemented through existing planning mechanisms and potential funding to make implementation happen.

Table 30. Criteria for Mitigation Action Ranking

Ranking	Criteria
High Priority (1)	<ul style="list-style-type: none"> <li>• Methods for reducing risk from the hazard are technically reliable.</li> <li>• The County has experience in implementing mitigation measures.</li> <li>• Mitigation measures are eligible under federal grant programs.</li> <li>• There are multiple mitigation measures for the hazard.</li> <li>• The mitigation measure(s) are known to be cost effective.</li> <li>• The mitigation measures protect lives and property for a long period of time or are permanent risk reduction solutions.</li> </ul>
Moderate Priority (2)	<ul style="list-style-type: none"> <li>• Mitigation methods are established.</li> <li>• The County has limited experience with the kinds of measures that may be appropriate to mitigate the hazard.</li> <li>• Some mitigation measures are eligible for federal grants.</li> <li>• There is a limited range of effective mitigation measures for the hazard.</li> <li>• Mitigation measures are cost-effective only in limited circumstances.</li> <li>• Mitigation measures are effective for a reasonable period.</li> </ul>

Ranking	Criteria
Low Priority (3)	<ul style="list-style-type: none"> <li>• Methods for reducing risk from the hazard are not well-established, are not proven reliable, or are experimental.</li> <li>• The State or Counties have little or no experience in implementing mitigation measures, and/or no technical knowledge of them.</li> <li>• Mitigation measures are ineligible under federal grant programs.</li> <li>• There is a very limited range of mitigation measures for the hazard, usually only one feasible alternative.</li> <li>• The mitigation measure(s) have not been proven cost effective and are likely to be very expensive compared to the magnitude of the hazard.</li> <li>• The long-term effectiveness of the measure is not known or is known to be relatively poor.</li> </ul>

Mitigation actions that have been completed or deleted from the 2012 Ramsey County Multi Hazard Mitigation Plan are identified and reported on in Appendix H. Completed and deleted mitigation actions are not carried over into the updated mitigation action chart.

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

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

The mitigation types are defined as follows:

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

Table 31. Ramsey County Master Mitigation Action Chart (2019-2023)

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
1	All-Hazards	Mitigation Preparedness & Response Support	Continue to ensure that all Ramsey County residents are aware of and sign-up for the County's Everbridge Emergency Notification System.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	Ramsey County Emergency Management & Homeland Security (RCEMHS) & Municipal Emergency Management Agencies (EMAs)	<p>This is a new effort of Ramsey County EMHS being rolled out in 2018. A link for the Everbridge for community sign up is provided on the Ramsey County EMHS website, and reminders are also posted using the Ramsey County EMHS Facebook Page. In addition to Everbridge, the County has IPAWS capabilities for targeted and countywide emergency notifications.</p> <p>All city jurisdictions within the County are encouraged to promote sign up for the Everbridge system using their means of public outreach (websites, social media, local media).</p>	County, municipal funding
2	All-Hazards	Education & Awareness Programs	Continue to enhance the ability to reach all residents of the County with emergency notifications, including non-English speaking residents and those with special needs (i.e. hearing impaired).	Ongoing	High	2019-2023	Ramsey County	RCEMHS and Saint Paul-Ramsey County Public Health (SPRCPH) in partnership with Twin Cities Public Television	<p>As of 2016, Ramsey County is IPAWS capable, allowing the County to do targeted and countywide emergency notifications to reach both residents and visitors (not an "Opt-In" system like Everbridge). Ramsey County EMHS also participates on the Integrated Warning Team that partners with Twin Cities Public Television (TPT) to provide emergency messaging over cable, broadcast television and social media in 3 alternative languages (Spanish, Somali, and Hmong).</p>	County Funding, Twin Cities Public Television

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
3	All-Hazards	Education & Awareness Programs	Continue to ensure that local elected officials and city emergency managers receive emergency preparedness education & training to understand their roles and responsibilities in the event of an emergency. Also continue to provide NIMS/ICS training to all incoming emergency response personnel throughout Ramsey County.	Ongoing	High	2019-2023	Ramsey County	RCEMHS & SPRCPH in coordination with municipal EMAs	This is a standing element of the Ramsey County EMHS program. RCEMHS made available to all municipalities MGT-312: Senior Officials Workshop for All-Hazards Preparedness on 3/31/2016. RCEMHS will continue to offer additional training as requested.	County, municipal funding
4	All-Hazards	Local Planning & Regulations	Update County/City Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards. Utilize data of past hazard events and future climate projections to help inform updates.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS in coordination with Ramsey County Community and Economic Development and local municipal administrators, Planning & Zoning Committees	Ramsey County has a “2030 Comprehensive Plan” prepared to meet the requirements of the Metropolitan Land Planning Act and the Metropolitan Council’s 2030 Regional Development Framework. Ramsey County will encourage municipalities to update their local Comprehensive Plans to include considerations for mitigation in land use planning to reduce future risk to due to natural hazards (i.e., flooding).	County, municipal funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
5	All-Hazards	Mitigation Preparedness & Response Support	Continue to meet the accreditation standards for Emergency Management Accreditation Program (EMAP) Ramsey County.	New	High	2019-2023	Ramsey County	RCEMHS	Ramsey County EMHS has recently been reviewed by and granted accreditation by Emergency Management Accreditation Program (EMAP). RCEMHS will work to maintain EMAP certification by meeting all requirements of the program.	County Funding
6	All-Hazards	Local Planning & Regulations	Continue to update Emergency Operation Plans and COOP/COG plans to ensure that they adequately detail the needed steps to respond to all-hazards and ensure continuity of key government functions in the event of a disaster.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS maintains an Emergency Operations Plan (EOP) and the Ramsey County Continuity of Operations (COOP)/Continuity of Government (COG) plans as guides for emergency and/or recovery operations. These plans are intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.	County, municipal funding
7	All-Hazards	Local Planning & Regulations	Continue to ensure that mass-care sheltering plans and facilities are established to care for displaced residents in the event of a disaster.	Ongoing	High	2019-2023	Ramsey County	RCEMHS & SPRCPH	Mass Care planning is part of the Ramsey County EOP. Saint Paul/Ramsey County Public Health have designated shelter facilities that have agreements with the American Red Cross.	County funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
8	All-Hazards	Local Planning & Regulations	Ensure planning for evacuation includes identification of access alternatives.	Ongoing	High	2019-2023	Ramsey County	RCEMHS in coordination with City Emergency Managers and local Public Safety agencies	Evacuation planning is part of the Ramsey County EOP. Ramsey County EMHS will work with local fire depts. on identifying areas of single access points and access alternatives.	County, municipal funding
9	All-Hazards	Education & Awareness Programs	Continue to promote education & awareness on all-hazards and emergency preparedness for schools, individuals, families, and businesses.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Information is distributed to the public via RCEMHS Facebook/ Twitter and subscription-based programs (GovDelivery) on a regular basis. Additional information is provided during the NWS severe weather awareness weeks in spring and winter. RCEMHS also has a YouTube Channel where "Get Ready Gopher" educational videos on preparedness and severe weather training are posted. These are promoted to the schools as well as the larger public for viewing. Cities are encouraged to share information through their own existing channels (i.e., websites, social media, and local media).	County, municipal funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
10	All-Hazards	Mitigation Preparedness & Response Support	Continue to enhance the outdoor warning siren system in Ramsey County.	Ongoing	High	2019-2023	Ramsey County	RCEMHS, Ramsey County Emergency Communications Center (RCECC), and municipal EMAs	There are 91 outdoor warning sirens located throughout Ramsey County. Ramsey County ECC has recently upgraded to match Saint Paul's use of the Commander One siren system for suburban Ramsey County. Federal Signal has completed a sound- propagation study and a complete inventory of siren systems in municipal Ramsey County. This information was shared with all the municipalities and those that own outdoor warning sirens have completed the process of upgrading those sirens that were determined to need it.	County, municipal funding

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11	All-Hazards	Mitigation Preparedness & Response Support	Enhance the cybersecurity of computer operations for city and county infrastructure.	Ongoing	High	2019-2023	Ramsey County	RC Information Services (IS)	<p>Ramsey County Information Services protects County information and technology resources through its information security program which is designed to minimize information system vulnerabilities and threats and meet legal and regulatory requirements for protecting data and systems.</p> <p>Ramsey County employs a Chief Information Officer and a Chief Information Security Officer.</p> <p>Ramsey County IS participates in the Secure360 program, which promotes comprehensive security and risk management education in Information Security. Ramsey County EMHS led an effort to develop countywide COOP/COG plan that includes IS/IT services.</p>	County funding
12	All-Hazards	Mitigation Preparedness & Response Support	Evaluate critical facilities for exposure to damage from all hazards, especially high impact hazards affecting Ramsey County.	Ongoing	High	2019-2023	Ramsey County	RCEMHS, RC Property Management	This is an ongoing All-Hazards mitigation effort by Ramsey County EMHS.	County funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
13	All-Hazards	Mitigation Preparedness & Response Support	Identify volunteers that should engage in disaster training and develop an all-hazards disaster training curriculum.	Ongoing	Moderate	2019-2023	Ramsey County, municipalities that sponsor CERT	RCEMHS, SPRCPH, Ramsey County Sheriff's Office, municipalities that sponsor CERT	Ramsey County EMHS has provided training to the Emergency Services Unit (ESU), Medical Reserve Corps (MRC), Community Emergency Response Team (CERT). Just-in-Time training has also been developed for use in emergency situations.	County, municipal funding
14	Severe Winter & Summer Storms	Education & Awareness Programs	Conduct outreach to provide education & awareness to residents for severe winter, spring & summer storms preparedness, including for individuals, families, schools, and those with access and functional needs.	Ongoing	High	2019-2023	Ramsey County	RCEMHS, SPRCPH	<p>Ramsey County EMHS provides regular postings to Facebook/ Twitter on preparedness throughout the year and promotes the annual NWS winter/spring severe weather awareness weeks. In addition, RCEMHS staff provide education information, instruction and outreach to employees and residents of Ramsey County through open houses, training sessions or classes as requested.</p> <p>Ramsey County EMHS also has a YouTube Channel where "Get Ready Gopher" educational videos on preparedness and severe weather training are posted. These are promoted to the schools as well as the larger public for viewing. Opportunities for additional community outreach may include providing information at community events such as National Night Out or the County Fair.</p>	County funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
15	Severe Winter & Summer Storms	Education & Awareness Programs	Continue to promote the use of NOAA weather radios by residents, schools, businesses, and facilities that house persons with functional and access needs.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS regularly promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. NOAA weather radios are recommended as an important way to receive emergency weather alerts from the NWS. Local city Emergency Managers are encouraged to ensure the placement of NOAA radios in key facilities within their communities.	County, municipal funding
16	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with municipal electrical cooperative and power companies to reduce overhead exposure of power lines that are vulnerable to damage from severe winter/summer storms (i.e., high winds, ice, and heavy snow). Replace overhead power lines with underground lines in areas with high-risk exposure (i.e. high tree concentration areas).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works, Municipal Public Works in cooperation with the appropriate utility company.	Ramsey County EMHS and all cities will work as needed with their appropriate utility providers as needed to evaluate areas of concern. Service providers for Ramsey County include: <ul style="list-style-type: none"> <li>• Xcel Energy</li> <li>• Connexus Energy</li> <li>• North Saint Paul Utility Department</li> </ul> Areas of concern will be evaluated to see where putting lines underground may be feasible and make sense.	Coop / Electric Company funding, Possible FEMA HMA grant for Infrastructure Retrofit

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
17	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Identify critical facilities or infrastructure that do not have generator backup power in the event of a major power outage resulting from severe winter or summer storms. (Examples of critical facilities include Police/ Fire departments, EOC's, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	<p>The Ramsey County Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner's Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power.</p> <p><b>Ramsey County's current priorities for generator backup power include:</b></p> <ul style="list-style-type: none"> <li>• Plato Building</li> <li>• Public Health and Emergency Management's Department Operations Center (DOC's)</li> <li>• Rec Centers and libraries that serve as cooling centers</li> <li>• Facilities designated for Mass Care Sheltering</li> <li>• Traffic Signal Systems</li> </ul> <p>Ramsey County and municipalities continue to assess what critical facilities need backup power. Working to mitigate against power outages also helps to mitigate other hazards.</p>	County, municipal funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
18	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that should have backup power.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	Ramsey County, local municipal governments, and schools will evaluate feasibility to purchase and install generators for key facilities and will do so as funding allows.	County, municipal funding, Possible FEMA HMA grant for Generators
19	Severe Winter Weather	Mitigation Preparedness & Response Support	Continue to provide for public safety on roads through anti-icing (application of brine solution before an event), snow removal, salting and sanding to minimize the impacts of snow/ice accumulations on roadways.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works & Municipal Public Works	Ramsey County and its municipalities complete the snow removal from all county and municipal roads as well as disperse salt/sand as needed. MNDOT will remove the snow from Interstate and State Highways as well as disperse salt/sand as needed. Municipalities have snow emergency plans and ordinances in place.	County, municipal funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
20	Severe Summer Storms	Education & Awareness Programs	Continue to provide the National Weather Service’s Skywarn “Storm Spotter” training in various parts of the County for first responders and community residents.	Ongoing	High	2019-2023	Ramsey County	RCEMHS in collaboration with local municipalities, Metro Skywarn and the National Weather Service	Ramsey County EMHS offers Skywarn training on an annual basis for local fire and law enforcement departments and residents that wish to be trained as volunteers.	County, municipal funding, NWS funding
21	Severe Summer Storms	Education & Awareness Programs	Encourage the retrofitting of existing homes, buildings, schools, or public park facilities with building materials that help to reduce the impact of severe storm events that can cause damage such as high winds, thunderstorms, lightning, and hail storms.  <i>(Examples may include special high wind resistant films for doors and windows and installation of lightning grounding systems.)</i>	Ongoing	Moderate	2019-2023	Ramsey County	RCEMHS, RC Property Management, & RC Parks & Rec, Municipal EMAs	Parks and Rec will work with EMHS to evaluate the ability to incorporate lighting detection systems at staffed park facilities (golf courses, beaches, water parks) and install new equipment as feasible. A portable system that could be deployed as needed is another possibility.  Ramsey County Property Management and Ramsey County Parks & Rec will evaluate respective county facilities for potential retrofit projects that will help to minimize future risk to county buildings or recreational facilities. School districts, businesses, and homeowners within the county are responsible to evaluate and retrofit their buildings as needed. RCEMHS will work to promote wind resistant building measures during Severe Weather Awareness Week.	County, municipal funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
22	Severe Summer Storms	Structure and Infrastructure Projects	Identify community areas, parks, and facilities (i.e., schools, government buildings, manufactured home parks) that are vulnerable to tornadoes and evaluate for potential construction or retrofit of safe rooms or storm shelters.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	RCEMHS and RC Parks & Rec will work to identify priority areas for evaluation for safe room construction or retrofit. Municipal EMAs will also work to evaluate areas of need for storm shelters or safe rooms, such as for local parks or manufactured home parks.	County, municipal funding
23	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	Ramsey County EMHS will seek to work with municipalities and schools to build community safe rooms where needed. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning. Any community safe room projects that the County is involved in will be part of the Ramsey County Emergency Management program. FEMA grant funding may be sought to support an eligible safe room project.	County, municipal funding, Possible FEMA HMA grant for Safe Rooms

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
24	Severe Summer Storms	Local Planning & Regulations	Work to ensure Minnesota Department of Health (MDH) Evacuation Plan & Storm Shelter Requirements are met in municipalities with manufactured home parks.	Ongoing	High	2019-2023	Arden Hills, Little Canada, Maplewood, Mounds View, New Brighton, Roseville, Shoreview, Vadnais Heights	Municipal EMAs in coordination with RCEMHS and MHP Operators	<p>Ramsey County has identified 15 manufactured home parks (MHPs) in 8 municipalities that have trailer parks. Of those 15, 12 have identified they have shelters, one may have a shelter and one does not and one is unknown.</p> <p>Minnesota State Statute (327.205 Shelter Construction Standards) outlines the requirements for MHP's with less than 10 units / more than 10 units for evacuation plans and sheltering facilities for the residents of the park in times of high winds or tornadoes, as well as the responsibility of municipalities with MHPs to assist with/approve of evacuation &amp; shelter plans.</p> <p>Ramsey County EMHS will continue to encourage municipalities to work with local MPH operators to ensure they follow the law.</p>	County, municipal funding, MHP Owner

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25	Severe Summer Storms	Education & Awareness Programs	Provide information on the benefits of tie-down straps for manufactured homes to help withstand extreme wind or tornado events.	Ongoing	Moderate	2019-2023	Ramsey County	RCEMHS, Municipal EMAs and Manufactured Home Park Owners	<p>This is ultimately the responsibility of the municipalities and the manufactured home park owners. Ramsey County EMHS will work in coordination with municipal EMAs and manufactured home parks to promote installation of tie down straps. RCEMHS may utilize news releases or post information on social media as well.</p> <p>Manufactured homes are more easily flipped or damaged during windstorms than site-built homes and require tie-downs to remain stable. Manufactured homes are elevated and vulnerable to the forces of wind uplift if they are not equipped with skirting.</p>	County, municipal and MHP owner funding
26	Severe Summer Storms	Mitigation Preparedness & Response Support	Equip all county and city recreation parks, fair grounds, and other outdoor venue areas with adequate early severe weather warning devices and lightning detection devices.	Ongoing	High	2019-2023	Ramsey County	RCEMHS, Ramsey County Parks & Rec, and Municipal EMAs	This will be based on the availability of funding and resources to purchase.	USDA Rural Development, Community Facilities Direct Loan & Grant Program

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
27	Extreme Temps (Heat / Cold)	Education & Awareness Programs / Local Planning & Regulations	Provide outreach & education to vulnerable populations in the community on personal safety measures to take during periods of extreme heat / cold.	Ongoing	Moderate	2019-2023	Ramsey County	RCEMHS, SPRCPH, in collaboration with Schools and Municipal EMAs	This is done as part of the NWS annual spring and winter severe weather awareness weeks. It is also done during actual periods of extreme temperatures. Information on staying safe during periods of extreme heat or cold is relayed to the public through channels such as County/City websites, social media, radio, and local newspapers. All Schools work to educate students on the dangers of extreme heat and cold as well.	County funding
28	Extreme Temps (Heat / Cold)	Mitigation Preparedness & Response Support	Enhance plans to respond to extreme temperature situations in Ramsey County.	Ongoing	Moderate	2019-2023	Ramsey County	RCEMHS and SPRCPH	In the event of a severe heat or cold event that poses risk to public safety, Ramsey County EMHS will work with Saint Paul-Ramsey County Public Health to release information to the public about personal safety measures and where to go for a heating/cooling facility for the public, especially at-risk individuals such as senior citizens.	County funding
29	Extreme Temps (Heat / Cold)	Structure and Infrastructure Projects	Reduce the effects of extreme heat temperatures through measures such as installation of permeable paving, greenways, white roofs and tree plantings.	<b>New</b>	Moderate	2019-2023	Ramsey County	RCEMHS, RC Property Management, RC Public Works	Ramsey County will work to identify potential areas for retrofit and consider heat-reduction design or materials for county facilities and in areas of new development.	County funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
30	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Enhance stormwater management plans and ordinances that require improvement of stormwater management systems, including for areas of new development and installation of infrastructure capable of handling a ten to twenty-year rain event. Identify and address where stormwater run-off capacity improvement projects are needed.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works and municipal Planning/Public Works depts. in coordination with local watershed organizations	Ramsey County and local cities maintain stormwater management plans and work to identify, prioritize, and address highest risk areas. Mitigation examples may include to construct, retrofit, or maintain drainage systems to include sewage and water retention and detention systems.  Outside funding to support stormwater improvement projects may be available through avenues such as the MN DNR Flood Hazard Mitigation Grants, MPCA, and FEMA HMA funding for flood reduction projects.	County/ City funding, SWCD, and Possible MPCA/PFA grant funding. Possible FEMA HMA grant for Localized Flood Reduction Projects or Infrastructure Retrofit
31	Flooding	Local Planning and Regulations	Encourage all municipal partners to participate in the National Flood Insurance Program (NFIP) and FEMA's Community Rating System (CRS)	New	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS	Ramsey County EMHS will explore enrollment in the NFIP with North Oaks and participation in the Community Rating System (CRS) with municipalities.	County Funding

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32	Flooding	Education & Awareness Programs / Structure & Infrastructure Projects	Provide information & technical assistance to property owners to help mitigate against localized flooding during high-rain events (i.e., landscaping / green infrastructure applications).	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, RC Conservation District, and municipal planning/public works	This is an ongoing effort of Ramsey County in conjunction with local jurisdictions that have experienced flooding due to high rain events.	County/City Funding, Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

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33	Flooding	Local Planning & Regulations	Identify residential, commercial, government facilities, and/or critical infrastructure properties that may experience damage from future flooding and work to implement appropriate mitigation measures (including buy-out for property acquisition & structure demolition or relocation). Areas of focus may include previously unidentified flooding locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Public Works, RC Property Management, RC Conservation District, municipal EMA	<p>In 2015, Ramsey County removed seven buildings, including critical infrastructure, from the Mississippi River floodplain. A permanent retaining wall along the bluff was completed in November 2017. Ramsey County remains owners of these properties and will work with the new developers and Saint Paul Emergency Management to provide technical assistance and support on flood protection systems and measures in the future.</p> <p>Ramsey County and its municipalities will continue to evaluate properties that may be at risk of flooding and work with property owners to identify mitigation measure to reduce or eliminate future damages.</p>	County, municipal funding, DNR Flood Mitigation Grant, US Army Corps of Engineers (USACE), Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation
34	Flooding	Structure & Infrastructure Projects	Continue to work with the Crestview Neighborhood/Grass Lake Area in the City of Shoreview to address De-Watering.	New	High	2019-2023	Ramsey County, City of Vadnais Heights	Ramsey-Washington Metro Watershed District in cooperation with the City of Shoreview and RC Parks & Rec	In February 2017, Ramsey County EMHS was approached by a local resident to discuss flooding issues in the Crestview Neighborhood of Shoreview due to heavy rainfalls in summer and fall of 2016. After conversations with the resident and follow-up with Ramsey-Washington Metro Watershed District (RWMWD), a plan for optimizing drainage in the area was developed.	Ramsey-Washington Watershed District

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35	Flooding	Local Planning & Regulations	Review and update the FEMA flood maps for Ramsey County and its municipalities to accurately map the actual flood plain and identify structures, both residential and commercial, not already on the FEMA maps.	Ongoing	High	2019-2023	Ramsey County	RCEMHS, RCGIS	FEMA established new floodplain maps for Ramsey County effective June 4, 2010. Ramsey County EMHS will review these maps and work with Ramsey County GIS to identify any additional new structures within floodplain boundaries.	County funding
36	Flooding	Education & Awareness Programs	Educate the public on the dangers associated with flooding and timely flood-condition information.	Ongoing	High	2019-2023	Ramsey County	RCEMHS	Flood watches, advisories, or warnings are issued by the NWS and additionally conveyed by RCEMHS social media to help get the word out. During the NWS's Severe Weather Awareness Week in April each year, one day is dedicated to floods and flood education.	County funding
37	Flooding	Local Planning & Regulations	Participate in the National Flood Insurance Program (NFIP) and enforce local floodplain ordinances to ensure that new construction is built above regulatory flood protection elevation.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, Municipal EMAs local city planning depts.	Ramsey County promotes, and all municipalities participate in the NFIP (except the City of North Oaks). Each city develops and enforces local floodplain ordinances.	County, municipal funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
38	Flooding	Structure & Infrastructure Projects	Identify, prioritize, and implement localized flood reduction measures to improve drainage systems and reduce over-the-road flooding to County or municipal roads.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, City Public Works, MnDOT, Watershed Districts,	<p>Ramsey County Public Works and local city Public Works work to identify and address localized flood risk reduction projects. <b>Following is a list of current priority areas to be addressed where flooding is an issue:</b></p> <ul style="list-style-type: none"> <li>• <b>Roseville</b> - Fairview Ave and Hwy 36</li> <li>• <b>Shoreview</b> - Gramsie Road north of Grass Lake</li> <li>• <b>Vadnais Heights</b> - Rice Street east of Grass Lake</li> <li>• <b>Vadnais Heights</b> - Edgerton and Centerville Rd</li> <li>• <b>Maplewood &amp; Little Canada</b> - Cty Rd B at 35-E</li> <li>• <b>Mounds View</b> - Mounds View Blvd between Silver Lake Rd and Cty Rd I</li> <li>• <b>Roseville</b> - Cleveland Ave and Cty Rd C-2</li> <li>• <b>New Brighton</b> - Silver Lake Rd south of Silver Lane</li> </ul>	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
39	Flooding	Local Planning & Regulations	Ensure that wellhead protection plans are in place to address flooding that may lead to contaminated drinking water.	New	High	2019-2023	Mounds View, New Brighton, North Saint Paul, Shoreview, White Bear Lake (partially), White Bear Township, Saint Paul Regional Water Services (Have a surface water and wellhead protection plan), St. Anthony Village (partially), Vadnais Heights	RC Public Works, MN Dept. of Health and local city public works depts.	Municipalities that use well water have and maintain a Wellhead Protection Plan. This plan presents the actions that will be taken to manage potential contamination sources that may present a risk to the quality of the community's drinking water. MDH assists public water suppliers with preparing and implementing wellhead protection plans.	MDH Source Water Protection grant funding for wellhead improvement projects
40	Flooding / Erosion	Natural Systems Protection	Work to restore and preserve natural systems impacted by wind/water erosion (i.e., wetland restoration).	Ongoing	High	2019-2023	Ramsey County	RC Conservation District in partnership with area watershed districts and property/facility owners	The Ramsey Conservation District works with community & agency partners to identify and implement projects that help to conserve and enhance natural resources in Ramsey County through providing technical, financial, and educational assistance. Example projects include localized stormwater management through green infrastructure landscaping and erosion control measures.	RC Conservation District funding, other watershed district funding, private funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
41	Erosion / Landslides	Natural Systems Protection	Improve the stabilization of hillsides, banks or bluffs to reduce impacts to critical infrastructure, roads, natural resources, and recreation areas from erosion and slope failure.	Ongoing	High	2019-2023	Ramsey County	RC Public Works, RC Conservation District in cooperation with Watershed Districts, coordinate efforts with the City of Saint Paul and their Hazard Mitigation Plan	<p>Ramsey Conservation District and five other watershed districts coordinate erosion control efforts into their respective comprehensive planning areas. RC public Works also works to identify erosion issue areas along roads maintained by the County. Local municipalities work to address erosion/slope stabilization within their communities.</p> <p>Ramsey County owns property along the southern slope of the Mississippi River bluffs (Plato Building) that is considered critical infrastructure. Both Ramsey County EMHS and Saint Paul/Ramsey County Public Health have Departmental Operations Centers located within this building. Tax collection and election services are also coordinated or managed in this building.</p>	County funding, SWCD State Cost-Share Program, and Possible FEMA HMA grant for Slope Stabilization, USDA Grant Funds

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
42	Wildfire	Local Planning & Regulations	Continue to ensure the strong coordination between local fire departments to provide fire protection.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	There are 12 fire departments located in Ramsey County. All the municipal fire departments have mutual aid agreements with each contiguous department that borders their respective fire district, including those in adjoining counties. Written mutual aid agreements are on file with each city.	Local fire department funding
43	Wildfire	Local Planning & Regulations	Continue to enforce burning permits/restrictions.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	Burn permits are regulated by the fire departments in Ramsey County. An actual permit may or may not be required, however, each jurisdiction has rules/regulations available to all residents online.	Municipal or fire district funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
44	Wildfire	Education & Awareness Programs	Provide public education on the application of defensible space measures to help minimize the risk of structure fire in the event of a wildfire.	Ongoing	Low	2019-2023	Ramsey County	Local fire districts	Ramsey County EMHS has done an episode of <i>Get Ready Gopher</i> on wildfire hazards and will continue to promote education outreach on wildfire preparedness. Local Fire Districts and the MN DNR Firewise Program are additional resources to assist with public outreach and education on wildfire safety.	Municipal or fire district funding
45	Wildfire	Education & Awareness Programs	Continue to provide public education materials related to the prevention of forest fires and wildfires, particularly during dry spells or periods of drought.	Ongoing	Moderate	2019-2023	Ramsey County	Local fire districts	Fire prevention is held annually each October. Many City fire departments participate and provide an opportunity for citizens to learn fire safety with open houses. In addition, Ramsey County EMHS has done an episode of <i>Get Ready Gopher</i> on wildfire hazards and will continue to promote education outreach on wildfire preparedness.	Municipal or fire district funding
46	Wildfire	Mitigation Preparedness & Response Support	Monitor air quality and convey information to the public on conditions and safety considerations when wildfire events are occurring in the County.	<b>New</b>	Low	2019-2023	Ramsey County	RCEMHS and SPRCPH in coordination with NWS and local fire districts	In the event of a wildfire, RCEMHS and SPRCPH will help to disseminate information regarding air quality conditions and notify the public of health concerns for air quality.	County funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County Comments on Planning Mechanisms for Implementation	Possible Funding
47	Drought	Education & Awareness Programs	Promote water conservation measures to residents during periods of drought and enforce water conservation ordinances when needed.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Conservation District & Local City planning depts.	Promoting water conservation during periods of drought is a standing effort of the County and local governments. The State of MN has a stateside drought response plan prepared by the MN DNR that the County may reference for guidance.	County, municipal funding
48	Dam Failure	Local Planning & Regulations	Review inundation mapping and identify both structures and the number of people in the inundation zone and promote enrollment in Everbridge.	<b>New</b>	Low	2019-2023	Ramsey County	RCEMHS, RCGIS	Ramsey County EMHS and Ramsey County GIS will work collaboratively on this effort.	County funding
49	Dam Failure	Local Planning & Regulations	Work with county, municipal and DNR officials to identify deficient dams and be informed for planning and development.	<b>New</b>	Low	2019-2023	Ramsey County	RCEMHS, RCGIS, MN DNR	Ramsey County EMHS and Ramsey County GIS will work collaboratively on this effort with the MN DNR and local municipalities where dams are located.	County funding, MNDNR

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

This plan is a multi-jurisdictional plan that covers Ramsey County, its school districts and the cities of Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North Saint Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights and White Bear Lake. Planning team members from each community participated directly in the development of local mitigation action charts for implementation. The Ramsey County risks and mitigation activities identified in this plan also incorporate the concerns and needs of townships and other entities participating in this plan.

Mitigation actions are separated by jurisdiction in Appendix G.

## Section 6 – Plan Maintenance

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

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

The Ramsey County Emergency Management Coordinator is the individual responsible for leading all efforts to monitor, evaluate and update the hazard mitigation plan within the 5-year window. Throughout the 5-year planning cycle, the Ramsey County Emergency Management Coordinator will work with the Ramsey County Emergency Management Committee (EMC) to monitor, review, evaluate and update the Multi-Hazard Mitigation Plan. The EMC meets every other month and consists of representatives from Ramsey County Emergency Management, Public Health, and other county departments, as well as representatives from the cities of Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights and White Bear Lake. Additional stakeholders will be added based on need. If necessary, the Ramsey County Emergency Management Coordinator will convene the committee to meet on a more regular basis to monitor plan implementation progress and reassess needs and opportunities. This could be done in response to funding cycles of programs that provide resources for hazard mitigation activities. If there is a need for a special meeting due to new developments or a declared disaster occurring in the county, the committee will meet to update pertinent mitigation strategies. Depending on Ramsey County opportunities and fiscal resources, mitigation projects may be implemented independently by individual communities or through local partnerships.

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

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

Throughout the 5-year window of the plan, each respective county department and jurisdiction will be required to report on the status of mitigation actions in their charts to the Ramsey County Emergency Management Coordinator so that progress notes may be maintained for the next plan update.

## 6.2 Implementation

Ramsey County and its included municipalities share a common Multi-Hazard Mitigation Plan and work together closely to develop, revise, and implement it. This MHMP provides a comprehensive chart of mitigation actions for Ramsey County and its jurisdictions (see Section 5.3.1, *Hazard Mitigation Actions*). The cities of Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights and White Bear Lake participated in the MHMP planning process and identified the specific mitigation strategies that they would seek to implement in their communities during the 5-year planning cycle. These mitigation actions are provided in *Appendix G: Mitigation Actions by Jurisdiction*.

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

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

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

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

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

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

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

### 6.3 Continued Public Involvement

Continued public involvement is critical to the successful implementation of the Multi-Hazard Mitigation Plan (MHMP). The Ramsey County Emergency Management Coordinator and the Emergency Management Committee members from the participating jurisdictions of the cities of Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights and White Bear Lake continue to engage new public stakeholders in planning discussions and project implementation during the 5-year cycle of this plan.

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

- The plan will be posted on the Ramsey County Emergency Management website for the public to read and provide feedback. Collected feedback will be reviewed and the plan will be amended as necessary.
- Following any major storms or natural disasters, Ramsey County Emergency Management will seek to gather concerns and new ideas for mitigation from residents to include in the next update of the plan. This may be done through public meetings, outreach via social media (i.e., Department’s Facebook Page), or news releases via local media.
- Each city participating in the plan will be responsible to keep their city councils, city departments, schools, and community members updated and engaged in the implementation of their respective mitigation action charts (see *Appendix G: Mitigation Actions by Jurisdiction*). Each respective jurisdiction will be required to report on the status of mitigation actions in their charts to the Ramsey County Emergency Management Coordinator.
- Jurisdictions will use numerous means of public outreach to engage new public stakeholders in providing input on mitigation efforts or concerns on hazards by sharing information at city council meetings, sharing information at special events, working with local schools and partner organizations, and posting information on relevant local or social media that their communities use to inform and engage the public. As mitigation projects are implemented, jurisdictions will work to keep the public updated and engaged in those local efforts.

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- Appendix B – Ramsey County Critical Facilities
- Appendix C – Ramsey County Hazard Events
- Appendix D – Adopting Resolutions
- Appendix E – Steering Committee Meetings
- Appendix F – Public Outreach & Engagement Documentation
- Appendix G – Mitigation Actions by Jurisdiction
- Appendix H – Past Mitigation Action Review Status Report (2012-2017)
- Appendix I – Works Cited
- Appendix J – Ramsey County Plans & Programs in Place
- Appendix K – Local Mitigation Capabilities Assessment Report
- Appendix L – Jurisdictional Questionnaires
- Appendix M – Minnesota Department of Health Climate & Health Report
- Appendix N – Technological Hazards

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Figure A - 1. Hydrography of Ramsey County

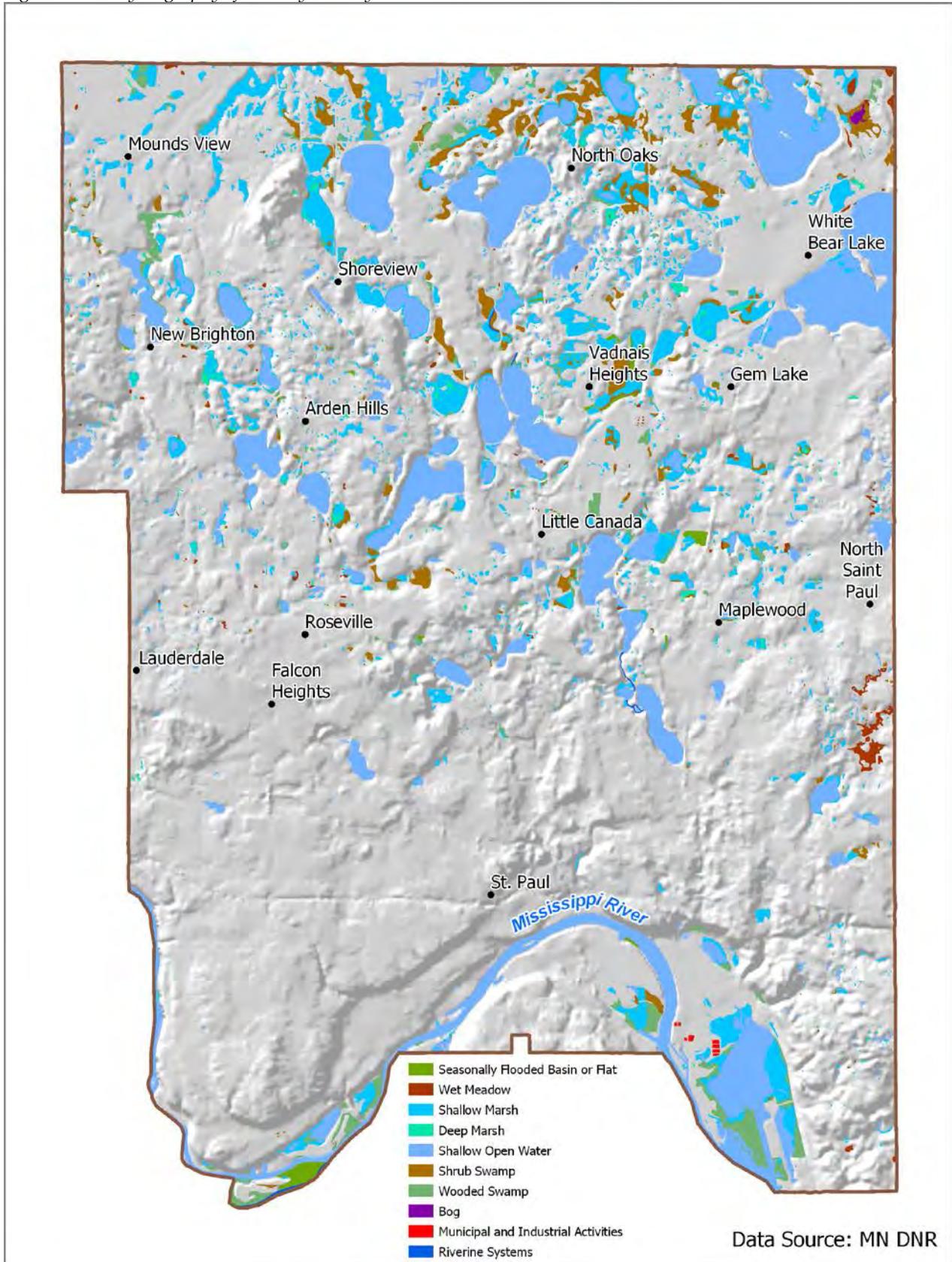


Figure A - 2. Ramsey County Population by Census Block, 2010

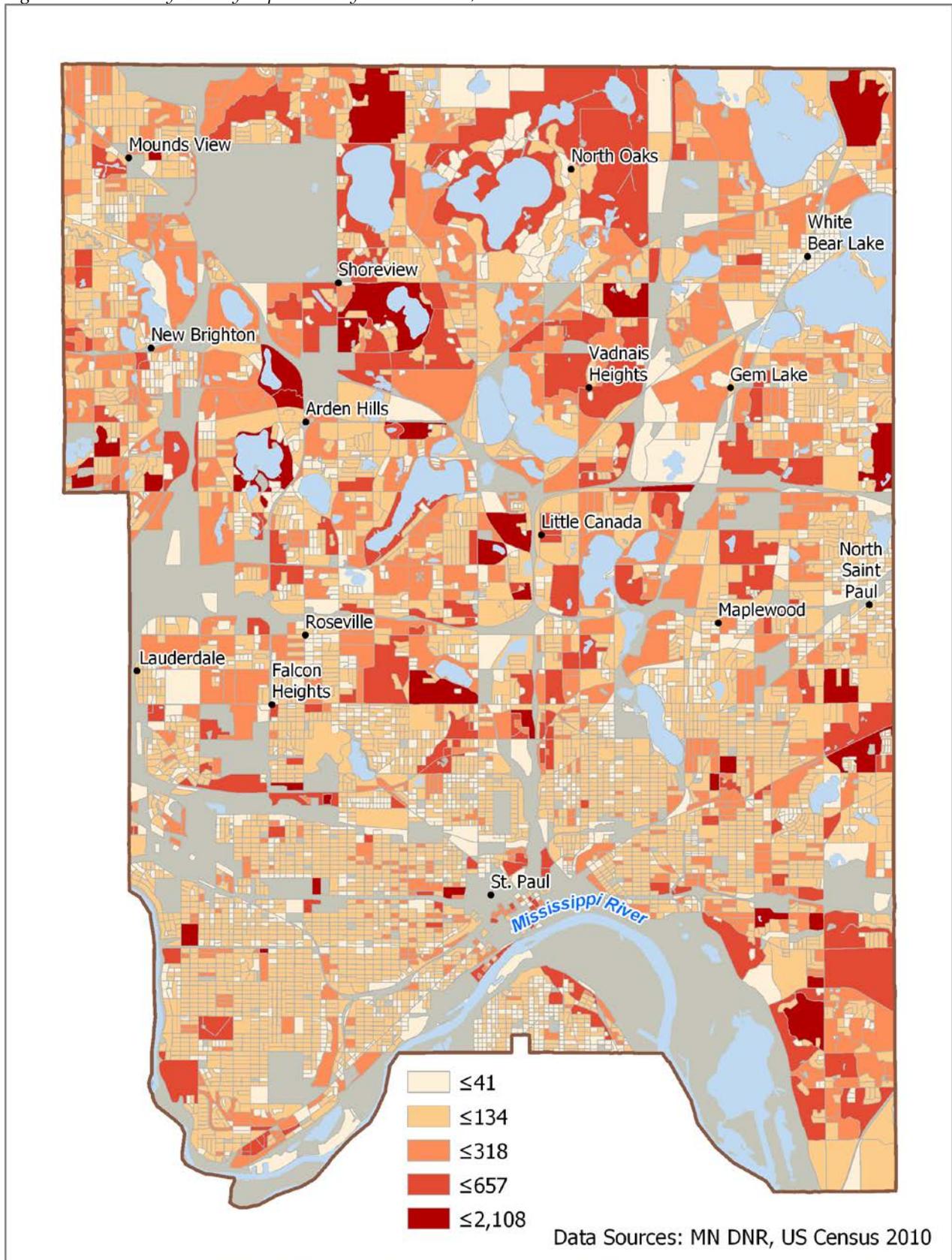


Figure A - 3. Fire Departments and Fire Response Times in Minutes in Ramsey County

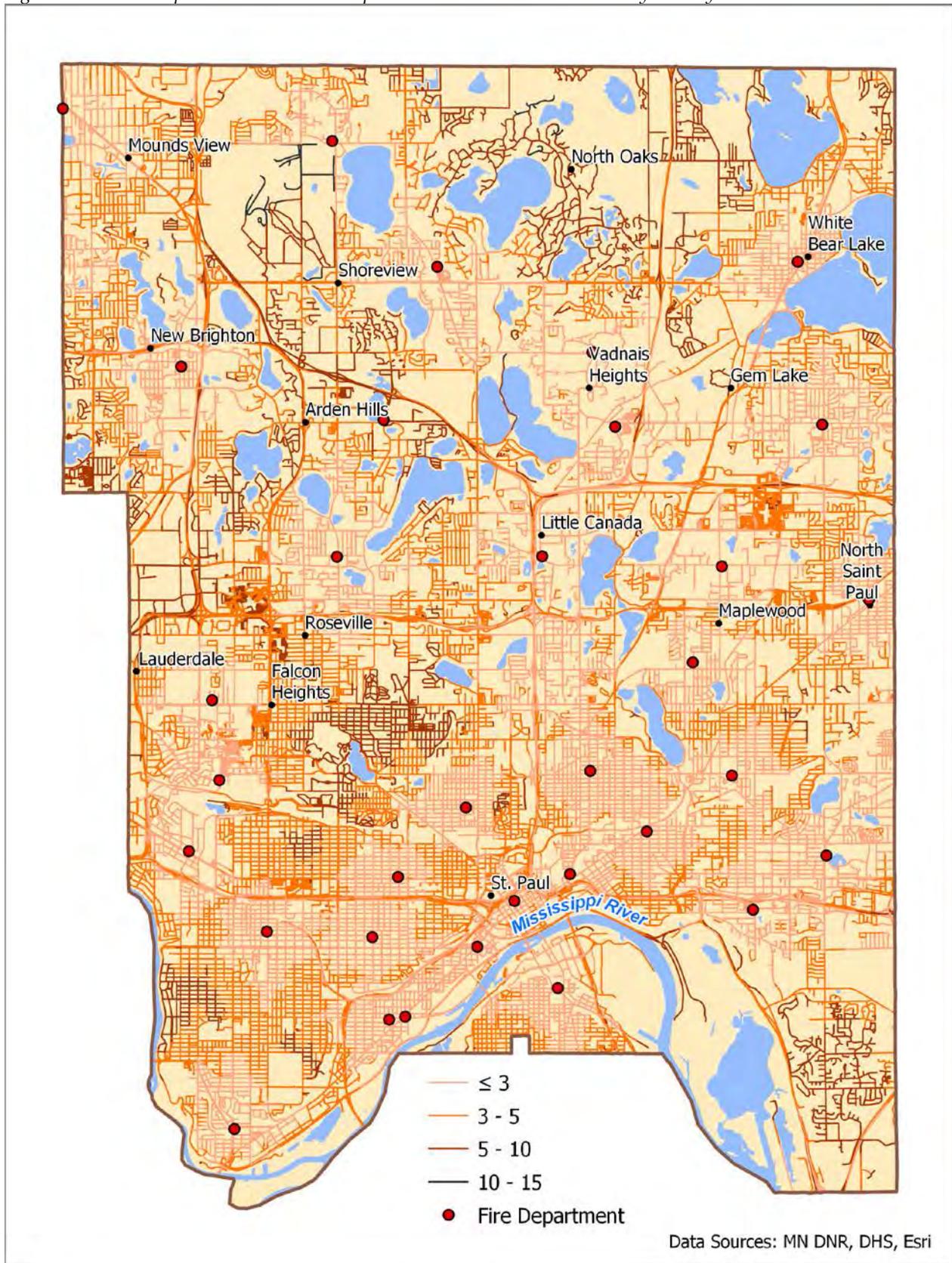


Figure A - 4. Ramsey County Public Safety and Government Services

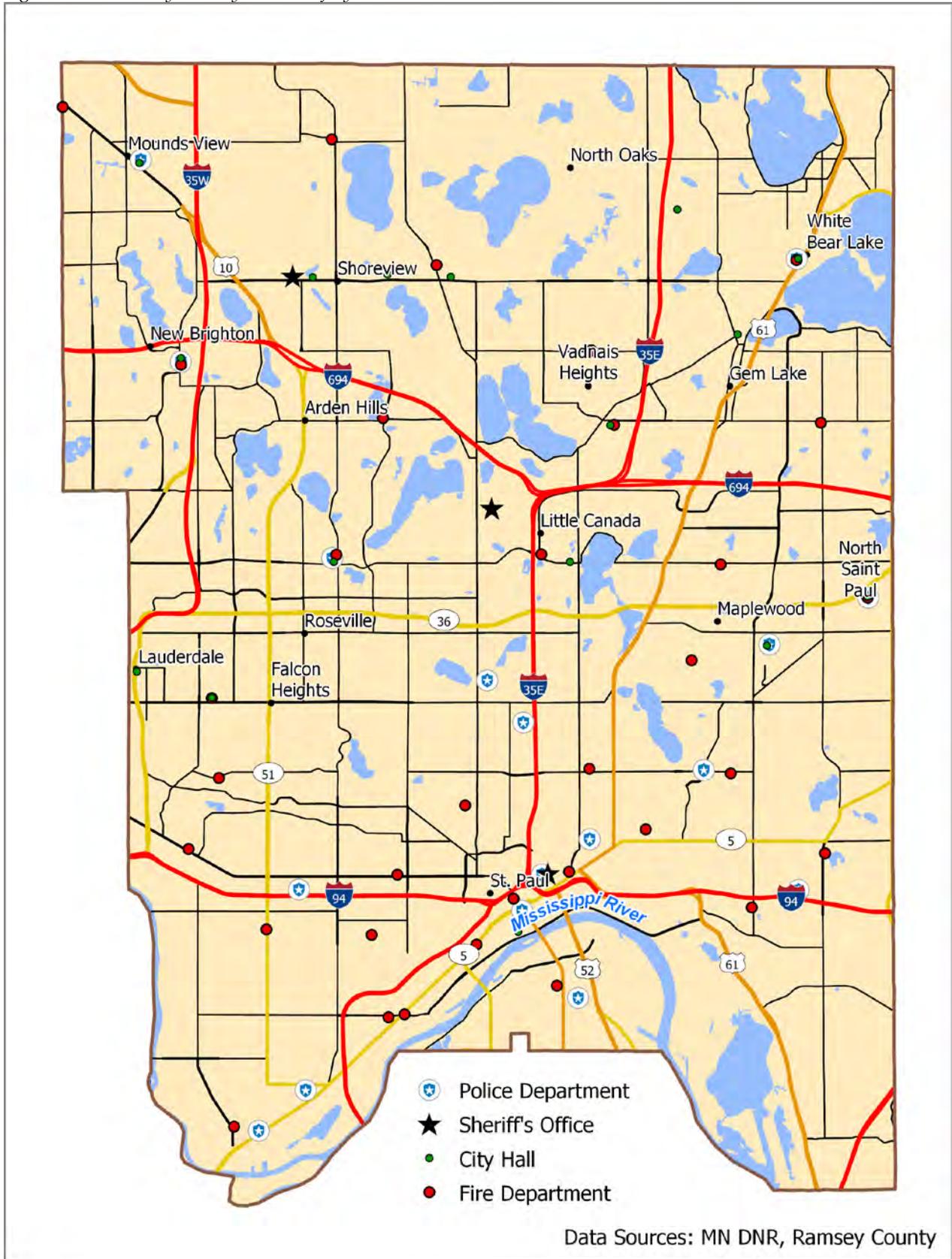


Figure A - 5. Ramsey County Utilities and Communication Infrastructure

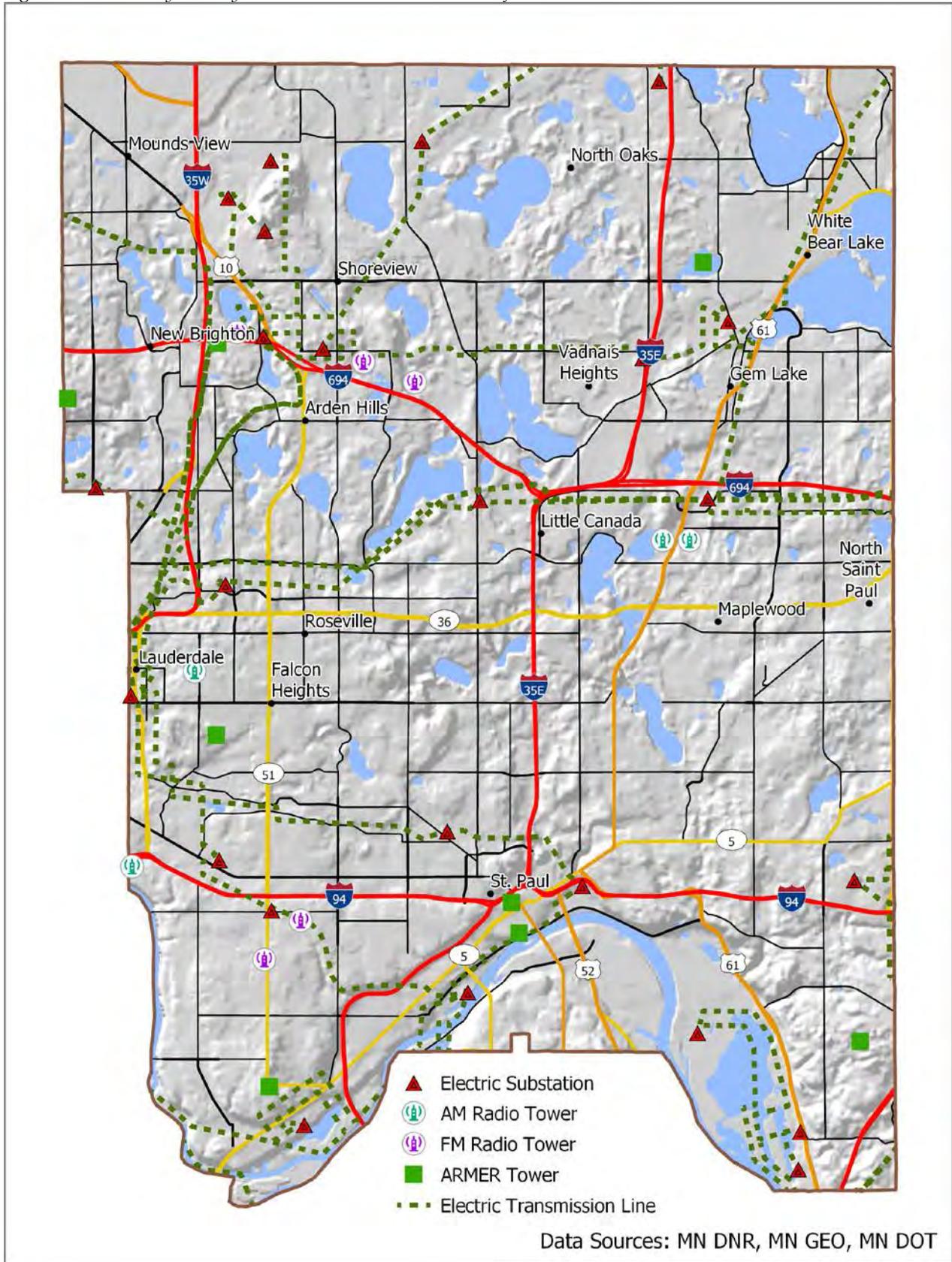


Figure A - 6. Ramsey County Transportation Infrastructure

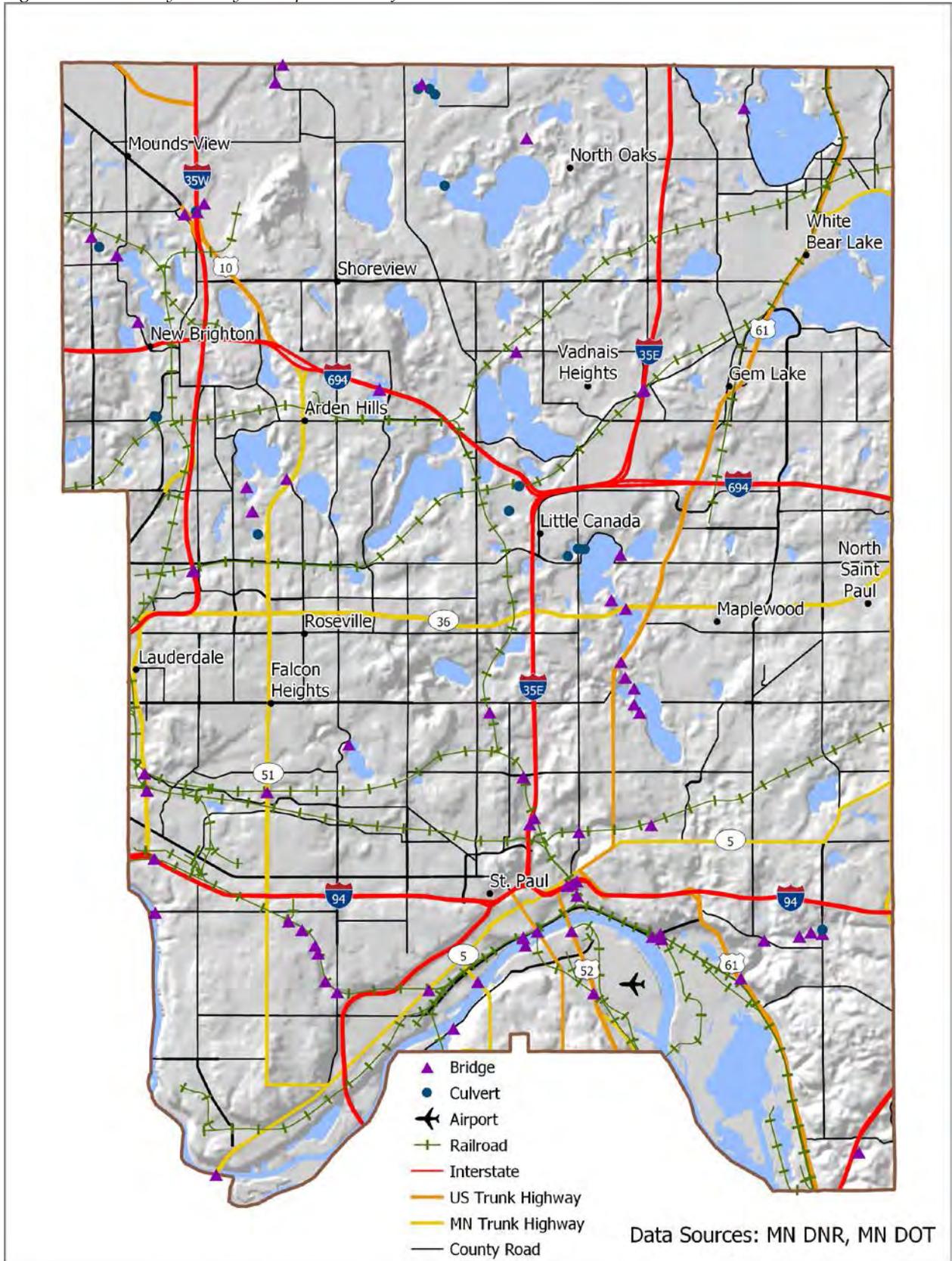


Figure A - 7. Ramsey County Land Cover, National Land Cover Database, 2011

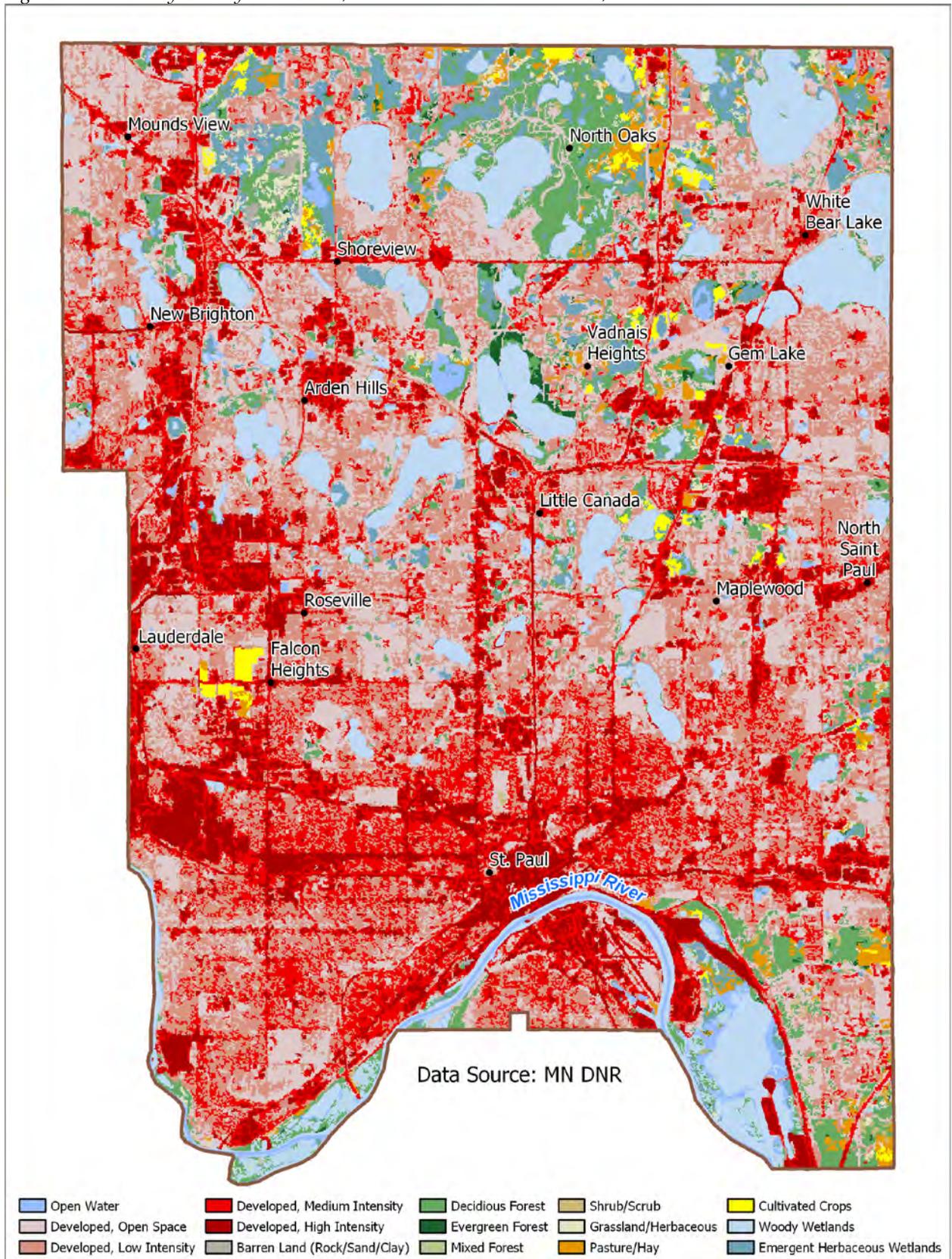


Figure A - 8. Ramsey County Land Ownership by Agency

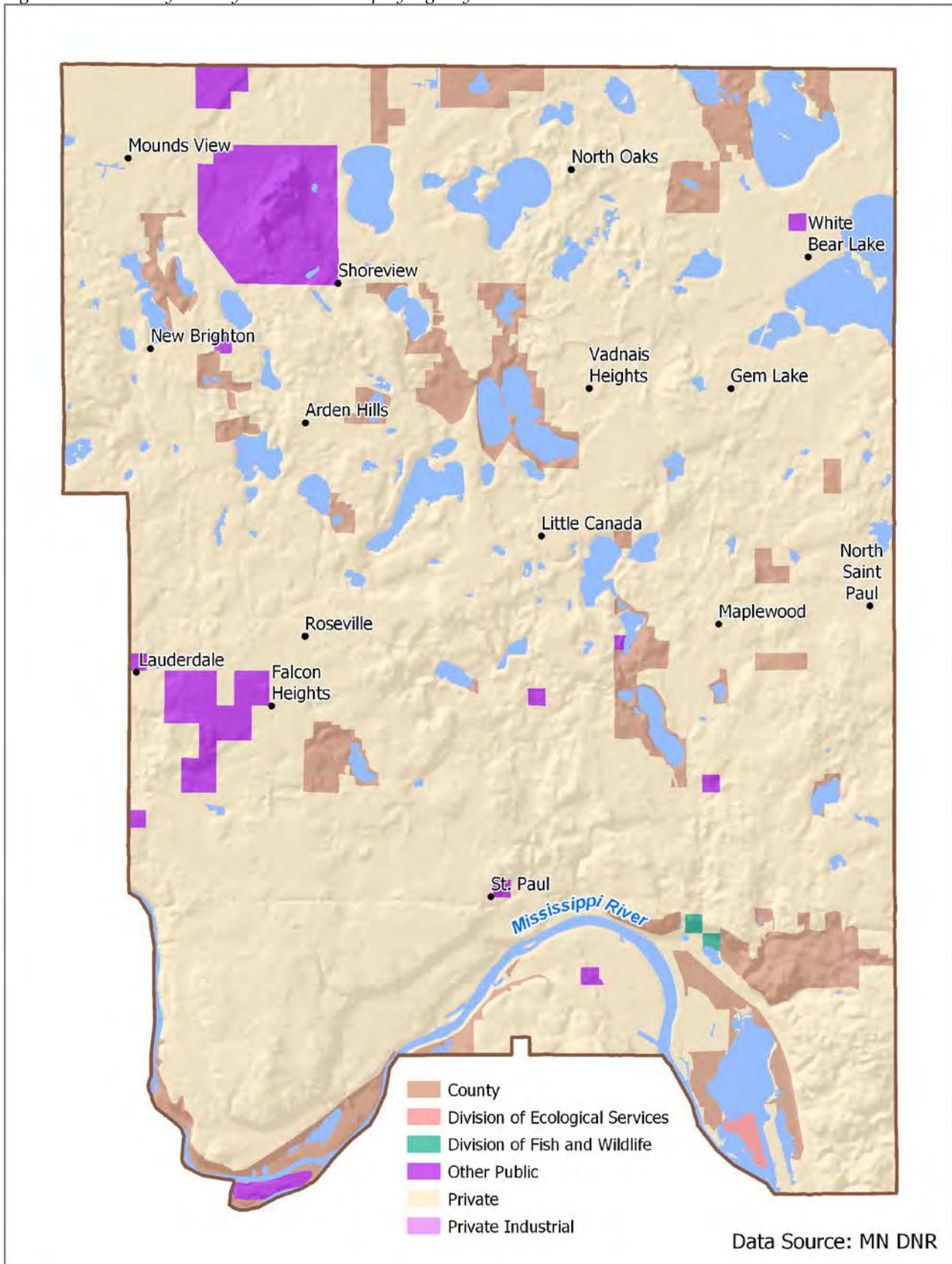


Figure A - 9. Most Recent Severe Wind and Hail Storms in Ramsey County

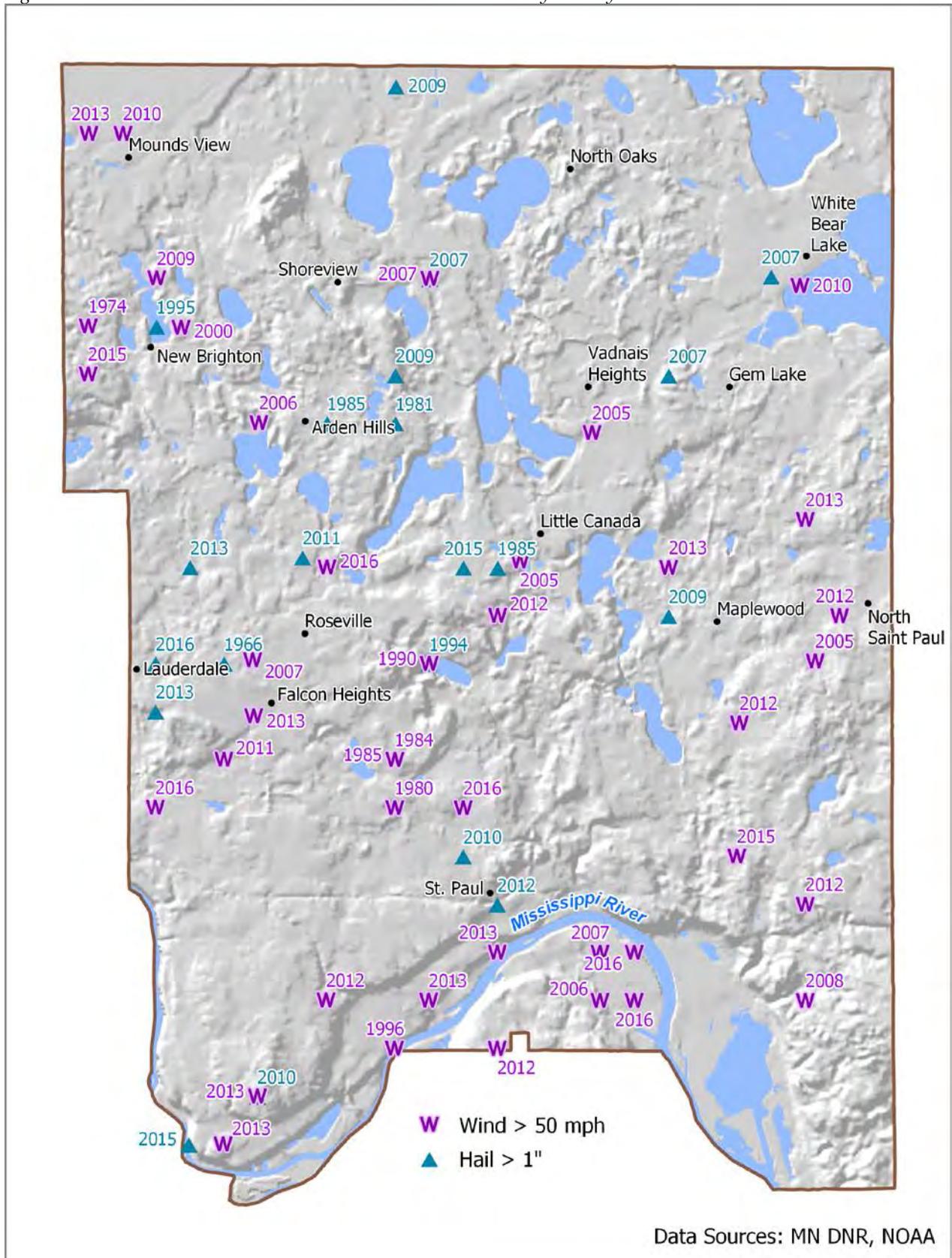


Figure A - 10. Tornado Touchdowns and Paths in Ramsey County

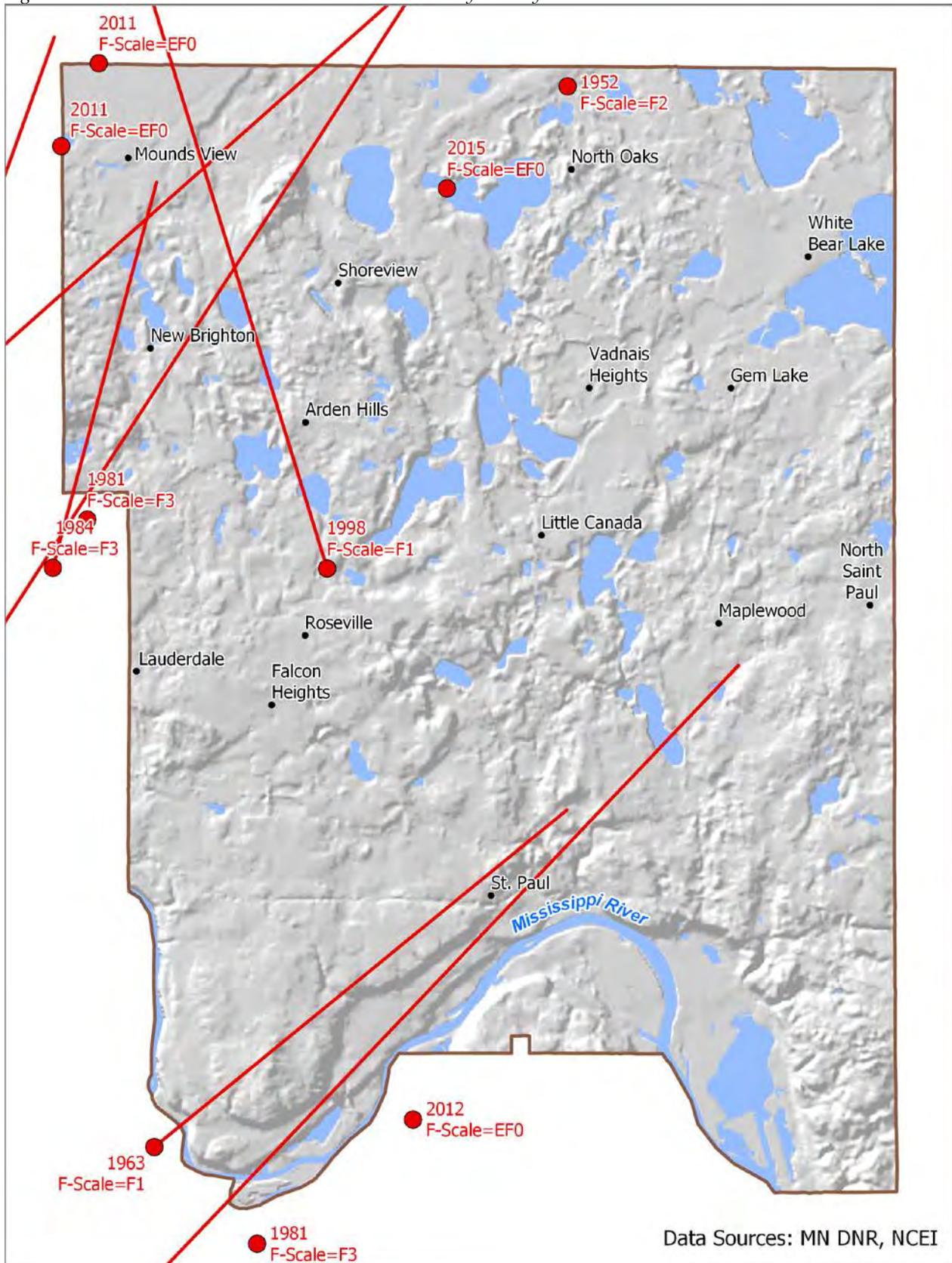


Figure A - 11. Dams in Ramsey County

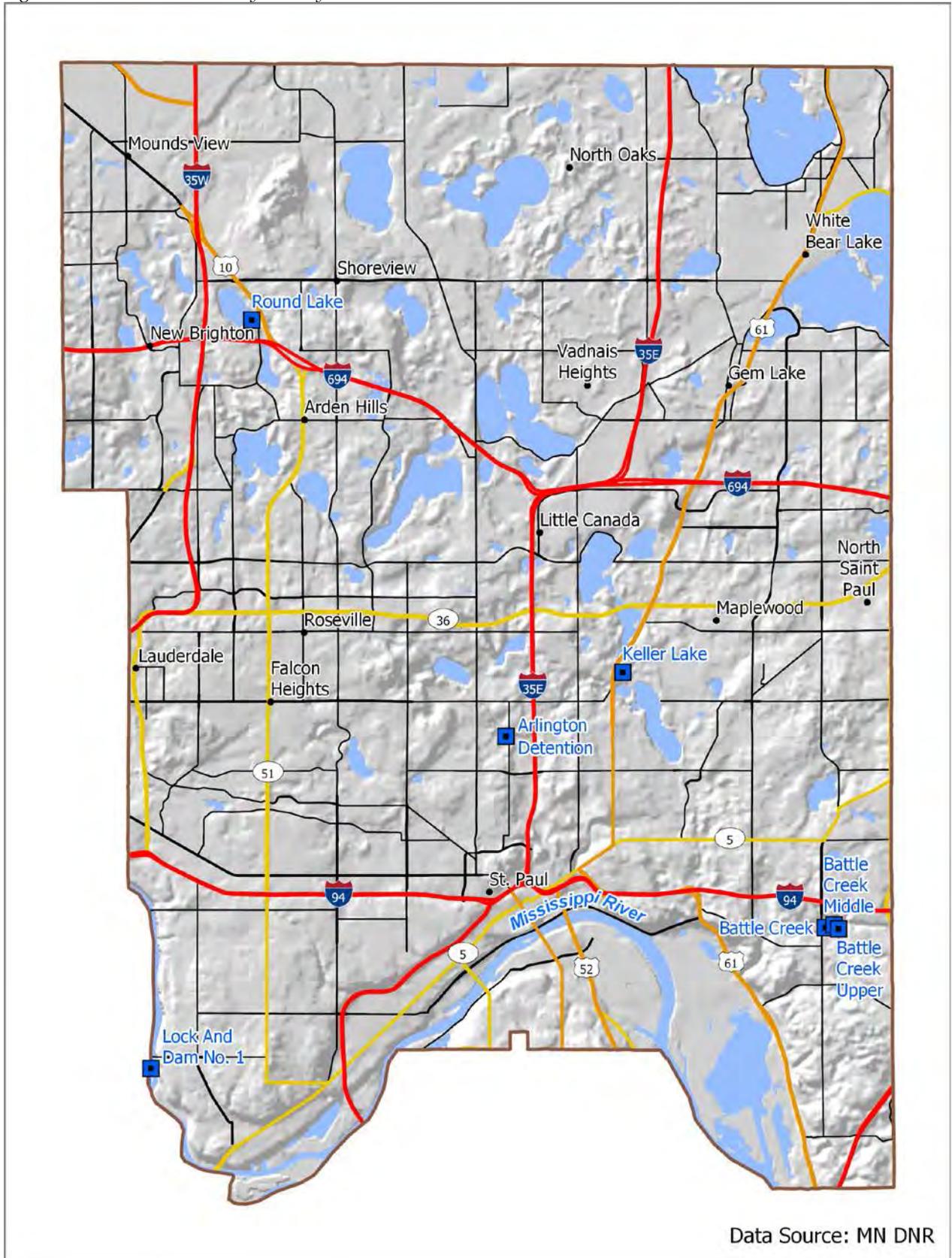


Figure A - 12. Sites with Hazardous or Chemical Waste in Ramsey County

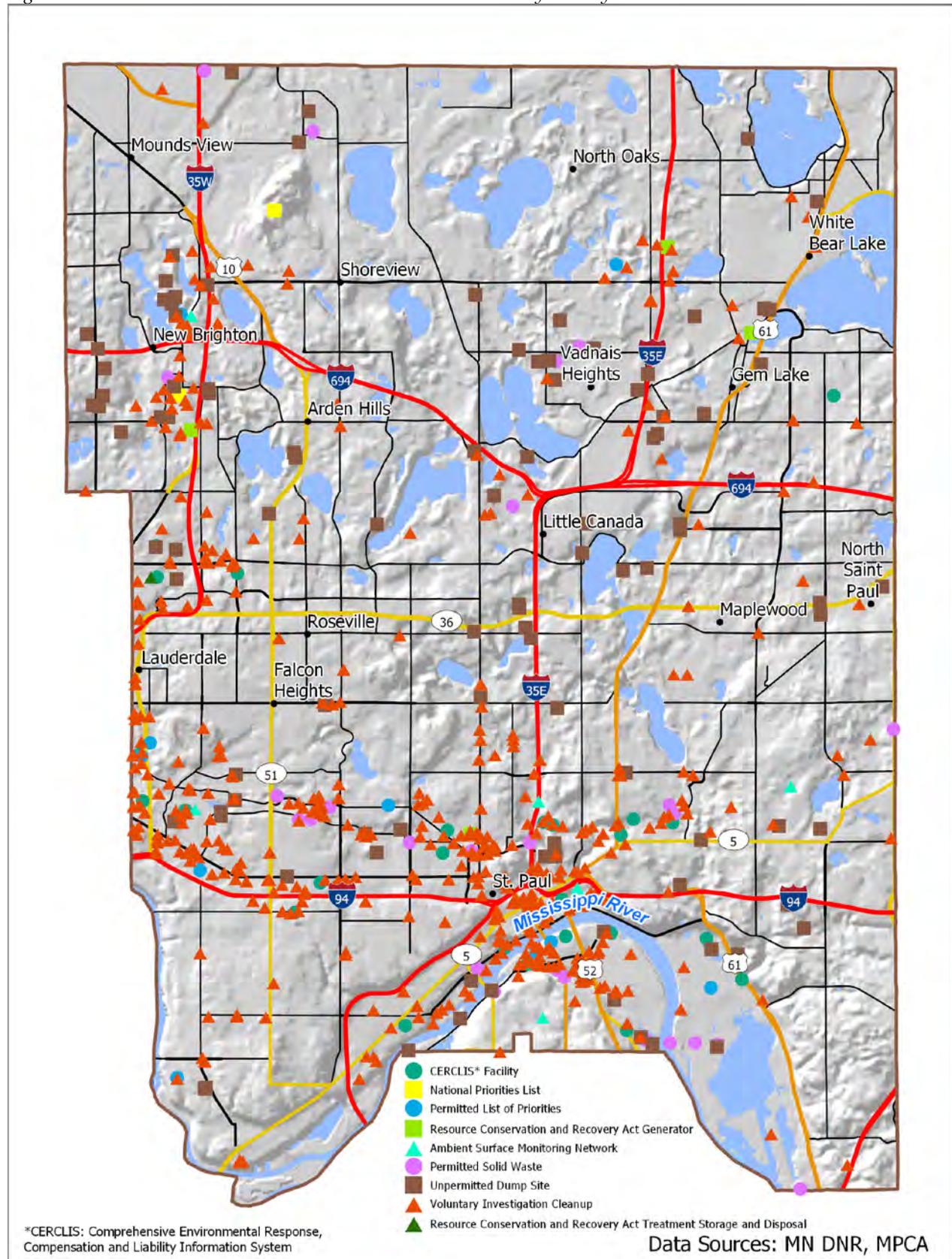


Figure A - 13. Health Care Providers in Ramsey County

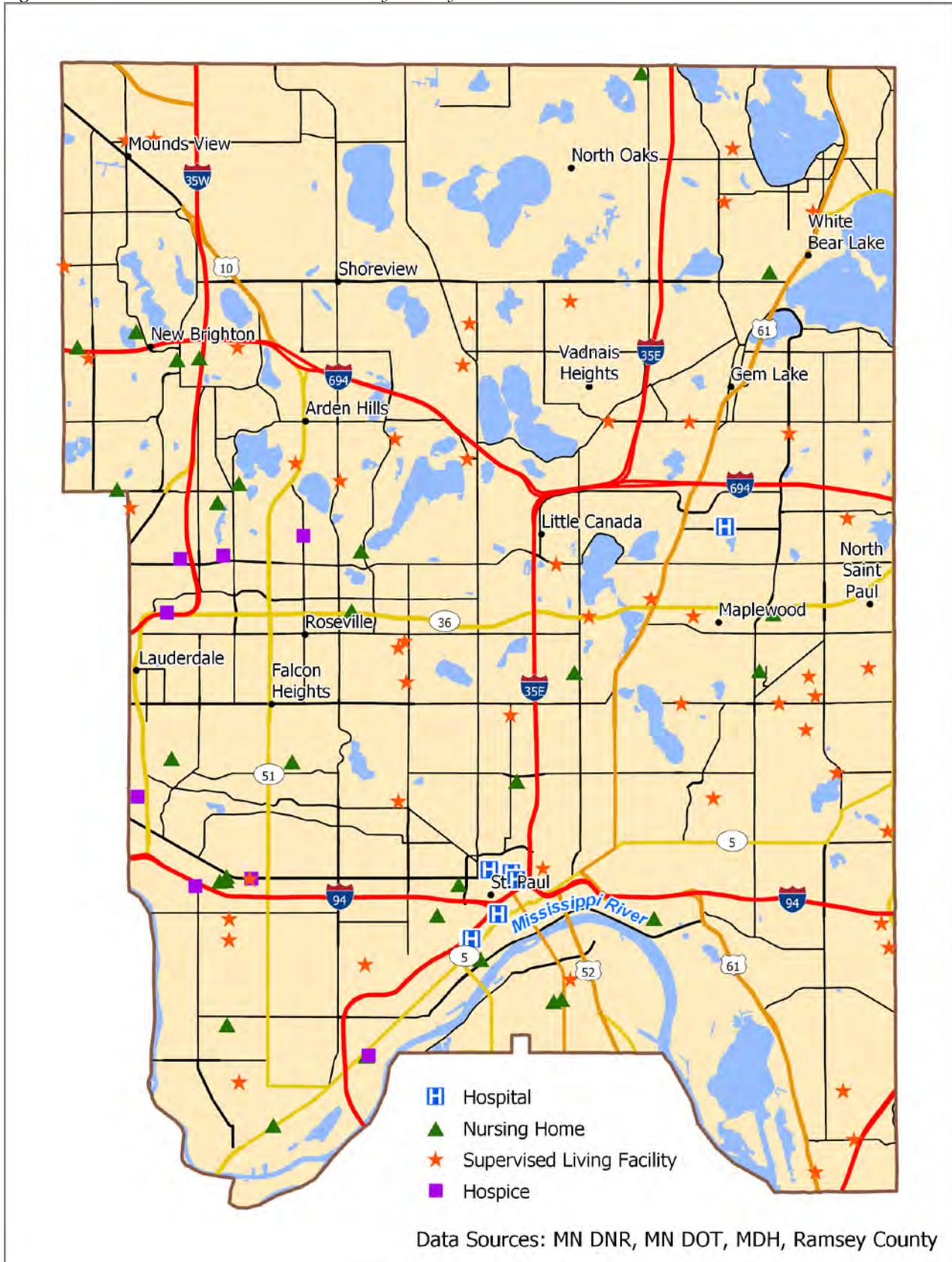


Figure A - 14. Ramsey County Aquifer Vulnerability and Public Wells

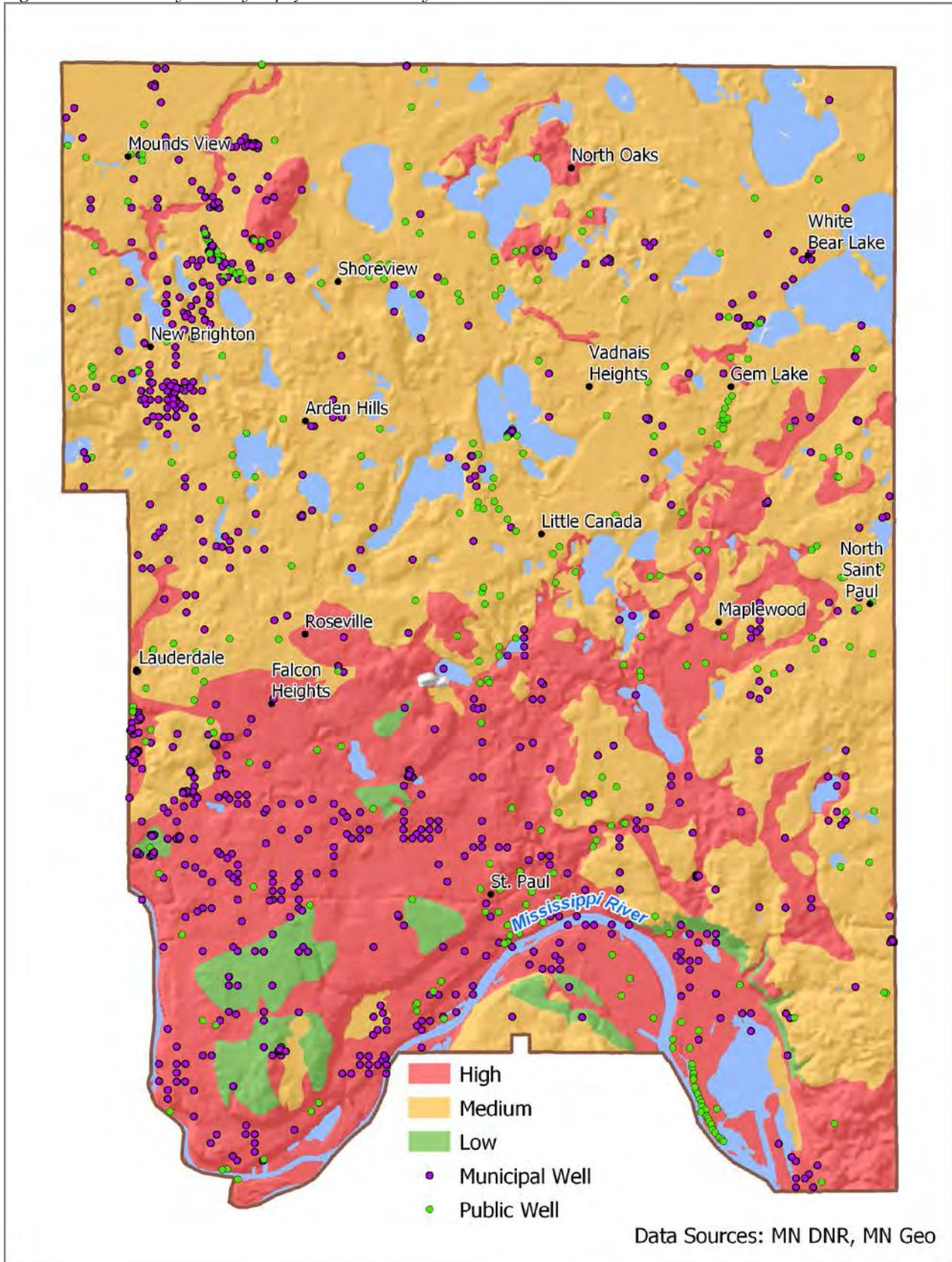


Figure A - 15. Critical Facilities in Ramsey County

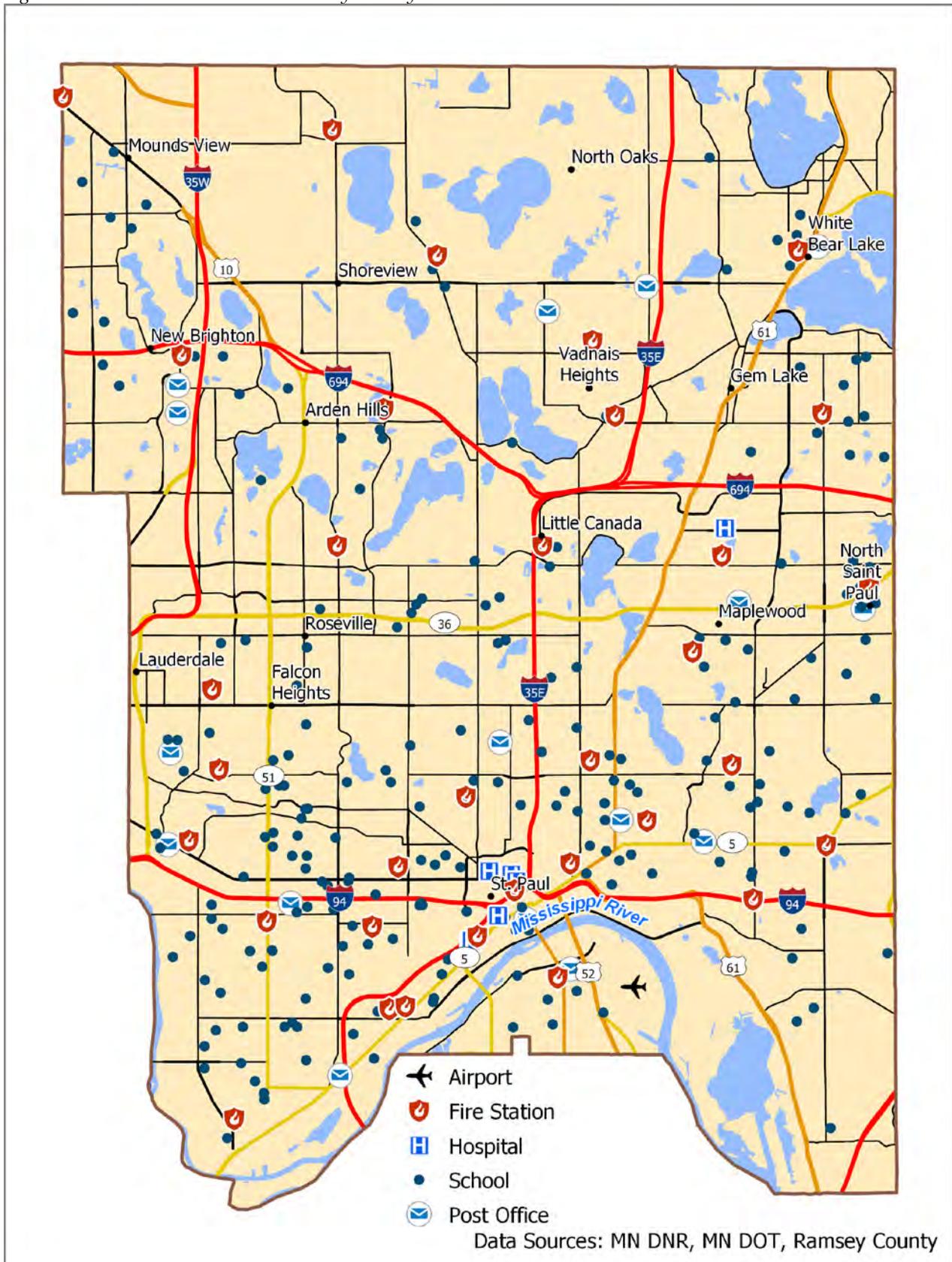


Figure A - 16. Critical Facilities in Maplewood

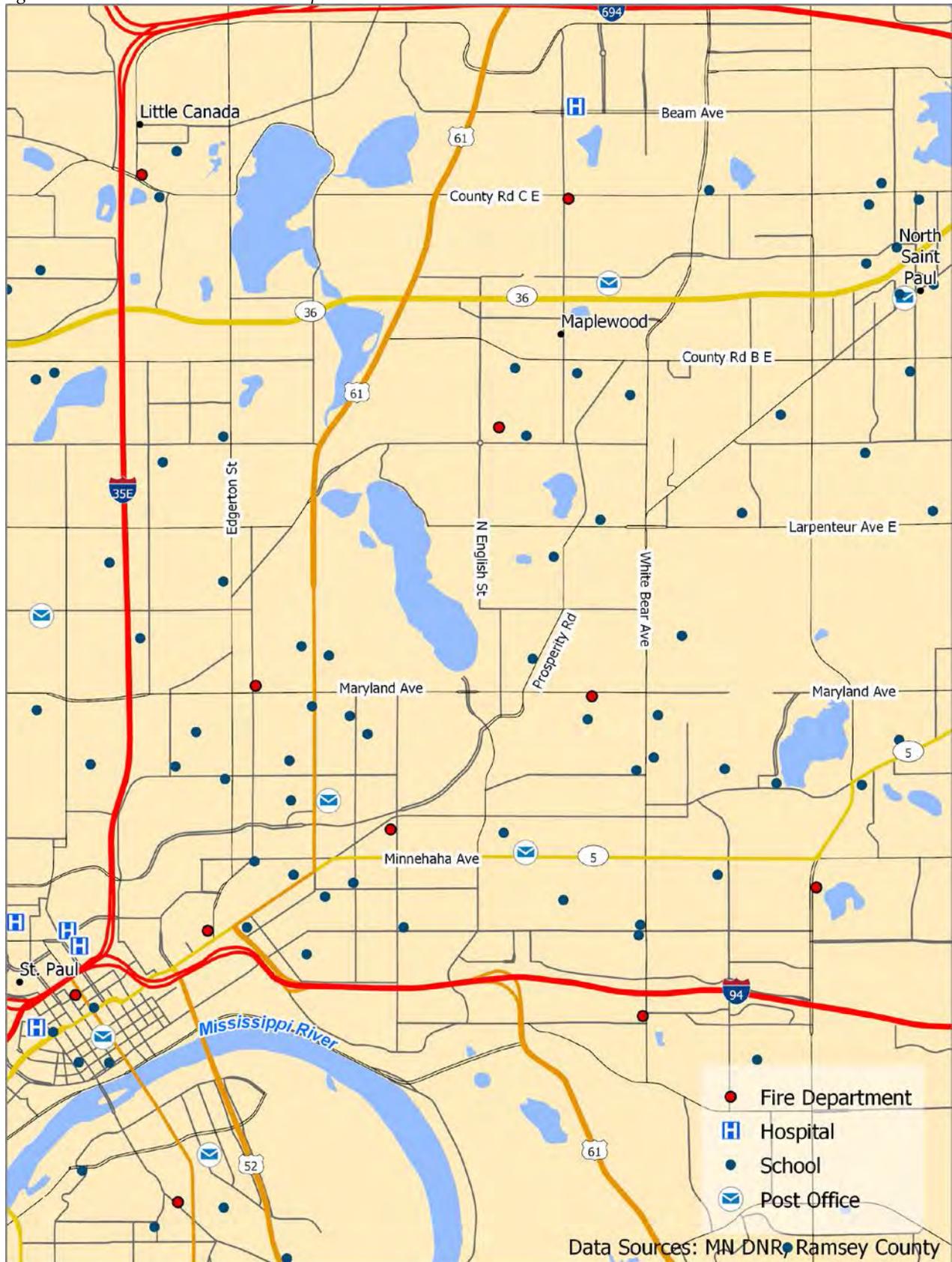


Figure A - 17. Critical Facilities in Roseville

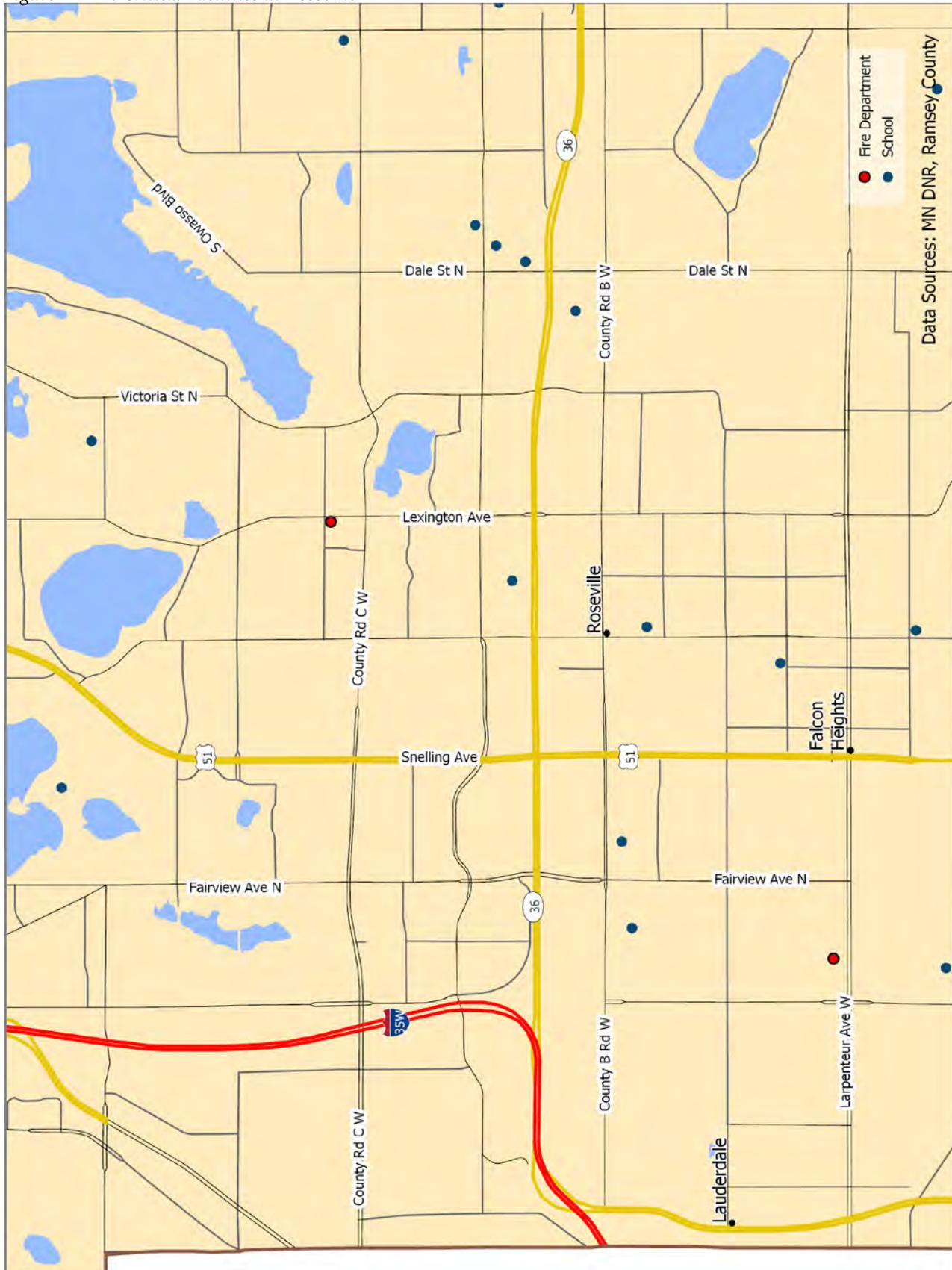


Figure A - 18. Wildfires by Acres Burned (1985-March 2017) and Peat Soil Areas in Ramsey County

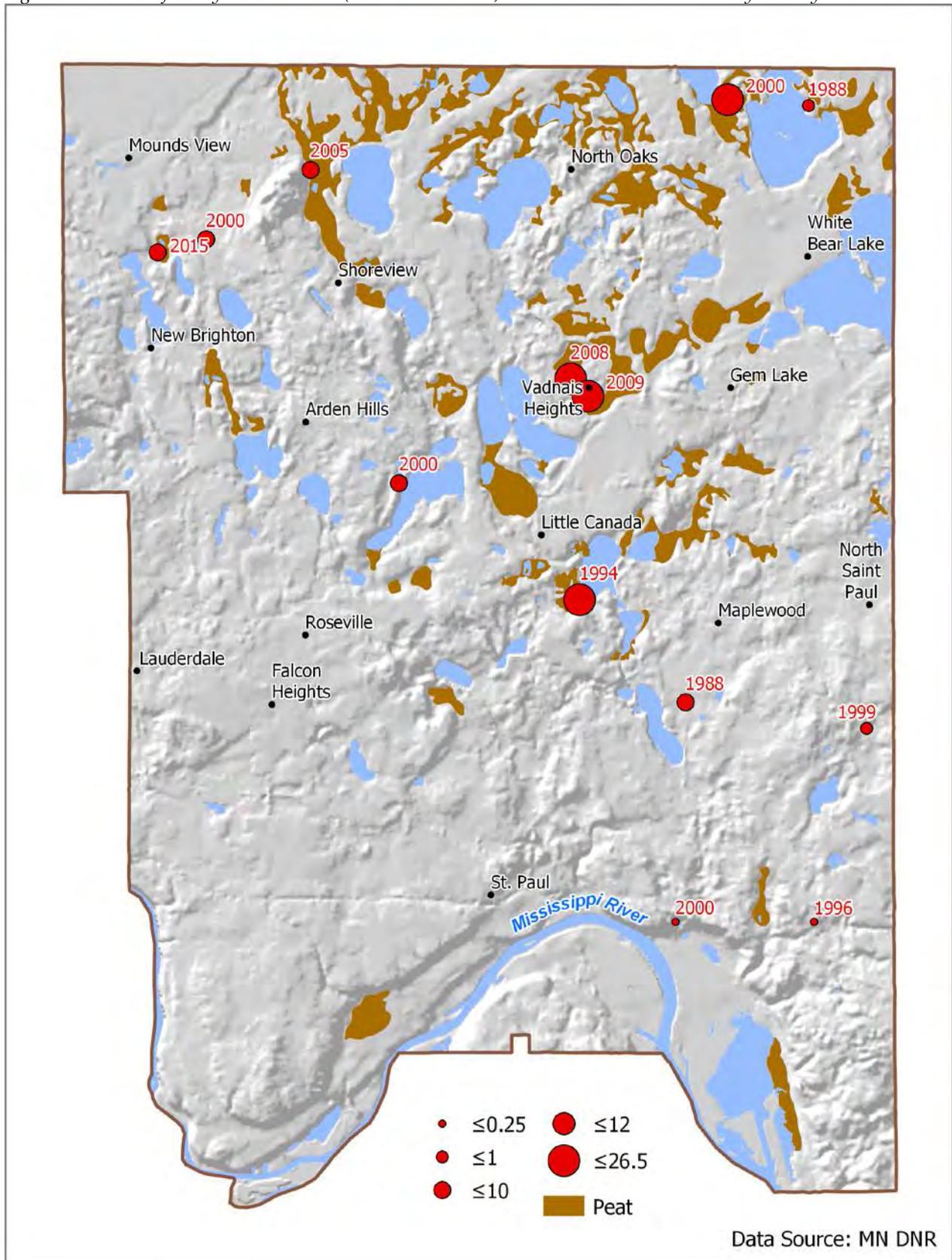


Figure A - 19. 100-Year Floodplain in Ramsey County

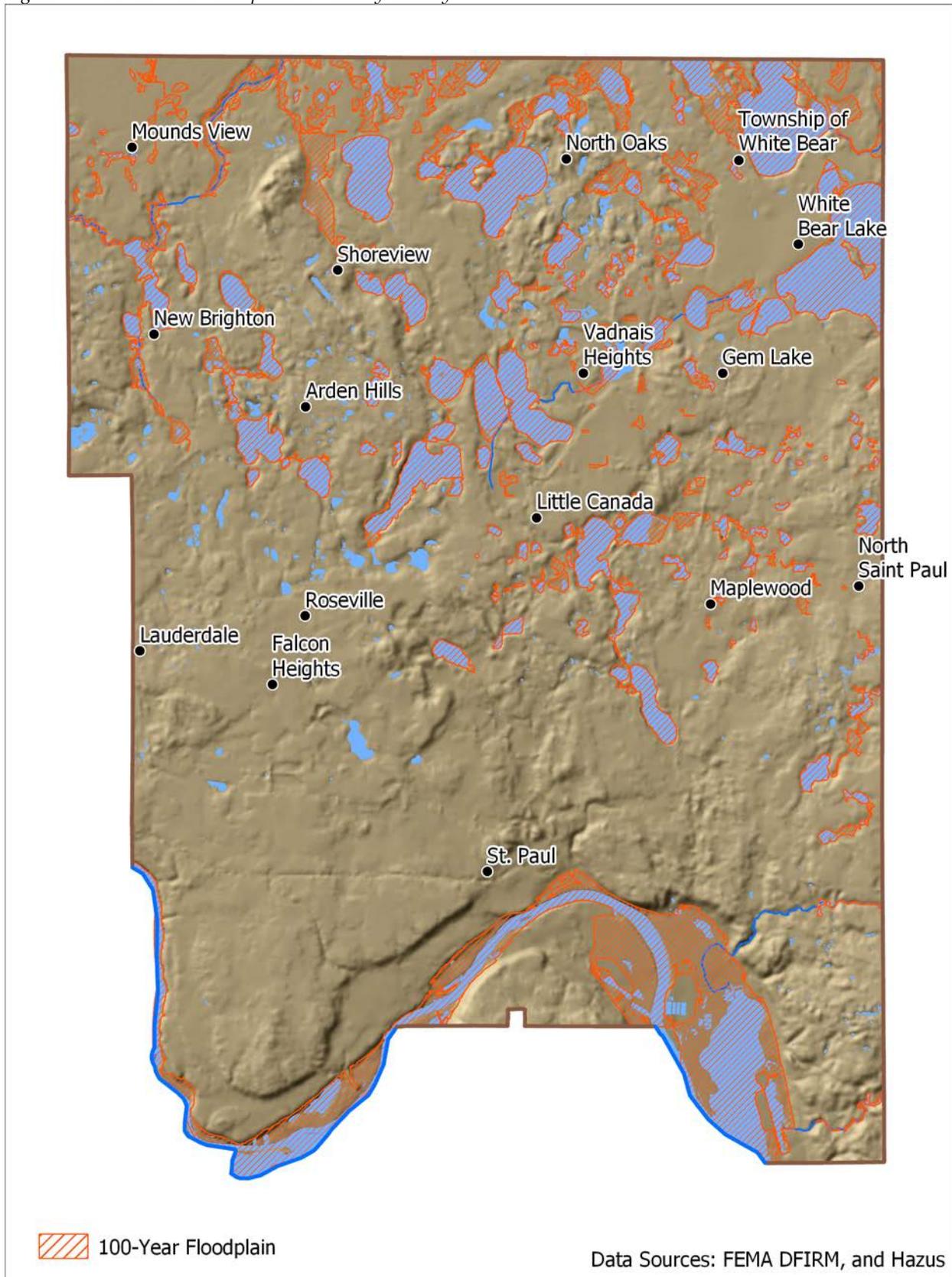


Figure A - 20. Estimated Economic Building-Related Loss, by Census Block, within the 100-Year Floodplain

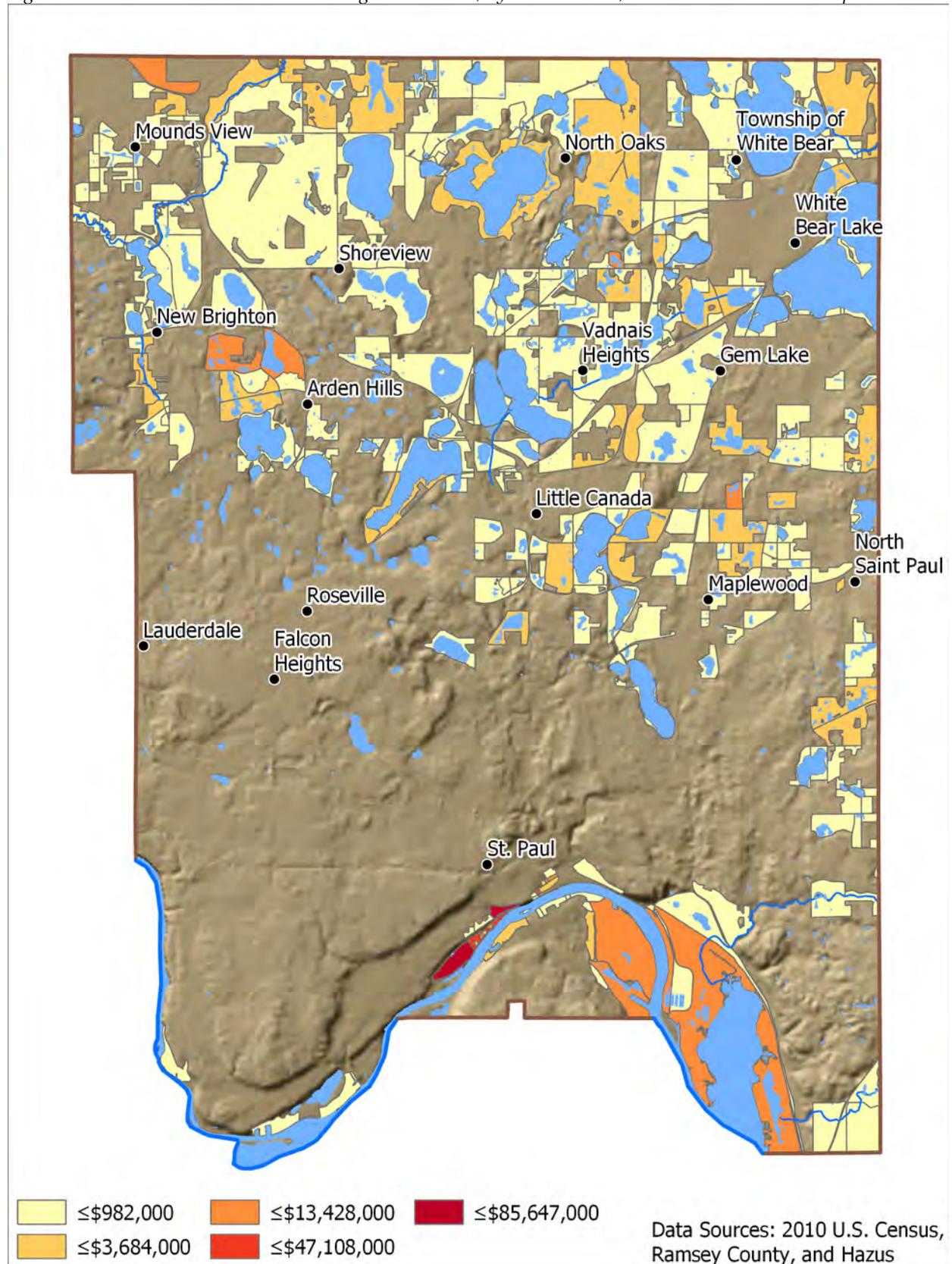


Figure A - 21. 100-Year Flood Building-Related Loss Estimates, by Census Block, Maplewood

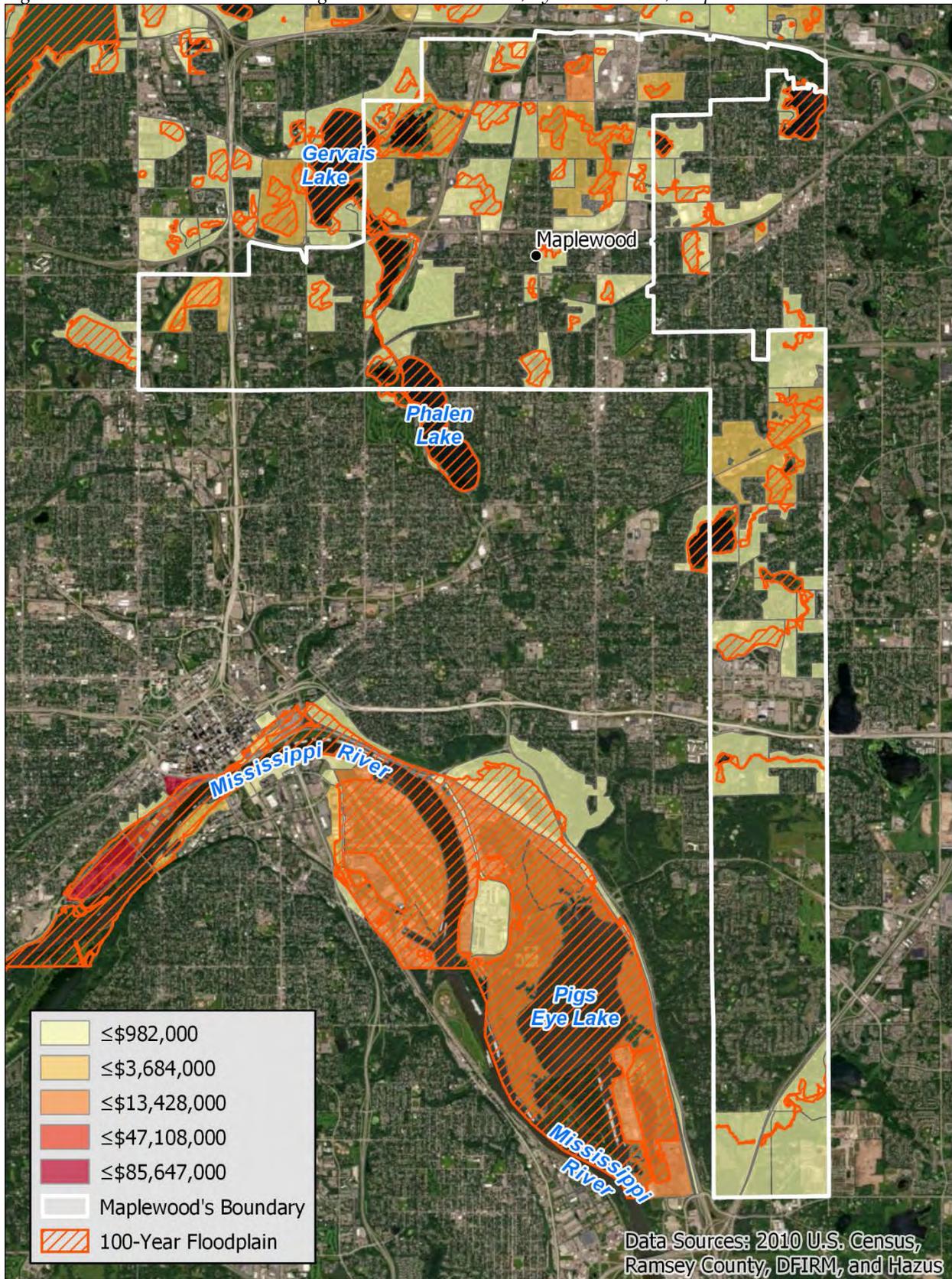


Figure A - 22. 100-Year Flood Building-Related Loss Estimates, by Census Block, Roseville

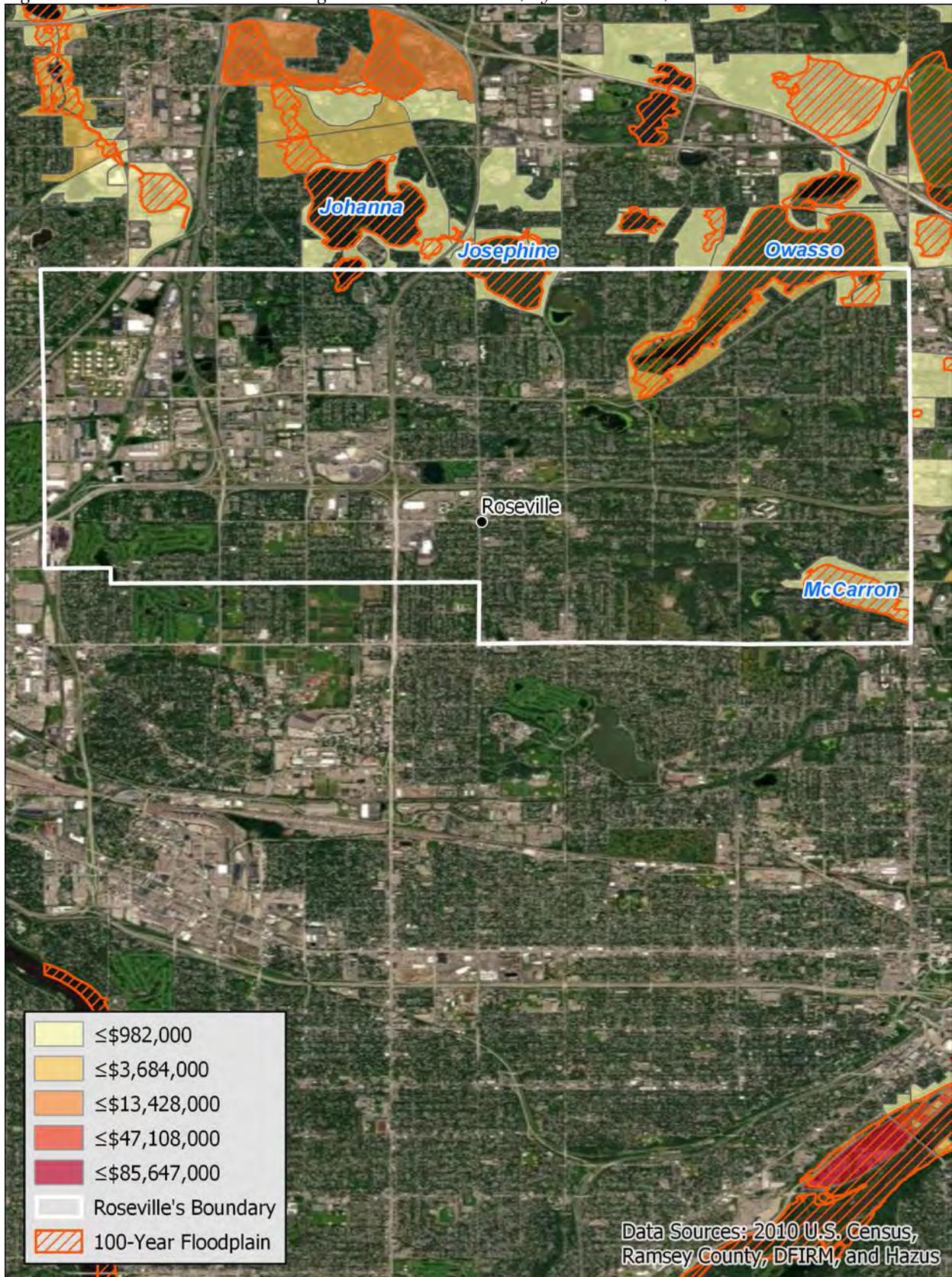


Figure A - 23. 100-Year Flood Building-Related Loss Estimates, by Census Block, Shoreview

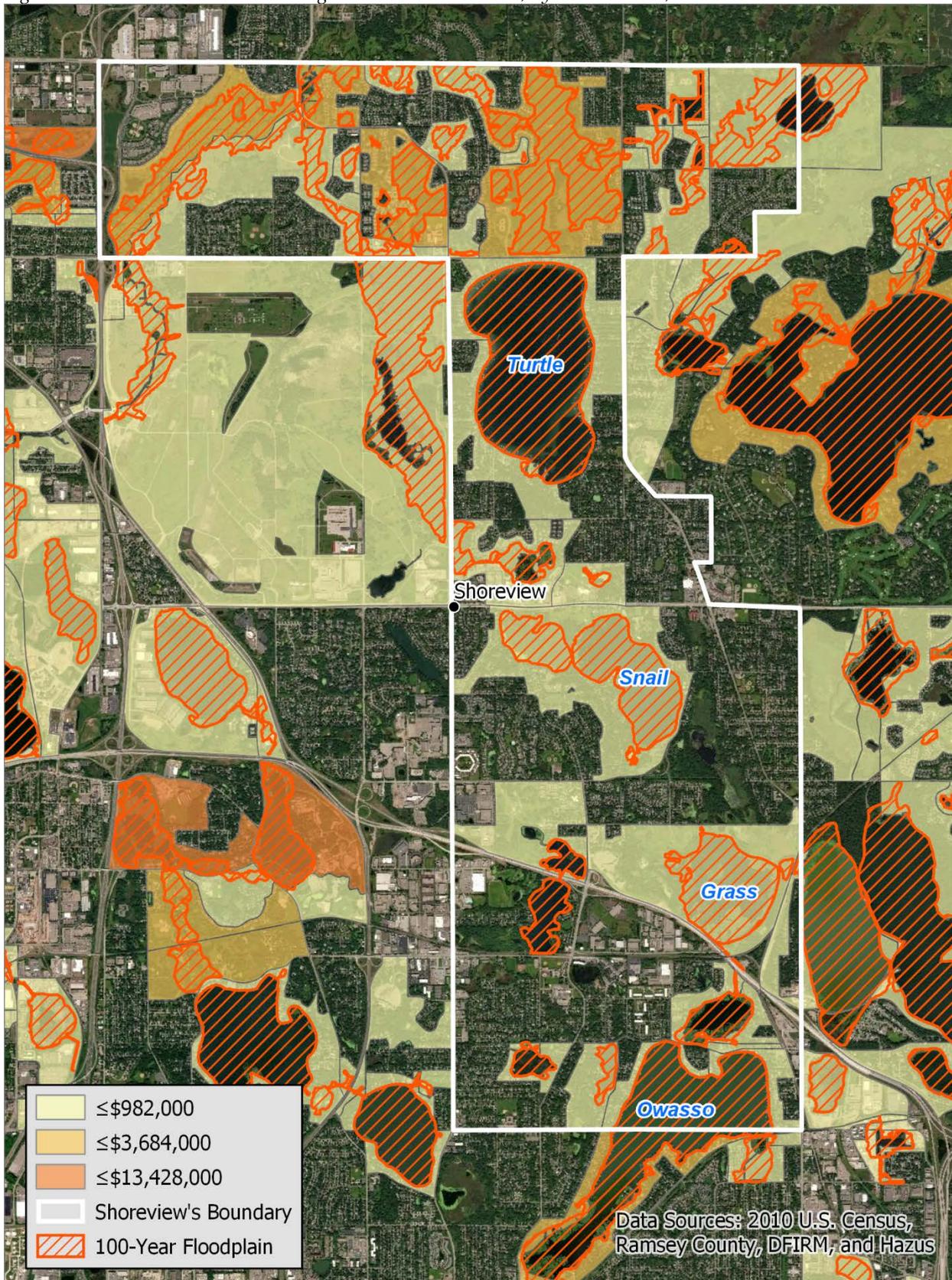


Figure A - 24. Census Block #271230424012022 and 100-Year Floodplain in Maplewood

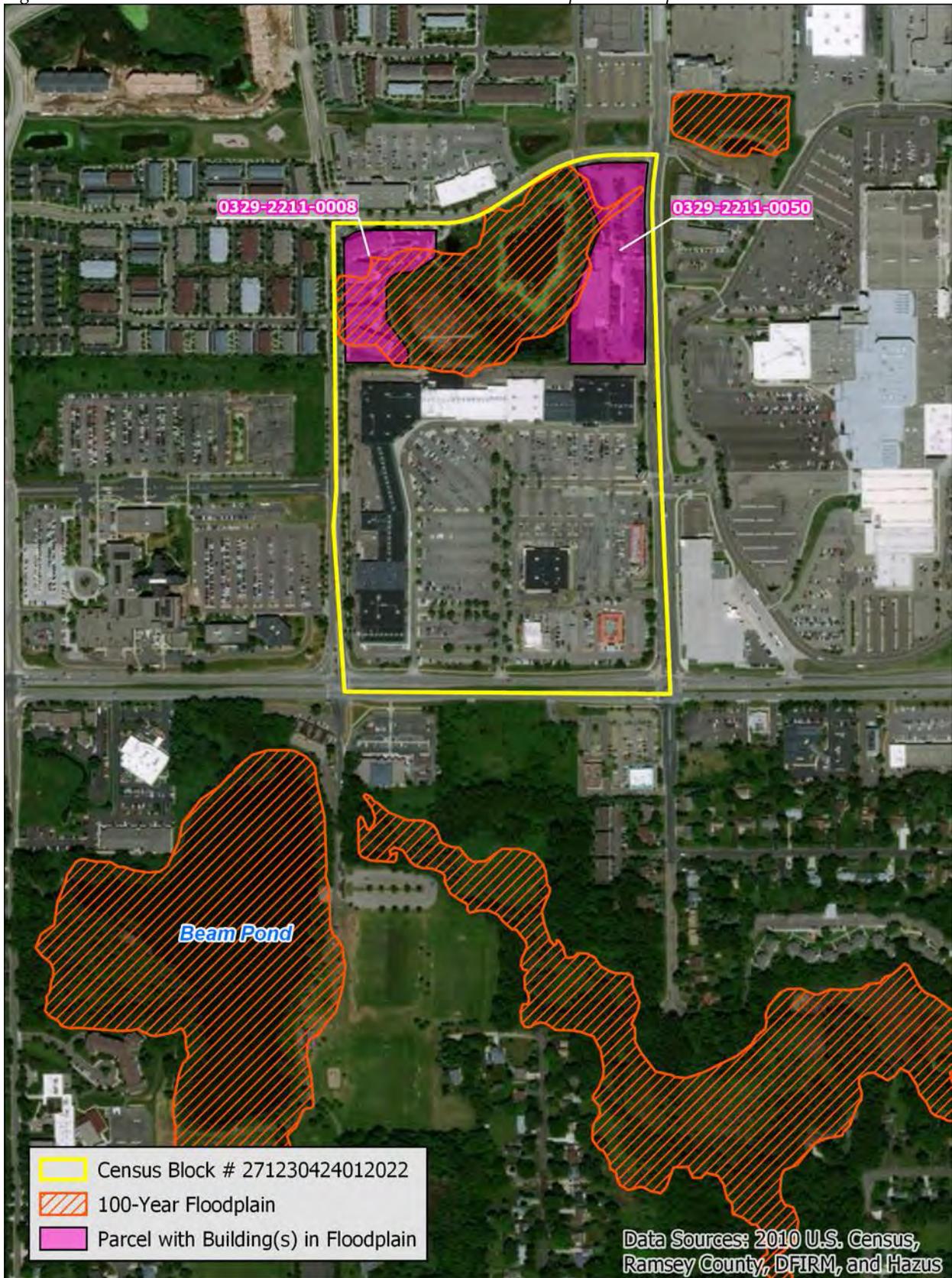


Figure A - 25. Census Block #271230406012032 and 100-Year Floodplain in White Bear Township



Figure A - 26. Census Block #271230409012003 and 100-Year Floodplain in Mounds View

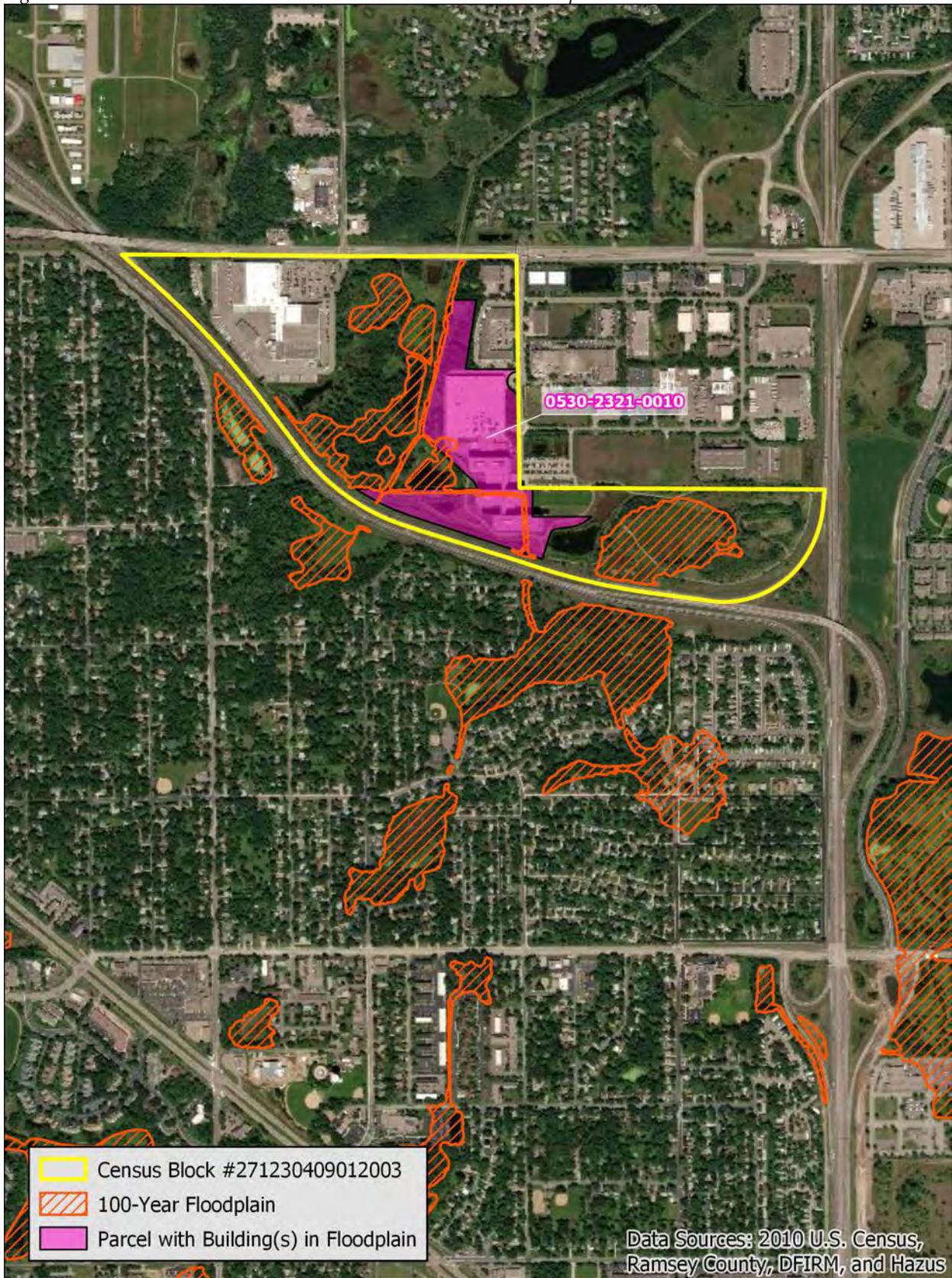
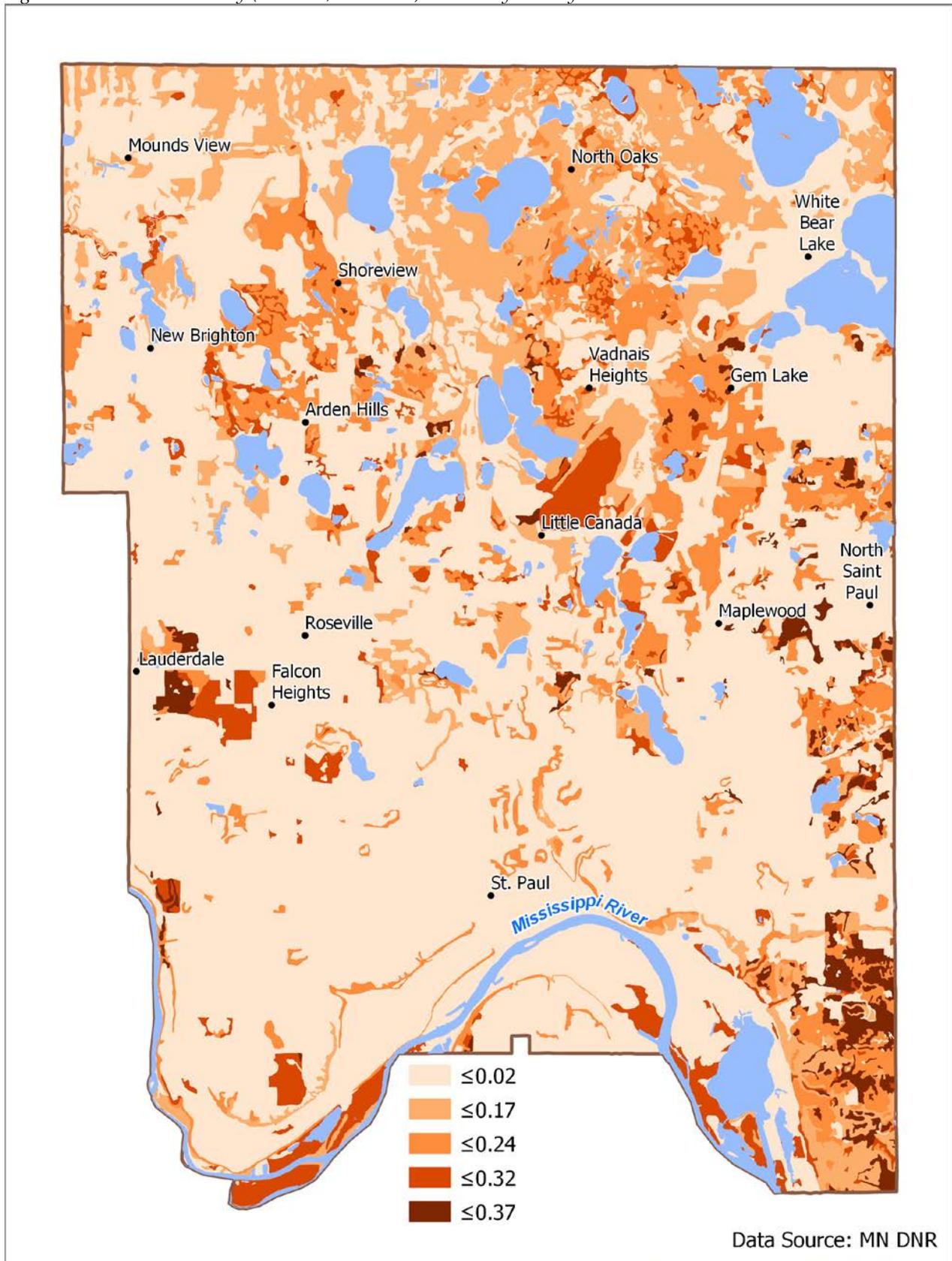


Figure A - 27. Soil Erodibility (K Factor, Rock Free) in Ramsey County



# **Appendix B**

## **Ramsey County Critical Facilities**

Agriculture & Food					
Cub Foods	3717 Lexington Avenue N	Arden Hills	MN	55112	651-486-7933
Land O' Lakes, Inc.	4001 Lexington Avenue N	Arden Hills	MN	55126	651-375-2222
Northwestern Foods, Inc / Oziama	1260 Grey Fox Road	Arden Hills	MN	55112	651-644-8060
Surya India Foods	3531 Lexington Avenue N	Arden Hills	MN	55112	651-333-1234
Aldi	2350 Rice Street	Little Canada	MN	55113	855-955-2534
Dollar Tree	2900 Rice Street #200	Little Canada	MN	55113	651-486-7149
Agropur	2080 Rice Street	Maplewood	MN	55113	651-487-1471
Aldi	3000 White Bear Avenue	Maplewood	MN	55109	651-955-2534
Borchert's Meat Market	1344 Frost Avenue	Maplewood	MN	55109	651-777-9133
Costco Wholesale	1431 Beam Avenue	Maplewood	MN	55109	612-486-1740
Cub Foods	100 County Road B East	Maplewood	MN	55117	651-489-8217
Cub Foods	2390 White Bear Avenue	Maplewood	MN	55109	651-773-8558
Dollar Tree	1727 Beam Avenue E	Maplewood	MN	55109	651-777-3511
Knowlan's Fresh Foods	2720 Stillwater Road E	Maplewood	MN	55119	651-739-9055
Rainbow Foods - Maplewood	2501 White Bear Avenue N	Maplewood	MN	55109	651-777-7849
Ramsey County Extension Office	2020 White Bear Avenue	Maplewood	MN	55109	651-704-2080
Aldi	2537 Mounds View Boulevard	Mounds View	MN	55112	855-955-2534
Aramark - Office Coffee & Water Services	2220 County Road H2	Mounds View	MN	55112	952-946-1438
Dollar General	2573 Mounds View Boulevard	Mounds View	MN	55112	763-786-5993
Sysco Minnesota	2400 County Road J	Mounds View	MN	55112	763-785-9000
Tyson Companies	4825 Mustang Circle	Mounds View	MN	55112	763-783-9999
Cub Foods	2600 Rice Creek Road	New Brighton	MN	55112	651-636-2695
Dollar Tree	2120 Silver Lake Road NW	New Brighton	MN	55112	651-636-4005
H Brooks & Company	600 Lakeview Point	New Brighton	MN	55112	651-635-0126
Mission Foods	1565 1st Avenue NW	New Brighton	MN	55112	651-697-5500
Target Stores	2199 Highway 36	North Saint Paul	MN	55109	651-779-5986
Aldi	2005 Twin Lakes Parkway	Roseville	MN	55113	855-955-2534
Anderson Produce	2296 Terminal Road	Roseville	MN	55113	651-636-2711
Basciani Foods, Inc	3115 Long Lake Road	Roseville	MN	55113	651-797-4832
Cub Foods	1201 Larpenteur Avenue W	Roseville	MN	55113	651-488-1825
Cub Foods	2100 Snelling Avenue	Roseville	MN	55113	651-633-9740
Dollar Tree	1121 Larpenteur Avenue W	Roseville	MN	55113	651-489-8870
Dollar Tree	2401 Fairview Avenue N	Roseville	MN	55113	651-582-0440
Lunds & Byerlys	1601 County Road C West	Roseville	MN	55113	651-633-6949
Metz Baking Company	2745 Long Lake Road	Roseville	MN	55113	651-626-8400

Agriculture & Food					
Mission Foods	2811 Fairview Avenue N	Roseville	MN	55113	651-697-7085
Old Dutch Foods, Inc	2375 Terminal Road	Roseville	MN	55113	651-633-8810
Premier Food Products, Inc	2804 Fairview Avenue N	Roseville	MN	55113	651-287-3663
Target Stores	1515 County Road B West	Roseville	MN	55113	651-631-0330
Walmart	1960 Twin Lakes Parkway	Roseville	MN	55113	651-788-1303
Fresh & Natural Foods	1075 Highway 96 W	Shoreview	MN	55126	651-203-3663
Kowalski's Market	441 Highway 96 W	Shoreview	MN	55126	651-313-6868
Target Stores	3800 Lexington Avenue N	Shoreview	MN	55126	651-486-0048
Trader Joe's	1041 Red Fox Road	Shoreview	MN	55126	651-765-1398
Cub Foods	3930 Silver Lake Road NE	St Anthony	MN	55421	612-789-8689
Dollar Tree	951 County Road E East	Vadnais Heights	MN	55127	651-765-1328
Fresh Thyme Farmers Market	955 County Road E East	Vadnais Heights	MN	55127	651-414-8110
Keebler Company (St. Paul Distribution Center)	1275 Willow Lake Boulevard	Vadnais Heights	MN	55110	651-484-0833
Target Stores	975 County Road E East	Vadnais Heights	MN	55127	651-483-9637
TruGreen Lawn Care	4240 Centerville Road	Vadnais Heights	MN	55127	651-212-2951
Walmart	850 County Road E East	Vadnais Heights	MN	55127	651-486-7001
Cub Foods	1059 Meadowlands Drive	White Bear Lake	MN	55127	651-426-6534
Cub Foods	1920 Buerkle Road	White Bear Lake	MN	55110	651-777-7899
Dollar Tree	2701 County Road E East	White Bear Lake	MN	55110	651-407-9730
Festival Foods	2671 County Road E East	White Bear Lake	MN	55110	651-653-8888
Kowalski's Market	4391 Lake Avenue S	White Bear Lake	MN	55110	651-429-5913
Saputo Dairy Foods	4041 Highway 61 N	White Bear Lake	MN	55110	651-426-1633

Banking & Finance					
Alerus Bank	6 Pine Tree Drive	Arden Hills	MN	55112	800-279-3200
Anchor Bank	1240 County Road E	Arden Hills	MN	55112	651-227-2265
Bremer Bank	4061 Lexington Avenue N	Arden Hills	MN	55112	651-481-9500
Catholic United Financial Credit Union	3499 Lexington Avenue N	Arden Hills	MN	55126	651-765-4132
City & County Credit Union	1001 Red Fox Road	Arden Hills	MN	55112	651-225-2700
Community Resource Bank	1501 County Road C W	Arden Hills	MN	55112	651-631-1040
Frandsen Corporation	4388 Round Lake Road W	Arden Hills	MN	55112	651-636-3778
US Bank	1001 Highway 96 W	Arden Hills	MN	55112	651-765-3819
Wells Fargo Bank	1220 County Road E W	Arden Hills	MN	55112	651-205-5511
Minnesota Catholic Credit Union	400 Little Canada Road E	Little Canada	MN	55117	651-484-0264

Banking & Finance					
Alerus Bank	2520 White Bear Avenue	Maplewood	MN	55109	651-777-7822
Associated Health Care Credit Union	1575 Beam Avenue	Maplewood	MN	55109	651-383-4000
City & County Credit Union	1661 Cope Avenue E	Maplewood	MN	55109	651-225-2700
Ideal Credit Union	2401 McKnight Road N	Maplewood	MN	55109	651-770-7000
Premier Bank	2866 White Bear Avenue	Maplewood	MN	55109	651-777-7700
SMW Federal Credit Union	1691 Cope Avenue E	Maplewood	MN	55109	651-747-1500
TCF Bank (inside Cub Foods)	2390 White Bear Avenue N	Maplewood	MN	55109	800-823-2265
Unity One Credit Union	1535 Beam Avenue	Maplewood	MN	55109	800-628-5517
US Bank	1760 Beam Avenue	Maplewood	MN	55109	651-747-2000
Wells Fargo Bank	2945 White Bear Avenue	Maplewood	MN	55109	651-205-8891
Chase Bank	2711 County Road 10 NE	Mounds View	MN	55112	651-290-7866
Western Bank	2711 Mounds View Boulevard	Mounds View	MN	55112	651-290-7866
Northeast Bank	1135 Silver Lake Road NW	New Brighton	MN	55112	651-529-1460
US Bank	2299 Palmer Drive	New Brighton	MN	55112	651-636-4300
Wells Fargo	2010 Silver Lake Road	New Brighton	MN	55112	800-869-3557
Wells Fargo Bank	1200 Silver Lake Road NW	New Brighton	MN	55112	651-205-5380
Anchor Bank	2700 7th Avenue E	North Saint Paul	MN	55109	651-770-2341
Affinity Plus Federal Credit Union	2750 Snelling Avenue N	Roseville	MN	55113	651-291-3700
BMO Harris Bank	1780 West Highway 36	Roseville	MN	55113	651-288-6300
Bremer Bank	1715 County Road B2 West	Roseville	MN	55113	651-288-3880
Genisys Credit Union	1490 County Road B West	Roseville	MN	55113	651-633-8443
Great Southern Bank	1875 County Road B2 West	Roseville	MN	55113	651-288-6700
North American Banking Company	2230 Albert Street N	Roseville	MN	55113	651-636-9654
North Star Bank	1820 Lexington Avenue N	Roseville	MN	55113	651-489-8811
Peoples Bank of Commerce	1909 Highway 36 Service Road	Roseville	MN	55113	651-291-5777
Premier Bank	1875 Highway 36 Service Road	Roseville	MN	55113	651-633-8880
Progressive Lending Solutions	2277 Highway 36	Roseville	MN	55113	651-636-2840
Provincial Bank AFG	2489 Rice Street	Roseville	MN	55113	651-287-0675
Spire Credit Union	1880 Perimeter Drive	Roseville	MN	55113	651-215-3500
TCF Bank	1445 County Road B West	Roseville	MN	55113	800-823-2265
TruStone Financial Federal Credit Union	2150 Lexington Avenue N	Roseville	MN	55113	800-862-1998
US Bank	1601 County Road C West	Roseville	MN	55113	651-639-1620

Banking & Finance					
US Bank	2690 Snelling Avenue N	Roseville	MN	55113	651-636-8300
US Bank	2850 Rice Street	Roseville	MN	55113	651-766-5660
Venture Bank	2100 County Road C West	Roseville	MN	55113	651-900-8888
Wells Fargo Bank	2440 Fairview Avenue N	Roseville	MN	55113	651-205-6333
Western Bank	1740 Rice Street	Roseville	MN	55113	651-290-7822
Building Trades Federal Credit Union	3353 Rice Street	Shoreview	MN	55126	651-486-9075
North American Banking Company	435 Highway 96 W	Shoreview	MN	55126	651-766-4220
TCF Bank	3836 Lexington Avenue N	Shoreview	MN	55126	800-823-2265
Wells Fargo	1801 Park View Drive	Shoreview	MN	55126	
Wells Fargo Bank	5950 Rice Creek Parkway	Shoreview	MN	55126	612-667-4755
BankCherokee	999 Village Center Drive	Vadnais Heights	MN	55127	651-483-3559
Cities Credit Union	3625 Talmage Circle	Vadnais Heights	MN	55110	651-426-3773
F&M Bank	845 County Road E East	Vadnais Heights	MN	55127	651-429-8000
Flagship Bank Minnesota	1048 Meadowlands Drive #1	Vadnais Heights	MN	55127	651-653-0768
MidCountry Bank Mortgage Office	1001 Labore Industrial Court	Vadnais Heights	MN	55110	877-415-1020
Peoples Bank Midwest	2945 White Bear Avenue	Vadnais Heights	MN	55127	651-735-2265
Peoples Bank Midwest	3585 US Highway 61	Vadnais Heights	MN	55110	651-735-2265
Sun Trust Leasing Corporation	4501 Allendale Drive	Vadnais Heights	MN	55127	651-482-0123
Unity One Credit Union	1010 Highway 96 East	Vadnais Heights	MN	55127	651-207-1729
Bremer Bank	4600 White Bear Parkway	White Bear Lake	MN	55110	651-762-2400
Lake Area Bank	1400 Highway 96 E	White Bear Lake	MN	55110	651-653-9619
MidCountry Bank	1310 Highway 96 E #116	White Bear Lake	MN	55110	651-766-7020
MidWestOne Bank	3670 East County Line Road N	White Bear Lake	MN	55110	651-426-2554
North Star Bank	4661 US Highway 61	White Bear Lake	MN	55110	651-429-4531
Premier Bank	2151 3rd Street	White Bear Lake	MN	55110	651-426-7800
TCF Bank	1059 Meadowlands Drive	White Bear Lake	MN	55127	800-823-2265
TCF Bank	2226 5th Street	White Bear Lake	MN	55110	800-823-2265
US Bank	2650 County Road E East	White Bear Lake	MN	55110	651-748-3800
US Bank	4700 Clark Avenue	White Bear Lake	MN	55110	651-426-8266
Wells Fargo Bank	4400 US Highway 61 N	White Bear Lake	MN	55110	651-205-8920

Chemical & Hazardous Materials					
AHATS FMS	4843 Hamline Ave N	Arden Hills	MN	55112	
Anderson Center	2 Pine Tree Drive	Arden Hills	MN	55112	
AT&T Mobility - Arden Hills (USID1643)	4251 FerNWood Avenue	Arden Hills	MN	55112	

Chemical & Hazardous Materials					
AWE - Arden Hills (USID1643)	4251 FerNWood Avenue	Arden Hills	MN	55112	
Cardiac Pacemaker Inc, DbA Boston Scientific Corp.	4100 Hamline Ave N	Arden Hills	MN	55112	
Chippewa Middle School	5000 Hodgson Rd	Arden Hills	MN	55126	
First Student, Inc. #11730	1901 Lake Valentine Road	Arden Hills	MN	55112	
Hood Packaging Corporation	1887 Gateway Blvd	Arden Hills	MN	55112	
International Paper Co.	1300 Red Fox Rd	Arden Hills	MN	55112	
Johanna Shores	3220 Lake Johanna Blvd	Arden Hills	MN	55112	
MnahI - Ups Supply Chain Solutions	2001 Gateway Boulevard	Arden Hills	MN	55112	
MnDOT	1905 W Co Rd I	Arden Hills	MN	55112	
Mounds View High School	1900 Lake Valentine Road	Arden Hills	MN	55112	
Pace Industries, Saint Paul Division	3737 N Lexington Ave	Arden Hills	MN	55126	
Ramsey County Public Works	1425 Paul Kirkwold Drive	Arden Hills	MN	55112	
Scherer Bros Lumber Co - Arden Hills Yard	4797 Hwy 10	Arden Hills	MN	55112	
Staples, Inc. Arden Hill Fulfillment Center #688	1233 West County Road E	Arden Hills	MN	55112	
Valentine Hills Elementary	1770 County Road E2 W.	Arden Hills	MN	55112	
Venture Solutions	1170 Grey Fox Road	Arden Hills	MN	55112	
Carley Foundry Inc	8301 Coral Sea Street	Blaine	MN	55449	
Falcon Heights Elementary School ISD #623	1393 W Garden Ave	Falcon Heights	MN	55113	
Falcon Heights ISD#623	1713 Energy Park Drive	Falcon Heights	MN	55108	
Twin City Die Castings Company	1070 33rd Ave Se	Lauderdale	MN	55414	
Xcel Energy - Terminal Substation	2533 W Larpenteur Ave	Lauderdale	MN	55108	
AT&T Mobility - Little Canada (Usid1726)	2655 Noel Drive	Little Canada	MN	55117	
Frattalone Companies, Inc.	3205 Spruce St	Little Canada	MN	55117	
Little Canada Elementary School ISD #623	400 Eli Rd	Little Canada	MN	55117	
Roseville Area Middle School - ISD #623	15 E Co Rd B-2	Little Canada	MN	55117	
Spud (Id:25556)	5 East County Rd. B	Little Canada	MN	55117	
St. Jude Medical	One Lillehei Plaza	Little Canada	MN	55117	
St. Jude Medical, Inc.	177 E Co Rd B	Little Canada	MN	55117	
3m Center - Maplewood	I-94 & Mcknight Rd	Maplewood	MN	55144	
Audi Saint Paul	2450 Maplewood Dr. N	Maplewood	MN	55109	
Carmax # 7633 Maplewood	1325 Beam Avenue E	Maplewood	MN	55109	

Chemical & Hazardous Materials					
Centurylink - 3M Bldg. 224	2501 Hudson Rd (3m Campus Bldg. 224)	Maplewood	MN	55109	
Centurylink - Maplewood CO	500 Carlton St North	Maplewood	MN	55119	
City of Maplewood	1830 E Co Rd B	Maplewood	MN	55109	
Costco Wholesale #1021	1431 Beam Avenue	Maplewood	MN	55109	
Edgerton Elementary School ISD #623	1929 Edgerton St	Maplewood	MN	55117	
Harambee Elementary School	30 East County Rd B	Maplewood	MN	55117	
Jiffy Lube #3084	3073 White Bear Avenue	Maplewood	MN	55109	
John Glenn Middle School - ISD #622	1560 E Co Rd B	Maplewood	MN	55109	
Lexus Of Maplewood	3000 N. Highway 61	Maplewood	MN	55109	
Maplewood Middle School - ISD #622	2410 Holloway Ave	Maplewood	MN	55109	
Maplewood Toyota	2873 N Hwy 61	Maplewood	MN	55109	
Merit Chevrolet	2696 Brookview Drive	Maplewood	MN	55119	
MnDOT	1779 Mcmenemy	Maplewood	MN	55117	
Ramsey County Park and Rec	2015 N Vandyke St	Maplewood	MN	55109	
SP Richards	2416 Maplewood Dr	Maplewood	MN	55109	
St John's Hospital	1575 Beam Ave.	Maplewood	MN	55109	
St Paul	2416 Maplewood Dr	Maplewood	MN	55109	
Saint Paul Regional Water Services Production Division	1900 Rice St	Maplewood	MN	55113	
The Home Depot Store #2801	2360 White Bear Avenue North	Maplewood	MN	55109	
Xcel Energy - Kohlman Lake Substation	1480 County Road D East	Maplewood	MN	55109	
Xcel Energy - Maplewood Propane Plant	1555 Century Ave	Maplewood	MN	55119	
Bolger Llc	3301 Como Ave Se	Minneapolis	MN	55414	
Bauer Welding and Metal Fabricators, Inc.	2159 Mustang Drive	Mounds View	MN	55112	
Bioclean Mobile Wash Inc.	2151 Mustang Dr	Mounds View	MN	55112	
City of Mounds View - Well #3	2426 Bronson Dr	Mounds View	MN	55112	
City of Mounds View - Well #5	5100 Long Lake Rd	Mounds View	MN	55112	
City of Mounds View - Well #6	7545 Groveland Rd	Mounds View	MN	55112	
Edgewood Middle School	5100 Edgewood Drive	Mounds View	MN	55112	
Medtronic Mounds View Campus	8200 Coral Sea Street Ne	Mounds View	MN	55112	
Midwest Medical Holdings, Llc	8400 Coral Sea St Ne	Mounds View	MN	55112	

Chemical & Hazardous Materials					
Owens & Minor Distribution, Inc.	2151 County Road H2 W	Mounds View	MN	55112	
Pinewood Elementary	5500 Quincy Street	Mounds View	MN	55112	
Sysco Minnesota	2400 County Road J	Mounds View	MN	55112	
Aqseptence Group, Inc.	1950 Old Highway 8 NW	New Brighton	MN	55112	651-636-3900
Arnel Oil Company	383 Old Highway 8 NW	New Brighton	MN	55112	651-633-3114
Bell Lumber & Pole Company	778 1st St NW	New Brighton	MN	55112	
Best Server (ID:21897)	660 5th Street SW (City Well #10)	New Brighton	MN	55112	
CenturyLink - New Brighton CO	390 Cleveland Ave N	New Brighton	MN	55112	
CenturyLink - New Brighton Garage	100 9th Ave SW	New Brighton	MN	55112	
City of New Brighton Well #10	660 5th St SW	New Brighton	MN	55112	
City of New Brighton Well #11	1375 7th St NW	New Brighton	MN	55112	
City of New Brighton Well #12	2400 Mississippi St	New Brighton	MN	55112	
City of New Brighton, PGAC Plant	3001 5th St NW	New Brighton	MN	55112	
D-Rock Center	175 Old Highway 8 SW	New Brighton	MN	55112	
Estes Express Lines	400 1st Street SW	New Brighton	MN	55112	304-744-2195
Highview Middle School	2300 7th Street NW	New Brighton	MN	55112	
Hypertherm, Inc. - Waterjet	305 2nd St NW, Ste 115	New Brighton	MN	55112	
Irondale High School	2425 Long Lake Road	New Brighton	MN	55112	
Matheson Valley Gas	305 2nd Street Northwest, #125	New Brighton	MN	55112	908-991-9200
Mission Foods	1565 1st Avenue NW	New Brighton	MN	55112	909-980-3566
Pentair New Brighton Operations	375 5th Ave NW	New Brighton	MN	55112	
Pike Lake Education Center	2101 14th Street NW	New Brighton	MN	55112	
Premier Grain & Seed Company	85 2nd Avenue Southeast	New Brighton	MN	55112	651-636-7323
Print Craft	315 5th Ave NW	New Brighton	MN	55112	
RTI Remmele Engineering - New Brighton	10 Old Hwy 8 SW	New Brighton	MN	55112	
Sunnyside Elementary	2070 County Rd H	New Brighton	MN	55112	
Wolkerstorfer Company, Inc	348 1st Street SW	New Brighton	MN	55112	651-636-0720
Saint Paul Regional Water Services Pleasant Lake	#4 East Pleasant Lake Road	North Oaks	MN	55127	
Centurylink - Park Row CO	2137 Park Row	North Saint Paul	MN	55109	
Citadel Restoration and Repair	2271 2nd Street North	North Saint Paul	MN	55109	

Chemical & Hazardous Materials					
ISD #622 Bus Garage	2225 Mcknight Road	North Saint Paul	MN	55109	
North High School - ISD #622	2416 E 11th Ave	North Saint Paul	MN	55109	
North High School - ISD #622	2416 E 11th Ave	North Saint Paul	MN	55109	
North High School - ISD #622	2416 E 11th Ave	North Saint Paul	MN	55109	
T.A. Schifsky & Sons Inc.	2370 E Hwy 36	North Saint Paul	MN	55109	
Metropolitan Mosquito Control District	6989 55th St N. Suite 101b	Oakdale	MN	55128	
844376-Ccatt- Roseville 1646	2420 W County Road C	Roseville	MN	55113	
Airgas USA, Llc	2400 Terminal Road	Roseville	MN	55113	
Bimbo Bakeries USA, Inc	2745 Long Lake Rd	Roseville	MN	55113	
Brimhall Elementary School ISD #623	1744 W Co Rd B	Roseville	MN	55113	
Caterpillar Logistics, Inc	1901 West County Road B2	Roseville	MN	55113	
Central Park Elementary School ISD # 623	535 W Co Rd B-2	Roseville	MN	55113	
Citi-Cargo & Storage	3080 Long Lake Road	Roseville	MN	55113	
City of Roseville Maintenance Garage	1140 Woodhill Dr.	Roseville	MN	55113	
Comcast Of Minnesota, Inc.-Roseville Master Headend & Warehouse	2611/2621 Fairview Ave. North	Roseville	MN	55107	
Evoqua Water Technologies, Llc	2430 Rose Place	Roseville	MN	55113	
Fairview Community Center/School ISD # 623	1910 W Co Rd B	Roseville	MN	55113	
FedEx Freight, Inc - MSP	2323 Terminal Road	Roseville	MN	55113	
First Transit, Inc. #55872	1717 West County Road C, Suite B	Roseville	MN	55113	
George C. Brandt, Inc.	2975 Long Lake Rd	Roseville	MN	55113	
Guidant John Rose Minnesota Oval	2661 Civic Center Dr	Roseville	MN	55113	
Hillsborough Manor	2345 Woodbridge	Roseville	MN	55113	
Jiffy Lube #1382	1585 Cty Rd C W	Roseville	MN	55113	
Lakeville Motor Express	2975 Partridge Rd	Roseville	MN	55113	
Landis+Gyr	2340 W County Rd C	Roseville	MN	55113	
Lifehealth, LLC	2656 Patton Rd	Roseville	MN	55113	
Lubrication Technologies, Inc.	2420 W Co Rd C	Roseville	MN	55113	
Magellan Pipeline Company, L. P. Roseville	2451 W Co Rd C	Roseville	MN	55113	
Morton Salt, Inc.	2500 Walnut Street	Roseville	MN	55113	
Nustar Energy L.P. Roseville Terminal	2288 West County Road C	Roseville	MN	55113	
Old Dutch Foods Inc.	2375 Terminal Rd	Roseville	MN	55113	

Chemical & Hazardous Materials					
Parkview Center School ISD #623	701 W Co Rd B	Roseville	MN	55113	
Penske Truck Leasing Co., Lp	2460 W Co Rd C	Roseville	MN	55113	
Pentair	2550 Walnut St	Roseville	MN	55113	
Praxair Distribution Inc.	2455 Rosegate	Roseville	MN	55113	
Raspac Holdings, Llc	2500 W Co Rd B	Roseville	MN	55113	
Rosedale Chevrolet	2845 Hwy 35 N	Roseville	MN	55113	
Rosedale Shopping Center	10 Rosedale Center	Roseville	MN	55113	
Rosetree Properties, LLP dba Rosetree Apartments	655 W. Highway 36	Roseville	MN	55113	
Roseville	2340 Rose Place	Roseville	MN	55113	
Roseville Area High School - ISD #623	1240 W Co Rd B2	Roseville	MN	55113	
Roseville Buick GMC	2775 Hwy 35w North	Roseville	MN	55113	
RTI Remmele Engineering Roseville	1945 County Road C2 W	Roseville	MN	55113	
Ryder Transportation Services #0638a	2580 Long Lake Rd	Roseville	MN	55113	
Unisys	2470 Highcrest Rd	Roseville	MN	55113	
University of Northwestern	3003 Snelling Ave N	Roseville	MN	55113	
Bethel University	3900 Bethel Drive	Shoreview	MN	55112	
Centurylink - Shoreview CO	3323 Rice St	Shoreview	MN	55112	
City of Shoreview Booster Station	883 W Hwy 96	Shoreview	MN	55126	
City of Shoreview Well #6	4965 N Hodgson Rd	Shoreview	MN	55126	
Comcast Of Minnesota, Inc.-Shoreview Hubsite	4640 Churchill St.	Shoreview	MN	55126	
Island Lake Elementary	3555 Victoria Street N.	Shoreview	MN	55126	
Multi-Clean	600 Cardigan Rd	Shoreview	MN	55126	
Shoreview Community Center	4600 N Victoria St	Shoreview	MN	55126	
Snail Lake Education Center	350 Highway 96 West	Shoreview	MN	55126	
Turtle Lake Elementary	1141 Lepak Court	Shoreview	MN	55126	
Wells Fargo Shoreview	1801 Park View Drive	Shoreview	MN	55126	
Westinghouse Fuel- Handling Equipment & Crane Manufacturing	899 Highway 96 West	Shoreview	MN	55126	
Williams Elementary School ISD # 623	955 W Co Rd D	Shoreview	MN	55126	
Ymca - Shoreview	3760 N Lexington Ave	Shoreview	MN	55126	
Electronic Industries Holding, Inc.	400 Commerce Court	Vadnais Heights	MN	55127	
Infineon Technologies Americas Corp.	1185 Willow Lake Blvd, Suite 100	Vadnais Heights	MN	55110	

Chemical & Hazardous Materials					
Kellogg Snacks Saint Paul Distribution Center	1275 Willow Lake Blvd	Vadnais Heights	MN	55110	
Saint Paul Regional Water Services Supply	85 E Vadnais Boulevard	Vadnais Heights	MN	55127	
Trugreen Chemlawn	4240 Centerville Rd	Vadnais Heights	MN	55127	
Pump House #1	2569 Stacker Blvd	White Bear	MN	55110	
Veeco Instruments	4875 Constellation Dr	White Bear	MN	55127	
White Bear Lake Buick-Pontiac-GMC	3880 N Hwy 61	White Bear	MN	55110	
White Bear Township Public Works Complex	1283 Hammond Rd	White Bear	MN	55110	
White Bear Township Pump House #3	2230 Park Ave	White Bear	MN	55110	
White Bear Township Pump House #4	5130 Dillon St	White Bear	MN	55110	
White Bear Township Pump House #5	4295 Otter Lake Rd	White Bear	MN	55110	
White Bear Township Pump House #6	2545 Buffalo St	White Bear	MN	55110	
White Bear Township Pump House #6	2545 Buffalo St	White Bear	MN	55110	
White Bear Township Pump House #6	2545 Buffalo St	White Bear	MN	55110	
White Bear Township Pump House #6	2545 Buffalo St	White Bear	MN	55110	
White Bear Township Pumphouse #2a	4099 Bellaire Ave	White Bear	MN	55110	
844221-Ccatt- White Bear Lake 1744	1629 9th Street	White Bear Lake	MN	55110	
Advanced Research Corporation/Arc	4459 White Bear Parkway	White Bear Lake	MN	55110	
Autonation Ford White Bear Lake	1493 E County Rd E	White Bear Lake	MN	55110	
Bald Eagle (Id:235850)	4701 Highway 61 (City Hall Building)	White Bear Lake	MN	55110	
Bus Garage - ISD #624	5005 Division St	White Bear Lake	MN	55110	
Central Jr High School - ISD #624	4857 Bloom Ave	White Bear Lake	MN	55110	
Centurylink - White Bear Lk CO	4747 Miller Aka 2050 4th Street	White Bear Lake	MN	55110	
City of White Bear Lake-Water Treatment	2401 Orchard Lane	White Bear Lake	MN	55110	
Comcast Of Minnesota, Inc.-White Bear Lake Hubsite	2460 County Road F	White Bear Lake	MN	55110	
Cortec Corp.	4119 White Bear Pkwy	White Bear Lake	MN	55110	
Cummins Sales and Service - Central Region	1600 Buerkle Road	White Bear Lake	MN	55110	
First Student, Inc. #27039	2331 Leibel Street	White Bear Lake	MN	55110	
Herold Precision Metals	1370 Hammond Road	White Bear Lake	MN	55110	

Chemical & Hazardous Materials					
International Paper Co.	1699 W 9th St	White Bear Lake	MN	55110	
Jiffy Lube #2902	4561 Lake Avenue N	White Bear Lake	MN	55110	
Liqtech NA, Inc	1804 Buerkle Road	White Bear Lake	MN	55110	
North Campus - ISD #624	5040 Bald Eagle Ave	White Bear Lake	MN	55110	
Sam's Club #6309	1850 Buerkle Road	White Bear Lake	MN	55110	
Saputo Dairy Foods USA, Llc	4041 Hwy 61 North	White Bear Lake	MN	55110	
Schwing America, Inc.	5900 Centerville Rd	White Bear Lake	MN	55127	
Taymark Inc.	4875 White Bear Parkway	White Bear Lake	MN	55110	
UFP White Bear Lake, Llc	4141 Hoffman Rd	White Bear Lake	MN	55110	
Water Gremlin Company	1610 Whitaker St.	White Bear Lake	MN	55110	
WBLAHS - South Campus - ISD #624	3551 McKnight Rd	White Bear Lake	MN	55110	
White Bear Acura	3525 N Hwy 61	White Bear Lake	MN	55110	
White Bear Area Ymca	2100 Orchard Lane	White Bear Lake	MN	55110	
Xcel Energy - White Bear Service Center	1700 E Co Rd E	White Bear Lake	MN	55110	

Commercial Facilities					
TranSWestern	3757-3775 North Dunlap Street	Arden Hills	MN	55112	651-000-0000
Boston Scientific	4100 Hamline Avenue N	Arden Hills	MN	55112	651-582-4000
Jehovah-Jireh Christian Fellowship	1317 Tiller Ln	Arden Hills	MN		
North Heights Lutheran Church	1700 Highway 96 W	Arden Hills	MN	55112	651-797-7800
Saint Katherine Orthodox Church	1600 County Highway 96 W	Arden Hills	MN	55112	651-697-1995
Scherer Bros Lumber Co - Arden Hills Yard	4797 Hwy 10	Arden Hills	MN		
Trinity Lutheran Church	3245 New Brighton Road	Arden Hills	MN	55112	651-633-2402
Yeshuas Line	4200 Norma Ave	Arden Hills	MN		
Boston Scientific	4211 Lexington Avenue North	Arden Hills	MN		
Falcon Heights United Church	1795 Holton Street	Falcon Heights	MN	55113	651-646-2681
Peace Lutheran Church	1744 Walnut Street	Lauderdale	MN	55113	651-644-5440
Twin Cities Chinese Christian Church	1795 Eustis St	Lauderdale	MN		
Alliance of Renewal Churches (ARC)	2700 Rice Street	Little Canada	MN	55117	651-000-0000
Gospel Association of India Inc	3118 Ontario Road	Little Canada	MN	55117	651-235-0826
Minnesota Christian Retrouvaille	3262 Rice St	Little Canada	MN		

Commercial Facilities					
St. Jude Medical, Inc.	177 County Road B E	Little Canada	MN		
3M Center - Maplewood	2501 Hudson Road	Maplewood	MN	55114	888-364-3577
Assalam Mosque	1460 Skillman Avenue E	Maplewood	MN	55109	651-748-1688
Beaver Lake Lutheran Church ELCA	2280 Stillwater Avenue E	Maplewood	MN	55119	651-739-8092
Christ United Methodist Church	2500 Hudson Place	Maplewood	MN	55119	651-739-8875
Church of the Presentation of the Blessed Virgin Mary	1725 Kennard Street	Maplewood	MN	55109	651-777-8116
Costco Wholesale #1021	1431 Beam Avenue	Maplewood	MN	55109	612-486-1738
Cross Lutheran Church	1945 Prosperity Road	Maplewood	MN	55109	651-777-1329
First Evangelical Free Church	2696 Hazelwood Street	Maplewood	MN	55109	651-777-5180
Gethsemane Lutheran Church	2410 Stillwater Road E	Maplewood	MN	55119	651-739-1264
Grace Bible Church	1397 Century Avenue N #104	Maplewood	MN	55119	651-492-1036
Greater Saint Paul Prayer Breakfast	255 Roselawn Ave E Ste 50	Maplewood	MN		
His Strength Ministry Missionary Church International	3021 Bartelmy CT	Maplewood	MN		
Hmong American Alliance Church	2515 West Maplewood Drive	Maplewood	MN	55109	651-765-2443
Josiah Center	1600 Gervais Avenue #2	Maplewood	MN	55109	651-260-0217
Lake Phalen Community Church	1717 North English Street	Maplewood	MN	55109	651-776-1536
Lakeview Lutheran Church	1194 County Road C East	Maplewood	MN	55109	651-484-1465
Lutheran Church of Peace	47 Century Avenue S	Maplewood	MN	55119	651-739-7094
Maplewood Mall	3001 White Bear Avenue North	Maplewood	MN		
Midwest Buddhist Association	1245 Summit CT	Maplewood	MN		
Mother Theresa Rosary Ministry Inc	1901 Desoto St	Maplewood	MN		
Obedience Alliance Church	2691 White Bear Avenue N	Maplewood	MN	55109	651-000-0000
Our Redeemer Lutheran Church	1390 Larpenteur Avenue E	Maplewood	MN	55109	651-772-2445
Redeeming Love Church	2425 White Bear Avenue N	Maplewood	MN	55109	651-777-5200
The Home Depot #2801	2360 White Bear Avenue North	Maplewood	MN		
Theravada Buddha Sasana Nuggaha MN	1519 County Road C E	Maplewood	MN		
Trinity Baptist Church	2220 Edgerton St	Maplewood	MN		
Twin Cities Bible Church	2555 Hazelwood Street	Maplewood	MN	55109	651-776-2361

Commercial Facilities					
Victory Through Christ International	2531 Nemitz Ave E	Maplewood	MN		
Vietnamese Grace Church	2220 Edgerton St A	Maplewood	MN		
Woodland Hills Church	1740 Van Dyke Street	Maplewood	MN	55109	651-487-0001
YMCA - Maplewood Community Center	2100 White Bear Avenue	Maplewood	MN	55109	651-747-0922
Abiding Savior Lutheran Church	8211 Red Oak Drive	Mounds View	MN	55112	763-784-5120
Bethlehem Baptist Church - North Campus	5151 Program Avenue	Mounds View	MN	55112	612-455-0800
Church Upon the Rock	7901 Red Oak Drive	Mounds View	MN	55112	651-728-4125
Kingdom Transitions Ministries Inc	5091 Eastwood Rd	Mounds View	MN		
Messiah Lutheran Church	2848 County Road H2	Mounds View	MN	55112	763-784-1786
Sunrise United Methodist Church	7687 Long Lake Road	Mounds View	MN	55112	763-786-4926
Trinity Works	7325 Pleasant View Dr	Mounds View	MN		
Vietnamese Buddhist Association	7611 Edgewood Dr	Mounds View	MN		
YMCA - Mounds View Community Center	5394 Edgewood Drive	Mounds View	MN	55112	763-717-4040
Medtronic Mounds View Campus	8200 Coral Sea Street NE	Mounds View	MN		
Christ the King Lutheran Church	1900 7th Street NW	New Brighton	MN	55112	651-633-4674
Christian Science Church	1190 Long Lake Road	New Brighton	MN	55112	651-631-2373
Church of Jesus Christ of Latter-Day Saints	100 Silver Lake Road	New Brighton	MN	55112	651-251-0184
D-Rock Center	175 Old Highway 8 SW	New Brighton	MN	55113	651-639-0446
Faith Christian Reformed Church	1600 Silver Lake Road NW	New Brighton	MN	55112	651-633-5252
Grace Point Church	2351 Rice Creek Road	New Brighton	MN	55112	651-633-7515
Gyuto Wheel of Dharma Monastery	687 2nd Ave NW	New Brighton	MN		
Hope Community Church	2455 Long Lake Road	New Brighton	MN	55112	651-786-2578
Jain Center of Minnesota	147 14th Ave SW	New Brighton	MN		
Korean Grace Church Inc	1500 29th NW	New Brighton	MN		
Korean United Methodist Church	701 8th Avenue NW	New Brighton	MN	55112	651-633-2434
Krishna Bhakti Seva Sangh	2940 Linden Dr	New Brighton	MN		
Mike & Mona Ministries	1900 Silver Lake Rd NW Ste 314	New Brighton	MN		
New Brighton Christian Church	1500 29th Avenue NW	New Brighton	MN	55112	651-633-7152
Northwest Bible Chapel	1070 Pike Lake Dr	New Brighton	MN		
Saint John the Baptist Catholic Church	835 2nd Avenue NW	New Brighton	MN	55112	651-633-8333
Salem Covenant Church	2655 5th Street NW	New Brighton	MN	55112	651-633-9615

Commercial Facilities					
United Church of Christ	1000 Long Lake Road	New Brighton	MN	55112	651-633-1327
Christ Lutheran Church WELS	2475 17th Avenue E	North Saint Paul	MN	55109	651-777-5771
Church of Saint Peter	2600 Margaret Street	North Saint Paul	MN	55109	651-777-8304
Community of Christ	2475 Skillman Avenue E	North Saint Paul	MN	55109	651-770-5583
North Haven Church	2240 15th Avenue East	North Saint Paul	MN	55109	651-777-1384
North Presbyterian Church	2675 Highway 36	North Saint Paul	MN	55109	651-777-4044
River of God Church	2490 7th Avenue E	North Saint Paul	MN	55109	651-770-7777
Saint Mark' Lutheran Church ELCA	2499 Helen Street N	North Saint Paul	MN	55109	651-777-7451
J C Fish Co	2724 9th Ave E	North St Paul	MN		
Bethany Baptist Church	2025 Skillman Avenue W	Roseville	MN	55113	651-631-0211
Calvary Baptist Church	2120 Lexington Avenue N	Roseville	MN	55113	651-487-2855
Centennial United Methodist Church - Roseville Campus	1524 County Road C2 West	Roseville	MN	55113	651-633-7644
Christ Temple Apostolic Church	2651 Hamline Avenue N	Roseville	MN	55113	651-628-9090
Church of Christ Roseville	241 Larpenteur Avenue W	Roseville	MN	55113	651-488-5688
Corpus Christi Catholic Church	2131 Fairview Avenue N	Roseville	MN	55113	651-639-8888
Crossroads of Roseville	1655 County Road B2 West	Roseville	MN	55113	651-000-0000
enCompass Church	2400 Dale Street N	Roseville	MN	55113	651-481-1559
Galilee Lutheran Church	145 North McCarrons Boulevard	Roseville	MN	55113	651-488-6769
Grace Church of Roseville	1310 West County Road B2	Roseville	MN	55113	651-633-6479
Harriet Alexander Nature Center	2520 Dale St N	Roseville	MN		
Hope of Glory Church	2129 Midlothian Rd	Roseville	MN		
King of Kings Lutheran Church King of Kings Lutheran School	2330 Dale St N	Roseville	MN		
Lutheran Church of the Resurrection	3115 Victoria Street N	Roseville	MN	55113	651-484-1292
Maranatha Ministries Foundation	2719 Patton Rd	Roseville	MN		
Midwest Reliability Organization	2774 Cleveland Ave. N	Roseville	MN		
Nazareth Chapel - University of Northwestern Saint Paul	3003 Snelling Avenue N	Roseville	MN	55113	651-692-4020
New Beginnings Christian Church	1476 Centennial Dr	Roseville	MN		
New Life Presbyterian Church	965 Larpenteur Avenue W	Roseville	MN	55113	651-488-5581

Commercial Facilities					
North Heights Lutheran Church	2701 Rice Street	Roseville	MN	55113	651-797-7800
Operation Stretch Ministries Inc	660 Heinel Dr	Roseville	MN		
Prince of Peace Lutheran Church	2561 Victoria Street N	Roseville	MN	55113	651-484-4144
Real Life Church	2353 North Chatsworth Street	Roseville	MN	55113	651-490-5433
Rose Hill Alliance Church	2105 Roselawn Avenue W	Roseville	MN	55113	651-631-0173
Rosedale Center	10 Rosedale Shopping Center	Roseville	MN		
Roseville Covenant Church	2865 Hamline Avenue N	Roseville	MN	55113	651-633-5526
Roseville Lutheran Church	1215 Roselawn Avenue W	Roseville	MN	55113	651-487-7752
Saint Christopher's Episcopal Church	2300 Hamline Avenue N	Roseville	MN	55113	651-633-4589
Saint Michael's Lutheran Church	1660 County Road B West	Roseville	MN	55113	651-631-1510
Saint Rose of Lima	2048 Hamline Avenue N	Roseville	MN	55113	651-646-8029
Salvation Army	2445 Prior Ave N	Roseville	MN		
Substance Church Inc	2776 Cleveland Ave N	Roseville	MN		
Transfer Road Business Center	2575 North Fairview, Suite 250	Roseville	MN		
Trinity House of Prayer Ministries Inc	452 County Road B W	Roseville	MN		
Twin Cities Emmanuel Church	2045 Aldine St	Roseville	MN		
Wilberforce Academy	1473 Clarmar Ln	Roseville	MN		
Gateway Business Center	2130 West County Road C	Roseville	MN		
International Technidyne Corp. (ltc)	2656 Patton Rd	Roseville	MN		
Ambassador Baptist Church	3720 Lexington Avenue N	Shoreview	MN	55126	651-483-4358
Emmanuel Covenant Church	513 Tanglewood Drive	Shoreview	MN	55126	651-757-3471
Greater Works Ministries	175 Galtier Pl	Shoreview	MN		
Harvest Community Church of Shoreview	4454 Harbor Place Dr	Shoreview	MN		
Hope Christian Church	4911 Hodgson Road	Shoreview	MN	55126	651-486-6243
Incarnation Lutheran Church	4880 Hodgson Road	Shoreview	MN	55126	651-484-7213
Luther Rose Inc	3490 Lexington Ave N Ste 340	Shoreview	MN		
New Life Lutheran Church	180 County Road F	Shoreview	MN	55126	651-484-1169
Peace United Methodist Church	5050 Hodgson Road	Shoreview	MN	55126	651-484-2226
Presbyterian Church of the Way	3382 Lexington Avenue N	Shoreview	MN	55126	651-484-3346

Commercial Facilities					
River of Life Church	4294 Hodgson Road	Shoreview	MN	55126	651-484-8737
Saint Odilia Catholic Church	3495 Victoria Street N	Shoreview	MN	55126	651-484-6681
Shepherd of the Hills Lutheran Church	3920 Victoria Street N	Shoreview	MN	55126	651-483-5419
Target Corporation	3800 Lexington Ave N	Shoreview	MN		
The Sanctuary Church	1030 County Road E	Shoreview	MN	55126	651-315-7732
Turtle Lake County Park	4979 Hodgson Road	Shoreview	MN		
YMCA - Shoreview	3760 Lexington Avenue N	Shoreview	MN	55126	651-483-2671
Medtronic Shoreview	3850 Victoria Street North	Shoreview	MN		
Calvary Church	4604 Greenhaven Drive	Vadnais Heights	MN	55127	651-487-2855
Christ the Servant Lutheran Church	3676 Centerville Road	Vadnais Heights	MN	55127	651-429-6596
Lake Vadnais Church	208 Twin Lake Boulevard	Vadnais Heights	MN	55127	651-484-2239
PPG Ministries	4513 Oak Leaf Dr	Vadnais Heights	MN		
Christ the King Lutheran Church	1660 Birch Lake Avenue	White Bear Lake	MN	55110	651-429-4828
Community of Grace Lutheran Church	4000 Linden Street	White Bear Lake	MN	55110	651-429-5349
Community Vineyard Church	2600 County Road E East	White Bear Lake	MN	55110	651-983-6563
First Church of Christ, Scientist	4705 Clark Avenue	White Bear Lake	MN	55110	651-429-0512
First Presbyterian Church of White Bear Lake	4821 Bloom Avenue	White Bear Lake	MN	55110	651-429-3381
Full Gospel Fellowship Church	1685 County Highway 96	White Bear Lake	MN	55110	651-429-4069
Great Hope Church of the Nazarene	2263 3rd Street	White Bear Lake	MN	55110	651-762-0525
Inter Faith Christian Center Church Inc	3558 Oak Ter	White Bear Lake	MN		
International Church of the Foursquare Gospel	3908 Hoffman Rd Apt 1	White Bear Lake	MN		
Northeast Baptist Church	2287 Golfview Dr	White Bear Lake	MN		
Parkview United Church	3737 Bellaire Avenue	White Bear Lake	MN	55110	651-429-3346
Redeemer Lutheran Church	3770 Bellaire Avenue	White Bear Lake	MN	55110	651-429-5411
Saint Ann's Chapel	2445 County Road E East	White Bear Lake	MN	55110	651-770-2921
Saint John in the Wilderness Church	2175 1st Street	White Bear Lake	MN	55110	651-429-5351
Saint Mary of the Lake	4741 Bald Eagle Avenue	White Bear Lake	MN	55110	651-429-7771
Saint Pius X Church	3878 Highland Avenue	White Bear Lake	MN	55110	651-429-5337
Saint Stephen Lutheran Church	1965 County Road E East	White Bear Lake	MN	55110	651-777-1107
Sam's Club #6309	1850 Buerkle Road	White Bear Lake	MN	55110	651-779-6535
South Shore Trinity Lutheran Church	2480 South Shore Boulevard	White Bear Lake	MN	55110	651-429-4293

Commercial Facilities					
White Bear Church of Christ	2449 Orchard Lane	White Bear Lake	MN	55110	651-429-5797
White Bear Lake United Methodist Church	1851 Birch Street	White Bear Lake	MN	55110	651-429-9026
YMCA - White Bear Area	2100 Orchard Lane	White Bear Lake	MN	55110	651-777-8103
Eagle Brook Church - White Bear Campus	2401 Buffalo Street	White Bear Township	MN	55110	651-429-9227
Wild Fox Zen Monastery	5505 Prospect Ave	White Bear Township	MN	55110	

Communications					
Arden Towers Inc	1777 14th street	Arden Hills	MN		
AT&T Mobility - Arden Hills (USID1643)	4251 Fernwood Avenue	Arden Hills	MN	55112	
Great River Wireless LLC	1296 West County Road F	Arden Hills	MN	55112	
Ramsey County ECC - 800MHz Comm Tower	1929 Lake Valentine Road	Arden Hills	MN	55112	651-767-0640
Ramsey County Emergency Communications Center	1425 Paul Kirkwold Drive	Arden Hills	MN	55112	651-767-0640
Ramsey County ECC - 800MHz Comm Tower	1955 Buford Avenue	Falcon Heights	MN	55108	651-767-0640
AT&T Mobility - Little Canada (usid1726)	2655 Noel Drive	Little Canada	MN	55117	
SPUD (ID:25556)	5 East County Rd. B	Little Canada	MN	55117	
T-Mobile Central, LLC	1300 Gervais Street	Little Canada	MN	55109	425-383-8401
CenturyLink - 3M Bldg. 224	2501 Hudson Rd (3m Campus Bldg. 224)	Maplewood	MN	55109	
CenturyLink - Maplewood Office	500 Carlton Street N	Maplewood	MN	55119	
KSTP-AM LLC	2792 Highway 61	Maplewood	MN		
Ramsey County ECC - 800MHz Comm Tower (Mpwd WT)	645 Sterling Avenue	Maplewood	MN	55119	651-767-0640
T-Mobile Central, LLC	1779 Mcmenemy Street	Maplewood	MN	55117	425-383-8401
Towerco Assets LLC	501 Carlton Street N	Maplewood	MN		
T Mobile Central, LLC	2450 Bronson Drive	Mounds View	MN	55112	425-383-8401
AT&T Mobility - New Brighton	129 14th Street Northwest	New Brighton	MN		
Best Server (ID:21897)	660 5th Street SW (City Well #10)	New Brighton	MN	55112	
CenturyLink - New Brighton Garage	100 9th Avenue SW	New Brighton	MN	55112	651-639-6500
Qwest Communications	390 Cleveland Avenue N	New Brighton	MN	55112	
CenturyLink - Park Row Office	2137 Park Row	North Saint Paul	MN	55109	

Communications					
AT&T INC	2285 Walnut Street	Roseville	MN		
Comcast of Minnesota, Inc -Roseville Master Headend	2611 Fairview Avenue N	Roseville	MN	55113	
Comcast of Minnesota, Inc.-Roseville Warehouse	2621 Fairview Avenue N	Roseville	MN	55113	
Crown Castle Cell Tower (AT&T) Roseville 1646	2420 W County Road C	Roseville	MN	55113	
MnDOT Waters Edge Data Center	1500 West County Road B2	Roseville	MN	55113	
Ramsey County ECC - 800MHz Comm Tower	78 10th Street East	Saint Paul	MN	55101	651-767-0640
Ramsey County Emergency Communications Center	388 13th Street	Saint Paul	MN	55101	651-767-0640
Saint Paul Radio	100 East 10th Street	Saint Paul	MN	55101	651-266-5500
CenturyLink - Shoreview CO	3323 Rice St	Shoreview	MN	55112	
Comcast of Minnesota, Inc.-Shoreview Hubsite	4640 Churchill Street	Shoreview	MN	55126	
Fox Television Stations	550 Gramsie Rd	Shoreview	MN		
Mobility Investments II, LLC	4344 Hodgson Rd	Shoreview	MN		
Telecommunications antennas	5880 Lexington Avenue	Shoreview	MN	55126	
Telecommunications antennas	745 West County Road F	Shoreview	MN	55126	
TeleFarms (TV) Antennas	960 West County Road F	Shoreview	MN	55127	202-457-4505
Mobility Investments II, LLC	3645 Centerville Road	Vadnais Heights	MN		
Bald Eagle (ID:235850)	4701 Highway 61 (City Hall Building)	White Bear Lake	MN	55110	
CenturyLink - White Bear Lake Office	4747 Miller Avenue	White Bear Lake	MN	55110	
Comcast of Minnesota, Inc.-White Bear Lake Hubsite	2460 County Road F	White Bear Lake	MN	55110	
Crown Castle Cell Tower (AT&T) White Bear Lake 1744	1629 9th Street	White Bear Lake	MN	55110	
Ramsey County ECC - 800MHz Comm Tower (WBL WT)	4636 Centerville Road	White Bear Lake	MN	55127	651-767-0640
Towerco Assets LLC	3910 Linden Street	White Bear Lake	MN		

Dams				
Ford Lock & Dam #1	5000 West River Parkway	Minneapolis	MN	55417
Arlington Detention			MN	
Battle Creek			MN	
Battle Creek Middle			MN	
Battle Creek Upper			MN	
Keller Lake			MN	
Round Lake			MN	

Emergency Services					
Arden Hills City Hall	1245 Highway 96 W	Arden Hills	MN	55112	
Arden Hills EOC	1245 Highway 96 W	Arden Hills	MN	55112	
Arden Hills Outdoor Warning Siren #1	4250 Old Highway 10	Arden Hills	MN	55112	
Arden Hills Outdoor Warning Siren #2	3242 New Brighton Road	Arden Hills	MN	55112	
Arden Hills Outdoor Warning Siren #3	Dunlap Street / Ingerson Road (intersection of)	Arden Hills	MN	55112	
Arden Hills Outdoor Warning Siren #4	Arden Place / Snelling Ave (intersection of)	Arden Hills	MN	55112	
Ramsey County ECC - 800MHz Comm Tower	1929 Lake Valentine Road	Arden Hills	MN	55112	651-767-0640
Ramsey County Emergency Communications Center	1425 Paul Kirkwold Drive	Arden Hills	MN	55112	651-767-0640
Ramsey County Emergency Communications Center (backup facility)	1411 Paul Kirkwold Drive	Arden Hills	MN	55112	
Ramsey County EOC	1425 Paul Kirkwold Dr	Arden Hills	MN	55112	
Ramsey County Sheriff's Department - Patrol Station	1411 Paul Kirkwold Drive	Arden Hills	MN	55112	651-266-7300
Blaine Public Works (Anoka County)	1801 101st Avenue NE	Blaine	MN	55449	763-785-6165
Spring Lake Park-Blaine-Mounds View Fire Department - Station 2	1141 89th Avenue NE	Blaine	MN	55434	763-786-4436
Spring Lake Park-Blaine-Mounds View Fire Department - Station 3	11920 Ulysses Street NE	Blaine	MN	55434	763-786-4436
Spring Lake Park-Blaine-Mounds View Fire Department - Station 4	10290 Lever Street NE	Blaine	MN	55014	763-786-4436
Falcon Heights Fire Department	2077 West Larpenteur Avenue	Falcon Heights	MN	55113	
Falcon Heights Fire Department	2077 Larpenteur Ave W	Falcon Heights	MN	55113	651-792-7600

Emergency Services					
Falcon Heights Outdoor Warning Siren #5	1845 Larpenteur Avenue	Falcon Heights	MN	55113	
Ramsey County ECC - 800MHz Comm Tower	1955 Buford Avenue	Falcon Heights	MN	55108	651-767-0640
Little Canada Fire Department	325 Little Canada Road E	Little Canada	MN	55117	651-792-7680
Little Canada Fire Department	325 Little Canada Road E	Little Canada	MN	55117	651-792-7680
Little Canada Outdoor Warning Siren #6	3332 Rice Street	Little Canada	MN	55126	
Little Canada Outdoor Warning Siren #7	3505 Little Canada Road	Little Canada	MN	55117	
Ramsey County Sheriff's Dept. Water Patrol Division	5 South Owasso Boulevard E	Little Canada	MN	55117	651-490-4511
Maplewood Fire Department - Headquarters	600 McKnight Road N	Maplewood	MN	55109	
Maplewood Fire Department - Station 1 (south)	600 McKnight Road N	Maplewood	MN	55109	
Maplewood Fire Department - Station 1 (South/Administration)	600 McKnight Road N	Maplewood	MN	55109	651-249-2800
Maplewood Fire Department - Station 2 (central)	1955 Clarence Street N	Maplewood	MN	55109	
Maplewood Fire Department - Station 2 (Central)	1955 Clarence Street N	Maplewood	MN	55109	651-249-2800
Maplewood Fire Department - Station 3 (north)	1530 County Road C E	Maplewood	MN	55109	
Maplewood Fire Department - Station 3 (North)	1530 County Road C East	Maplewood	MN	55109	651-249-2800
Maplewood Outdoor Warning Siren #10	Kohlman Lane & Keller Parkway	Maplewood	MN	55109	
Maplewood Outdoor Warning Siren #11	1965 Manton Street	Maplewood	MN	55109	
Maplewood Outdoor Warning Siren #12	1530 East County Road C	Maplewood	MN	55109	
Maplewood Outdoor Warning Siren #13	McKnight Road & Lydia Avenue	Maplewood	MN	55109	
Maplewood Outdoor Warning Siren #14	1600 Myrtle Street	Maplewood	MN	55119	
Maplewood Outdoor Warning Siren #15	814 Sterling & 7th Street	Maplewood	MN	55109	
Maplewood Outdoor Warning Siren #16	220 O'Day Street	Maplewood	MN	55119	
Maplewood Outdoor Warning Siren #17	2501 Londin Lane	Maplewood	MN	55119	

Emergency Services					
Maplewood Outdoor Warning Siren #18	1200 Sterling Street	Maplewood	MN	55119	
Maplewood Outdoor Warning Siren #19	County Road D & Highway 61	Maplewood	MN	55109	
Maplewood Outdoor Warning Siren #8	217 Roselawn Avenue	Maplewood	MN	55117	
Maplewood Outdoor Warning Siren #9	County Road B & Kenwood Street	Maplewood	MN	55109	
Maplewood Police Department	1830 County Road B E	Maplewood	MN	55109	
Maplewood Police Department	1830 County Road B East	Maplewood	MN	55109	651-249-2600
Ramsey County ECC - 800MHz Comm Tower (Mpwd WT)	645 Sterling Avenue	Maplewood	MN	55119	651-767-0640
University of Minnesota Police Department	511 Washington Avenue SE	Minneapolis	MN	55455	612-624-2677
Metro Transit Police Headquarters	2425 Minnehaha Avenue S	Minneapolis (Henn Cty)	MN	55404	612-349-7200
Mounds View Outdoor Warning Siren #20	2428 Bronson Dr	Mounds View	MN	55112	
Mounds View Outdoor Warning Siren #21	2860 Mustang Circle	Mounds View	MN	55112	
Mounds View Outdoor Warning Siren #22	2815 Ardan Ave	Mounds View	MN	55112	
Mounds View Police Department	2401 County Road 10	Mounds View	MN	55112	
Mounds View Police Department	2401 Mounds View Boulevard	Mounds View	MN	55112	651-717-4070
New Brighton Fire Department	785 Old Highway 8 NW	New Brighton	MN	55112	
New Brighton Outdoor Warning Siren #23	400 Old Highway 8 SW	New Brighton	MN	55112	
New Brighton Outdoor Warning Siren #24	622 Old Highway 8 NW	New Brighton	MN	55112	
New Brighton Outdoor Warning Siren #25	2145 5th St NW	New Brighton	MN	55112	
New Brighton Outdoor Warning Siren #26	2100 14th St NW	New Brighton	MN	55112	
New Brighton Outdoor Warning Siren #27	2400 Mississippi St	New Brighton	MN	55112	
New Brighton Outdoor Warning Siren #28	1951 Old Highway 8 NW	New Brighton	MN	55112	
New Brighton Outdoor Warning Siren #29	2nd Street SE & 1st Avenue SE (intersection of)	New Brighton	MN	55112	
New Brighton Public Safety Center	785 Old Highway 8 NW	New Brighton	MN	55112	651-767-0640
Lake Johanna Fire Department - Station #120	4676 Hodgson Road	North Oaks	MN	55126	651-484-3444
North Saint Paul Fire Department	2400 Margaret St N	North Saint Paul	MN	55109	

Emergency Services					
North Saint Paul Fire Department	2400 Margaret Street N	North Saint Paul	MN	55109	651-747-2405
North Saint Paul Outdoor Warning Siren #30	2400 Margaret St N	North Saint Paul	MN	55109	
North Saint Paul Police Department	2400 Margaret St N	North Saint Paul	MN	55109	
North Saint Paul Police Department	2400 Margaret Street N	North Saint Paul	MN	55109	651-747-2406
Roseville Fire Department	2701 Lexington Avenue N	Roseville	MN	55113	651-792-7009
Roseville Outdoor Warning Siren #31	2878 Cleveland Avenue	Roseville	MN	55113	
Roseville Outdoor Warning Siren #32	2782 Hamline Avenue	Roseville	MN	55113	
Roseville Outdoor Warning Siren #33	2739 Mackubin Street	Roseville	MN	55113	
Roseville Outdoor Warning Siren #34	2540 Cleveland	Roseville	MN	55113	
Roseville Outdoor Warning Siren #35	2137 Hamline Avenue	Roseville	MN	55113	
Roseville Outdoor Warning Siren #36	1985 Dale Street	Roseville	MN	55113	
Roseville Outdoor Warning Siren #37	1611 County Line Road	Roseville	MN	55113	
Roseville Outdoor Warning Siren #38	2701 Lexington Avenue	Roseville	MN	55113	
Roseville Outdoor Warning Siren #39	2156 County Road B	Roseville	MN	55113	
Roseville Outdoor Warning Siren #40	211 McCarrons Boulevard	Roseville	MN	55113	
Roseville Police Department	2660 Civic Center Dr	Roseville	MN	55113	
Roseville Police Department	2660 Civic Center Drive	Roseville	MN	55113	651-792-7008
Saint Anthony EOC	3505 Silver Lake Road NE	Saint Anthony	MN	55418	612-782-3400
Saint Anthony Fire Department	3505 Silver Lake Road NE	Saint Anthony	MN	55418	612-782-3400
Saint Anthony Police Department	3301 Silver Lake Road NE	Saint Anthony	MN	55418	612-782-3350
American Red Cross - Donor Center Saint Paul	176 South Robert Street	Saint Paul	MN	55107	
American Red Cross - North Central Blood Region	100 South Robert Street	Saint Paul	MN	55107	651-291-4600
Ramsey County ECC - 800MHz Comm Tower	78 10th Street East	Saint Paul	MN	55101	651-767-0640
Ramsey County Emergency Communications Center	388 13th Street E	Saint Paul	MN	55101	651-266-0640
Ramsey County Emergency Communications Center	388 13th Street	Saint Paul	MN	55101	651-767-0640

Emergency Services					
Ramsey County EMHS DOC	90 W Plato Boulevard	Saint Paul	MN	55107	
Ramsey County Sheriff's Department - Law Enforcement Center	425 Grove Street	Saint Paul	MN	55101	651-266-9333
State of Minnesota - Department of Public Safety - HSEM	444 Cedar Street	Saint Paul	MN	55101	651-201-7400
State of Minnesota Emergency Operations Center	444 Cedar Street	Saint Paul	MN	55101	651-201-7400
Allina Ambulance Base	550 Shoreview Park Road	Shoreview	MN	55126	651-222-0555
Lake Johanna Fire Department - Headquarters	5545 Lexington Avenue North	Shoreview	MN	55126	651-481-7024
Lake Johanna Fire Department - Station #130	5545 Lexington Avenue North	Shoreview	MN	55126	651-481-7024
Lake Johanna Fire Department - Station #140	3615 Victoria Street North	Shoreview	MN	55126	651-483-0767
Shoreview Outdoor Warning Siren #41	4615 N Victoria Street	Shoreview	MN	55126	
Shoreview Outdoor Warning Siren #42	420 Sherwood Road	Shoreview	MN	55126	
Shoreview Outdoor Warning Siren #43	936 Arbogast Street	Shoreview	MN	55126	
Shoreview Outdoor Warning Siren #44	3856 Victoria Street	Shoreview	MN	55126	
Shoreview Outdoor Warning Siren #45	5595 N Lexington Avenue	Shoreview	MN	55126	
Shoreview Outdoor Warning Siren #46	4965 Hodgson Road	Shoreview	MN	55126	
Shoreview Outdoor Warning Siren #47	1726 Parkview Drive	Shoreview	MN	55126	
Shoreview Outdoor Warning Siren #48	1602 Hillview Road	Shoreview	MN	55126	
Spring Lake Park-Blaine-Mounds View Fire Department - Station I	1710 County Highway 10	Spring Lake Park	MN	55432	763-786-4436
Spring Lake Park-Blaine-Mounds View Fire Department Headquarters	1710 County Highway 10	Spring Lake Park	MN	55432	763-786-4436
Lakeview Emergency Medical Services	927 Churchill Street W	Stillwater	MN	55082	651-439-5330
Vadnais Heights Fire Department (North Station)	665 East County Road F	Vadnais Heights	MN	55127	651-204-6032
Vadnais Heights Fire Department (South Station)	3595 Arcade Street N	Vadnais Heights	MN	55127	651-204-6032
Vadnais Heights Outdoor Warning Siren #49	665 E County Road F	Vadnais Heights	MN	55127	

Emergency Services					
Vadnais Heights Outdoor Warning Siren #50	4366 Rice Street	Vadnais Heights	MN	55127	
Vadnais Heights Outdoor Warning Siren #51	3188 Edgerton Street	Vadnais Heights	MN	55127	
Vadnais Heights Outdoor Warning Siren #52	3524 International Drive	Vadnais Heights	MN	55127	
Ramsey County ECC - 800MHz Comm Tower (WBL WT)	4636 Centerville Road	White Bear Lake	MN	55127	651-767-0640
White Bear Lake Emergency Communications Center	4701 Highway 61	White Bear Lake	MN	55110	651-429-8511
White Bear Lake Fire Department - Station 1	4701 Highway 61	White Bear Lake	MN	55110	651-429-8568
White Bear Lake Fire Department - Station 2	3595 McKnight Road	White Bear Lake	MN	55110	651-429-8568
White Bear Lake Outdoor Warning Siren #53	2240 E County Road E	White Bear Lake	MN	55110	
White Bear Lake Outdoor Warning Siren #54	E County Road F & Highway 96	White Bear Lake	MN	55110	
White Bear Lake Outdoor Warning Siren #55	1700 Miller Avenue	White Bear Lake	MN	55110	
White Bear Lake Outdoor Warning Siren #56	E County Road E & Highway 96	White Bear Lake	MN	55110	
White Bear Lake Outdoor Warning Siren #57	3375 Willow Avenue	White Bear Lake	MN	55110	
White Bear Lake Police Department	4701 Highway 61	White Bear Lake	MN	55110	651-429-8511
White Bear Township Outdoor Warning Siren #58	Hickory Trail & Otter Lake Road	White Bear Township	MN	55110	
White Bear Township Outdoor Warning Siren #59	Stacker Blvd & Stacker Place	White Bear Township	MN	55110	
White Bear Township Outdoor Warning Siren #60	2545 Buffalo Street	White Bear Township	MN	55110	
White Bear Township Outdoor Warning Siren #61	5130 Dillon Street	White Bear Township	MN	55110	

Energy					
Koch Pipeline Company LP.	6483 85th Street S	Cottage Grove (Wash Cty)	MN	55016	651-459-2424
Xcel Energy	2535 Larpenteur Avenue E	Lauderdale	MN	55113	
Xcel Energy - Maplewood Propane Plant	1555 Century Ave N	Maplewood	MN	55109	
Magellan Midstream Partners LP	2451 County Road C West	Roseville	MN	55113	651-633-4171

Energy					
NuStar Energy LP	2288 County Road C West	Roseville	MN	55113	651-636-1780
District Energy - Saint Paul	76 Kellogg Boulevard W	Saint Paul	MN	55102	651-297-8955
Xcel Energy - High Bridge Plant	155 Randolph Avenue	Saint Paul	MN	55102	800-895-4999
Xcel Energy - Roseville Service Center	3115 Centre Pointe Drive	Saint Paul	MN	55113	651-639-4470
Xcel Energy - White Bear Service Center	1700 County Road E East	White Bear Lake	MN	55110	651-779-3100

Government Facilities					
ISD #625 - Belwin Outdoor Sciences	1553 Stagecoach Trail S	Afton (Wash Cty)	MN	55001	651-436-5243
Arden Hills City Hall	1245 West Highway 96	Arden Hills	MN	55112	651-792-7800
Arden Hills Parks - Arden Manor Park	4601 Prior Avenue	Arden Hills	MN	55112	651-792-7800
Arden Hills Parks - Arden Oaks Park	1413 Arden Oaks Drive	Arden Hills	MN	55112	651-792-7800
Arden Hills Parks - Crepeau Nature Preserve	1145 Benton Way	Arden Hills	MN	55112	651-792-7800
Arden Hills Parks - Cummings Park	1219 Cummings Park Drive	Arden Hills	MN	55112	651-792-7800
Arden Hills Parks - Floral Park	1423 West Floral Drive	Arden Hills	MN	55112	651-792-7800
Arden Hills Parks - Freeway Park	1370 West County Road E	Arden Hills	MN	55112	651-792-7800
Arden Hills Parks - Hazelnut Park	3301 New Brighton Road	Arden Hills	MN	55112	651-792-7800
Arden Hills Parks - Ingerson Park	3255 North Lexington Avenue	Arden Hills	MN	55112	651-792-7800
Arden Hills Parks - Johanna Marsh Pond	3168 Ridgewood Road	Arden Hills	MN	55112	651-792-7800
Arden Hills Parks - Lindey's Park	North Snelling Ave & County Road E	Arden Hills	MN	55112	651-792-7800
Arden Hills Parks - Perry Park	3700 New Brighton Road	Arden Hills	MN	55112	651-792-7800
Arden Hills Parks - Royal Hills Park	Snelling Avenue & McClung Drive	Arden Hills	MN	55112	651-792-7800
Arden Hills Parks - Sampson Park	1900 Lake Lane	Arden Hills	MN	55112	651-792-7800
Arden Hills Parks - Valentine Park	1650 Lake Valentine Road	Arden Hills	MN	55112	651-792-7800
Arden Hills Public Works	1425 Paul Kirkwood Drive	Arden Hills	MN	55112	651-792-7800
Bethel Seminary-Saint Paul	3949 Bethel Drive	Arden Hills	MN	55112	651-638-6288
Bethel University	3900 Bethel Drive	Arden Hills	MN	55112	651-638-6400
ISD #621 - Mounds View High School	1900 Lake Valentine Road	Arden Hills	MN	55112	651-621-7100

Government Facilities					
ISD #621 - Valentine Hills Elementary School	1770 West County Road E2	Arden Hills	MN	55112	651-621-7800
Minnesota National Guard - Arden Hills Armory	4761 Hamline Avenue N	Arden Hills	MN	55112	651-282-4250
Minnesota National Guard - Arden Hills Armory/Ben Franklin Readiness Center	1245 County Road 96	Arden Hills	MN	55112	651-634-5226
Ramsey County Emergency Operations Center	1425 Paul Kirkwold Drive	Arden Hills	MN	55112	651-266-6720
Ramsey County Parks - Tony Schmidt County Park	3500 Lake Johanna Boulevard	Arden Hills	MN	55112	
Ramsey County Public Works Garage & Administration	1425 Paul Kirkwold Drive	Arden Hills	MN	55112	651-266-7100
Ramsey County Sheriff's Patrol Station	1411 Paul Kirkwold Drive	Arden Hills	MN	55112	
United States Army Reserve	4655 Lexington Avenue N	Arden Hills	MN	55126	651-628-3100
Blaine City Hall (Anoka County)	10801 Town Square Drive	Blaine	MN	55449	763-784-6700
United States Coast Guard - Marine Safety Detachment Saint Paul	5600 American Boulevard W #250	Bloomington (Henn Cty)	MN	55437	952-806-0021
ISD #916 Karner Blue Education Center	3764 95th Avenue NE	Circle Pines (Anoka Cty)	MN	55014	651-415-6200
Falcon Heights City Hall	2077 Larpenteur Ave W	Falcon Heights	MN	55113	651-792-7600
Falcon Heights Fire Department	2077 Larpenteur Ave W	Falcon Heights	MN	55113	651-792-7600
Falcon Heights Public Works	2077 Larpenteur Ave W	Falcon Heights	MN	55113	651-792-7600
ISD #623 - Falcon Heights Elementary School	1393 Garden Avenue W	Falcon Heights	MN	55113	651-646-0021
Ramsey County Historical Society @ Gibbs Farm Museum	2097 West Larpenteur Avenue	Falcon Heights	MN	55113	651-646-8629
ISD #916 Metro Heights Academy	7122 University Avenue NE	Fridley (Anoka Cty)	MN	55432	651-415-5690
Gem Lake City Hall	4200 Otter Lake Road	Gem Lake	MN	55110	651-747-2790
ISD #624 - Hugo Elementary School	14895 Francesco Avenue	Hugo (Wash Cty)	MN	55038	651-653-2800
ISD #624 - Oneka Elementary School	4888 Heritage Parkway N	Hugo (Wash Cty)	MN	55038	651-288-1802
ISD #624 - Transition Education Center	13497 Fenway Boulevard Circle N	Hugo (Wash Cty)	MN	55038	651-773-6051
Lauderdale City Hall	1891 Walnut Street	Lauderdale	MN	55113	651-792-7650
Lauderdale Parks - Community Park	1885 Fulham Street	Lauderdale	MN	55113	
Lauderdale Parks - Nature Area	Idaho Avenue & Fulham Street	Lauderdale	MN	55113	
Lauderdale Parks - Skyview Park	Walnut Street & Lone Street	Lauderdale	MN	55113	

Government Facilities					
Lauderdale Parks - Walsh Park	Ryan Avenue & Pleasant Avenue	Lauderdale	MN	55113	
ISD #623 - Little Canada Elementary School	400 Eli Road	Little Canada	MN	55117	651-490-1353
ISD #623 - Roseville Area Middle School	15 County Road B2 E	Little Canada	MN	55117	651-482-5280
ISD #916 Alternate Learning Program @ Capitol View Center	70 West County Road B2	Little Canada	MN	55117	651-415-5438
ISD #916 East View Academy	70 West County Road B2	Little Canada	MN	55117	651-415-5363
ISD #916 Work Experience Life Skills - WELS-South	70 West County Road B2	Little Canada	MN	55117	651-415-5640
Little Canada City Hall	515 Little Canada Road E	Little Canada	MN	55117	651-766-4029
Little Canada Fire Department	325 Little Canada Road E	Little Canada	MN	55117	651-792-7680
Little Canada Parks - Firebarns Skate Park	430 Little Canada Road E	Little Canada	MN	55117	
Little Canada Parks - Firefighters Historical Trail	325 Little Canada Road E	Little Canada	MN	55117	
Little Canada Parks - Gervais Mill Park	Edgerton Street & Little Canada Road	Little Canada	MN	55117	
Little Canada Parks - Nadeau Wildlife Park	Demont Avenue & Jackson Street	Little Canada	MN	55117	
Little Canada Parks - Old Fire Hall	440 Little Canada Road E	Little Canada	MN	55117	
Little Canada Parks - Pioneer Park	2950 Centerville Road	Little Canada	MN	55117	
Little Canada Parks - Rondeau Park	Jackson Street & Little Canada Road	Little Canada	MN	55117	
Little Canada Parks - Spooner Park	350 Eli Road	Little Canada	MN	55117	
Little Canada Parks - Thunder Bay / Westwinds Park	Payne Avenue to Labore (under lines)	Little Canada	MN	55117	
Little Canada Parks - Water Works ROW	South Owasso Drive to Country Drive (north to south)	Little Canada	MN	55117	
Little Canada Public Works	515 Little Canada Road E	Little Canada	MN	55117	651-766-4029
Minnesota Waldorf School (PreK-8)	70 East County Road B	Little Canada	MN	55117	651-487-6700
Ramsey County Sheriff's Water Patrol / Impound Lot	5 South Owasso Boulevard	Little Canada	MN	55117	
Saint John School of Little Canada (PreK-8)	2621 McMenemy Street	Little Canada	MN	55117	651-484-3038
Capital City Adventist Christian School (PreK-8)	1220 McKnight Road S	Maplewood	MN	55119	651-739-7484
Gethsemane Lutheran School (PreK-8)	2410 Stillwater Road E	Maplewood	MN	55119	651-739-7540
Hill-Murray School	2625 Larpenteur Avenue E	Maplewood	MN	55109	651-777-1376

Government Facilities					
ISD #622 - Beaver Lake Education Center	1060 Sterling Street North	Maplewood	MN	55119	651-702-8450
ISD #622 - Carver Elementary School	2680 Upper Afton Road	Maplewood	MN	55119	651-702-8200
ISD #622 - Gladstone Community Education Center	1945 Manton Street	Maplewood	MN	55109	651-748-7200
ISD #622 - Harmony Learning Center	1961 East County Road C	Maplewood	MN	55109	651-748-6200
ISD #622 - John Glenn Middle School	1560 East County Road B	Maplewood	MN	55109	651-748-6300
ISD #622 - Maplewood Middle School	2410 Holloway Avenue	Maplewood	MN	55109	651-748-6500
ISD #622 - Weaver Elementary School	2135 Birmingham Street	Maplewood	MN	55109	651-748-7000
ISD #623 - Edgerton Elementary School	1929 Edgerton Street	Maplewood	MN	55117	651-772-2565
ISD #623 - Harambee Elementary School	30 County Road B E	Maplewood	MN	55117	651-379-2500
ISD #916 Alternate Learning Program @ John Glenn Middle School	1560 East County Road B	Maplewood	MN	55109	651-415-5470
Maplewood City Hall	1830 County Road B East	Maplewood	MN	55109	651-249-2000
Maplewood Community Center	2100 White Bear Avenue	Maplewood	MN	55109	651-747-0922
Maplewood Fire Department - Station 1 (South/Administration)	600 McKnight Road N	Maplewood	MN	55109	651-249-2800
Maplewood Fire Department - Station 2 (Central)	1955 Clarence Street N	Maplewood	MN	55109	651-249-2800
Maplewood Fire Department - Station 3 (North)	1530 County Road C East	Maplewood	MN	55109	651-249-2800
Maplewood Nature Center	2659 East 7th Street	Maplewood	MN	55119	651-249-2170
Maplewood Parks - Afton Heights Park	63 North Sterling Street	Maplewood	MN	55119	651-249-2330
Maplewood Parks - Applewood Park	822 Sterling Street S	Maplewood	MN	55119	651-249-2330
Maplewood Parks - City Hall Campus Park	1830 County Road B East	Maplewood	MN	55109	651-249-2330
Maplewood Parks - Crestview Park	2540 Londin Lane E	Maplewood	MN	55119	651-249-2330
Maplewood Parks - Edgerton Park	2001 Bradley Street N	Maplewood	MN	55117	651-249-2330
Maplewood Parks - Flicek Park	1141 Frost Avenue	Maplewood	MN	55109	651-249-2330
Maplewood Parks - Four Seasons Park	1685 Gervais Avenue	Maplewood	MN	55109	651-249-2330
Maplewood Parks - Geranium Park	2568 Geranium Avenue E	Maplewood	MN	55119	651-249-2330

Government Facilities					
Maplewood Parks - Gethsemane Park	2401 East 7th Street	Maplewood	MN	55119	651-249-2330
Maplewood Parks - Gloster Park	1839 Frank Street	Maplewood	MN	55109	651-249-2330
Maplewood Parks - Goodrich Park	1980 North Saint Paul Road	Maplewood	MN	55109	651-249-2330
Maplewood Parks - Harvest Park	2561 North Barclay Street	Maplewood	MN	55109	651-249-2330
Maplewood Parks - Hazelwood Park	1663 County Road C	Maplewood	MN	55109	651-249-2330
Maplewood Parks - Hillside Park	1879 Myrtle Street N	Maplewood	MN	55109	651-249-2330
Maplewood Parks - Joy Park	2615 Joy Road	Maplewood	MN	55109	651-249-2330
Maplewood Parks - Lower Sunset Ridge Park	Walter Street	Maplewood	MN	55109	651-249-2330
Maplewood Parks - Playcrest Park	2390 Lydia Avenue E	Maplewood	MN	55109	651-249-2330
Maplewood Parks - Pleasantview Park	1100 Marnie Street	Maplewood	MN	55119	651-249-2330
Maplewood Parks - Robinhood Park	2039 Manton Street	Maplewood	MN	55109	651-249-2330
Maplewood Parks - Roselawn Park	393 Roselawn Avenue E	Maplewood	MN	55117	651-249-2330
Maplewood Parks - Sherwood Park	2237 Kennard Street	Maplewood	MN	55109	651-249-2330
Maplewood Parks - Sterling Oaks Park	1440 Sterling Street	Maplewood	MN	55119	651-249-2330
Maplewood Parks - Upper Sunset Ridge Park	3020 Frank Street	Maplewood	MN	55109	651-249-2330
Maplewood Parks - Vista Hills Park	2480 Mailand Road E	Maplewood	MN	55119	651-249-2330
Maplewood Parks - Wakefield Park	1590 Frost Avenue	Maplewood	MN	55109	651-249-2330
Maplewood Parks - Western Hills Park	1750 Adolphus Street	Maplewood	MN	55117	651-249-2330
Maplewood Police Department	1830 County Road B East	Maplewood	MN	55109	651-249-2600
Maplewood Public Works	1902 County Road B East	Maplewood	MN	55109	651-249-2400
Mounds Park Academy	2051 Larpenteur Avenue E	Maplewood	MN	55109	651-777-2555
Presentation of Mary School (PreK-8)	1695 Kennard Street	Maplewood	MN	55109	651-777-5877
Ramsey County CHS - Family Service Center	2001 North Van Dyke	Maplewood	MN	55109	651-647-2300
Ramsey County Correctional Facility (RCCF)	297 South Century Avenue	Maplewood	MN	55119	
Ramsey County Library - Maplewood Branch	3525 Southlawn Avenue	Maplewood	MN	55119	651-724-6001
Ramsey County Parks - Aldrich Ice Arena	1850 North White Bear Avenue	Maplewood	MN	55109	651-748-2510

Government Facilities					
Ramsey County Parks - Battle Creek Regional Park	2301 Upper Afton Road	Maplewood	MN	55119	
Ramsey County Parks - Battle Creek Waterworks	2401 Upper Afton Road	Maplewood	MN	55119	651-501-6340
Ramsey County Parks - Beaver Lake Park	1050 Edgewater Boulevard	Maplewood	MN	55119	
Ramsey County Parks - Gervais Lake County Park	2520 Edgerton Street	Maplewood	MN	55109	
Ramsey County Parks - Goodrich Gold Course	1820 Van Dyke Street	Maplewood	MN	55109	651-748-2525
Ramsey County Parks - Keller Golf Course	2166 Maplewood Drive	Maplewood	MN	55109	651-766-4170
Ramsey County Parks - Keller Regional Park	2039-2099 U.S. Highway 61	Maplewood	MN	55109	
Ramsey County Parks & Recreation Administration	2015 North Van Dyke Avenue	Maplewood	MN	55109	651-748-2500
Ramsey County Suburban Courts	2050 White Bear Avenue	Maplewood	MN	55109	651-266-1999
Saint Jerome School (PreK-8)	384 Roselawn Avenue E	Maplewood	MN	55117	651-771-8494
Saint Paul Regional Water Services	1900 Rice Street	Maplewood	MN	55113	651-266-6350
Metro Transit Police Headquarters	2425 Minnehaha Avenue S	Minneapolis (Henn Cty)	MN	55404	612-349-7200
ISD #621 - Area Learning Center	2574 Mounds View Boulevard	Mounds View	MN	55112	651-621-6200
ISD #621 - Bridges Program	2408 Mounds View Boulevard	Mounds View	MN	55112	651-621-6160
ISD #621 - Edgewood Middle School	5100 Edgewood Drive N	Mounds View	MN	55112	651-621-6600
ISD #621 - Pinewood Elementary School	5500 Quincy Street	Mounds View	MN	55112	651-621-7500
Mounds View City Hall	2401 Mounds View Boulevard	Mounds View	MN	55112	763-717-4000
Mounds View Community Center	5394 Edgewood Drive	Mounds View	MN	55112	651-717-4040
Mounds View Parks - City Hall Park	2401 Mounds View Boulevard	Mounds View	MN	55112	651-717-4040
Mounds View Parks - Greenfield Park	2335 Knoll Drive	Mounds View	MN	55112	651-717-4040
Mounds View Parks - Groveland Park	2815 Ardan Avenue	Mounds View	MN	55112	651-717-4040
Mounds View Parks - Hillview Park	7901 Hillview Road	Mounds View	MN	55112	651-717-4040
Mounds View Parks - Lambert Park	5324 Jackson Drive	Mounds View	MN	55112	651-717-4040
Mounds View Parks - Random Park	5214 Long Lake Road	Mounds View	MN	55112	651-717-4040
Mounds View Parks - Silver View Park	2700 County Road I	Mounds View	MN	55112	651-717-4040
Mounds View Parks - Woodcrest Park	2752 Woodcrest Drive	Mounds View	MN	55112	651-717-4040

Government Facilities					
Mounds View Police Department	2401 Mounds View Boulevard	Mounds View	MN	55112	651-717-4070
Mounds View Public Works	2401 Mounds View Boulevard	Mounds View	MN	55112	651-717-4050
Ramsey County Library - Mounds View Branch	2576 Mounds View Drive	Mounds View	MN	55112	651-724-6004
ISD #621 - Bel Air Elementary School	1800 5th Street NW	New Brighton	MN	55112	651-621-6300
ISD #621 - Early Childhood Education Center	500 10th Street NW	New Brighton	MN	55112	651-621-6150
ISD #621 - Highview Middle School	2300 7th Street NW	New Brighton	MN	55112	651-621-6700
ISD #621 - Irondale High School	2425 Long Lake Road	New Brighton	MN	55112	651-621-6800
ISD #621 - Pike Lake Kindergarten Center	2101 14th Street NW	New Brighton	MN	55112	651-621-8060
ISD #621 - Sunnyside Elementary School	2070 County Road H	New Brighton	MN	55112	651-621-7600
New Brighton City Hall	803 Old Hwy 8	New Brighton	MN	55112	651-638-2100
New Brighton Community Center	400 10th St NW	New Brighton	MN	55112	651-638-2130
New Brighton Parks - Meadow Wood Park	2081 29th Avenue NW	New Brighton	MN	55112	651-638-2130
New Brighton Parks - Brightwood Hills Golf Course	1975 Silver Lake Road	New Brighton	MN	55112	651-638-2150
New Brighton Parks - Creekview Park	Silver Lake Road & Mississippi Road	New Brighton	MN	55112	651-638-2130
New Brighton Parks - Driftwood Park	2705 5th Street NW	New Brighton	MN	55112	651-638-2130
New Brighton Parks - Freedom Park	2121 14th Street NW	New Brighton	MN	55112	651-638-2130
New Brighton Parks - Hansen Park	1555 5th Street NW	New Brighton	MN	55112	651-638-2130
New Brighton Parks - Hidden Oaks Park	1550 29th Avenue NW	New Brighton	MN	55112	651-638-2130
New Brighton Parks - Innsbruck Park	1150 27th Avenue NW	New Brighton	MN	55112	651-638-2130
New Brighton Parks - Pike Lake Trail Park	1021 Pike Lake Drive	New Brighton	MN	55112	651-638-2130
New Brighton Parks - Silver Oaks Park	340 Oakwood Drive	New Brighton	MN	55112	651-638-2130
New Brighton Parks - South Park Trail	Northwest Parkway	New Brighton	MN	55112	651-638-2130
New Brighton Parks - Sunny Square Park	2200 Sunnyside Terrace	New Brighton	MN	55112	651-638-2130
New Brighton Parks - Totem Pole Park	1111 Foss Road	New Brighton	MN	55112	651-638-2130
New Brighton Parks - Vermont Park	150 1st Avenue SE	New Brighton	MN	55112	651-638-2130
New Brighton Parks - Veterans Park	803 Old Hwy 8	New Brighton	MN	55112	651-638-2130

Government Facilities					
New Brighton Public Safety Center	785 Old Highway 8 NW	New Brighton	MN	55112	651-767-0640
New Brighton Public Works Facility	700 5th Street NW	New Brighton	MN	55112	651-638-2111
Ramsey County Library - New Brighton Branch	400 10th Street NW	New Brighton	MN	55112	651-724-6002
Ramsey County Parks - Long Lake Regional Park	1500 Old Highway 8	New Brighton	MN	55112	
Saint John the Baptist School (PreK-8)	835 2nd Avenue NW	New Brighton	MN	55112	651-633-1522
ISD #621 - Chippewa Middle School	5000 Hodgson Road	North Oaks	MN	55126	651-621-6400
North Oaks City Hall	100 Village Center Drive	North Oaks	MN	55127	651-792-7750
Christ Lutheran Church WELS (PreK-8)	2475 17th Avenue E	North Saint Paul	MN	55109	651-777-5771
ISD #622 - Cowern Elementary School	2131 North Margaret Street	North Saint Paul	MN	55109	651-748-6800
ISD #622 - District #622 Transportation Department	2225 McKnight Road N	North Saint Paul	MN	55109	651-621-1980
ISD #622 - Next Step Transition Program	2586 East 7th Avenue	North Saint Paul	MN	55109	651-621-1900
ISD #622 - North High School	2416 11th Avenue E	North Saint Paul	MN	55109	651-748-6000
ISD #622 - North St. Paul/Maplewood/Oakdale Dist. #622 Offices	2520 East 12th Avenue	North Saint Paul	MN	55109	651-748-7622
ISD #622 - Polar Arena	2444 11th Avenue E	North Saint Paul	MN	55109	651-748-6292
ISD #622 - Richardson Elementary School	2615 First Street N	North Saint Paul	MN	55109	651-748-6900
ISD #622 - Webster Elementary School	2170 East 7th Avenue	North Saint Paul	MN	55109	651-748-7100
North Saint Paul City Hall	2400 Margaret Street N	North Saint Paul	MN	55109	651-747-2400
North Saint Paul Fire Department	2400 Margaret Street N	North Saint Paul	MN	55109	651-747-2405
North Saint Paul Parks - Casey Lake Park	2101 17th Avenue	North Saint Paul	MN	55109	651-747-2411
North Saint Paul Parks - Colby Hills Park	2092 7th Street N	North Saint Paul	MN	55109	651-747-2411
North Saint Paul Parks - Dorothy Park	2916 Lake Boulevard	North Saint Paul	MN	55109	651-747-2411
North Saint Paul Parks - Hause Park	2616 4th Avenue	North Saint Paul	MN	55109	651-747-2411
North Saint Paul Parks - McKnight Field Complex	2310 10th Avenue	North Saint Paul	MN	55109	651-747-2411
North Saint Paul Parks - Northwood Park	1850 1st Street	North Saint Paul	MN	55109	651-747-2411
North Saint Paul Parks - Polar Park	2390 Shawnee	North Saint Paul	MN	55109	651-747-2411
North Saint Paul Parks - Rotary Park (Gateway Trailhead)	2290 2nd Street N	North Saint Paul	MN	55109	651-747-2411

Government Facilities					
North Saint Paul Parks - Silver Lake Park	2601 19th Avenue	North Saint Paul	MN	55109	651-747-2411
North Saint Paul Parks - Southwood Nature Preserve	2651 Holloway Avenue	North Saint Paul	MN	55109	651-747-2411
North Saint Paul Parks - Tower Park	2380 14th Avenue	North Saint Paul	MN	55109	651-747-2411
North Saint Paul Parks - Urban Ecology Center	County Road B East & McKnight Road	North Saint Paul	MN	55109	651-747-2411
North Saint Paul Parks - Veterans Park	2480 Margaret Street N	North Saint Paul	MN	55109	651-747-2411
North Saint Paul Police Department	2400 Margaret Street N	North Saint Paul	MN	55109	651-747-2406
North Saint Paul Public Works	2400 Margaret Street N	North Saint Paul	MN	55109	651-747-2409
Saint Peter Catholic School (PreK-8)	2620 Margaret Street N	North Saint Paul	MN	55109	651-777-3091
Ramsey County Library - North St. Paul Branch	2300 North St. Paul Drive	North St. Paul	MN	55109	651-724-6005
ISD #622 - Castle Elementary School	6675 50th Street North	Oakdale (Wash Cty)	MN	55128	651-748-6700
ISD #622 - Eagle Point Elementary School	7850 15th Street North	Oakdale (Wash Cty)	MN	55128	651-702-8300
ISD #622 - Oakdale Elementary School	821 Glenbrook Avenue N	Oakdale (Wash Cty)	MN	55128	651-702-8500
ISD #622 - Skyview Elementary School	1100 Heron Avenue N	Oakdale (Wash Cty)	MN	55128	651-702-8100
ISD #622 - Skyview Middle School	1100 Heron Avenue N	Oakdale (Wash Cty)	MN	55128	651-702-8000
ISD #622 - Tartan Arena	740 Greenway Avenue N	Oakdale (Wash Cty)	MN	55128	651-714-9251
ISD #622 - Tartan High School	828 Greenway Avenue N	Oakdale (Wash Cty)	MN	55128	651-702-8600
Concordia Academy (9-12)	2400 Dale Street N	Roseville	MN	55113	651-484-8429
ISD #621 - CLT Twin Lakes	1895 County Road C	Roseville	MN	55113	651-621-7980
ISD #623 - Brimhall Elementary School	1744 County Road B W	Roseville	MN	55113	651-638-1958
ISD #623 - Central Park Elementary School	535 County Road B2 W	Roseville	MN	55113	651-481-9951
ISD #623 - Early Childhood Education Center	701 County Road B W	Roseville	MN	55113	651-487-4378
ISD #623 - Fairview Alternative High School	1910 County Road B W	Roseville	MN	55113	651-604-3800
ISD #623 - Fairview Community Center	1910 County Road B W	Roseville	MN	55113	651-604-3500
ISD #623 - Parkview Center School	701 County Road B W	Roseville	MN	55113	651-487-4360
ISD #623 - Roseville Area High School	1240 West County Road B2	Roseville	MN	55113	651-635-1660
ISD #623 - Roseville Area Schools District Offices	1251 County Road B2 W	Roseville	MN	55113	651-635-1600
ISD #916 County Road C Offices	2106 West County Road C	Roseville	MN	55113	651-415-5546

Government Facilities					
King of Kings Lutheran School (PreK-8)	2330 North Dale Street	Roseville	MN	55113	651-484-5142
Minneapolis Business College	1711 County Road B West	Roseville	MN	55113	651-636-7405
Minnesota Department of Education	1500 Highway 36 West	Roseville	MN	55113	651-582-8200
North Heights Christian Academy (PreK-8)	2701 Rice Street	Roseville	MN	55113	651-797-7900
Ramsey County Library - Roseville Branch	2180 Hamline Avenue N	Roseville	MN	55113	651-724-6001
Ramsey County Parks - Lake Josephine County Park	3027 North Lexington Avenue	Roseville	MN	55113	
Ramsey County Woodview Women's Detention Facility	1771 North Kent Street	Roseville	MN	55113	
Roseville City Hall	2660 Civic Center Drive	Roseville	MN	55113	651-792-7000
Roseville Fire Department	2701 Lexington Avenue N	Roseville	MN	55113	651-792-7009
Roseville Parks - Acorn Park	286 County Road C West	Roseville	MN	55113	651-792-7006
Roseville Parks - Applewood Park	2838 Arona Street	Roseville	MN	55113	651-792-7006
Roseville Parks - Autumn Grove Park	1365 Lydia Avenue W	Roseville	MN	55113	651-792-7006
Roseville Parks - Bruce Russell Park	1175 Roselawn Avenue W	Roseville	MN	55113	651-792-7006
Roseville Parks - Cedarholm Golf Course	2323 Hamline Avenue N	Roseville	MN	55113	651-792-7154
Roseville Parks - Central Park - Dale West	2555 Dale Street N	Roseville	MN	55113	651-792-7006
Roseville Parks - Central Park - Lexington	2540 Lexington Avenue N	Roseville	MN	55113	651-792-7006
Roseville Parks - Central Park - North	816 Heinel Drive N	Roseville	MN	55113	651-792-7006
Roseville Parks - Central Park - Victoria Ballfields	2490 Victoria Street N	Roseville	MN	55113	651-792-7006
Roseville Parks - Concordia Park	2394 Dale Street N	Roseville	MN	55113	651-792-7006
Roseville Parks - Cottontail Park	1281 County Road C2 West	Roseville	MN	55113	651-792-7006
Roseville Parks - Evergreen Park	1810 County Road B West	Roseville	MN	55113	651-792-7006
Roseville Parks - Harriet Alexander Nature Center	2520 Dale Street N	Roseville	MN	55113	651-792-4262
Roseville Parks - Howard Johnson Park	1260 Woodhill Drive	Roseville	MN	55113	651-792-7006
Roseville Parks - Keller Mayflower Park	2070 Fernwood Street	Roseville	MN	55113	651-792-7006
Roseville Parks - Ladyslipper Park	299 Owasso Boulevard S	Roseville	MN	55113	651-792-7006
Roseville Parks - Langton Lake Park	1894 County Road C2 West	Roseville	MN	55113	651-792-7006

Government Facilities					
Roseville Parks - Lexington Park	2131 Lexington Avenue N	Roseville	MN	55113	651-792-7006
Roseville Parks - Mapleview Park	2917 Matilda Street	Roseville	MN	55113	651-792-7006
Roseville Parks - Materion Park	225 Minnesota Avenue	Roseville	MN	55113	651-792-7006
Roseville Parks - Muriel Sahlin Arboretum	2525 Dale Street N	Roseville	MN	55113	651-792-7118
Roseville Parks - Oasis Park	1700 County Road C2 West	Roseville	MN	55113	651-792-7006
Roseville Parks - Owasso Ballfields	2659 Victoria Street N	Roseville	MN	55113	651-792-7006
Roseville Parks - Owasso Hills Park	593 Owasso Hills Drive	Roseville	MN	55113	651-792-7006
Roseville Parks - Pioneer Park	1966 Chatsworth Street	Roseville	MN	55113	651-792-7006
Roseville Parks - Pocahontas Park	2540 Pascal Street	Roseville	MN	55113	651-792-7006
Roseville Parks - Reservoir Woods	1901 Alta Vista Drive	Roseville	MN	55113	651-792-7006
Roseville Parks - Rosebrook Park	2590 Fry Street	Roseville	MN	55113	651-792-7006
Roseville Parks - Sandcastle Park	3060 Patton Road	Roseville	MN	55113	651-792-7006
Roseville Parks - Tamarack Park	1745 Farrington Street	Roseville	MN	55113	651-792-7006
Roseville Parks - Valley Park	3110 Avon Street	Roseville	MN	55113	651-792-7006
Roseville Parks - Veterans Park	1135 Woodhill Drive	Roseville	MN	55113	651-792-7006
Roseville Parks - Victoria West	2495 Victoria Street N	Roseville	MN	55113	651-792-7006
Roseville Parks - Villa Park	2055 Cohansey Boulevard	Roseville	MN	55113	651-792-7006
Roseville Parks - Willow Pond	1283 County Road B2 West	Roseville	MN	55113	651-792-7006
Roseville Parks - Woodhill Park	2724 Western Avenue	Roseville	MN	55113	651-792-7006
Roseville Police Department	2660 Civic Center Drive	Roseville	MN	55113	651-792-7008
Roseville Public Works	2660 Civic Center Drive	Roseville	MN	55113	651-792-7041
Roseville Skating Center	2661 Civic Center Drive	Roseville	MN	55113	651-792-7121
University of Northwestern - Saint Paul	3003 Snelling Avenue N	Roseville	MN	55113	651-631-5100
Saint Anthony City Hall	3301 Silver Lake Road	Saint Anthony	MN	55418	612-782-3301
ISD #282 - Saint Anthony / New Brighton School District Office	3303 33rd Avenue NE	Saint Anthony (Henn Cty)	MN	55418	651-706-1000
ISD #282 - Saint Anthony Community Services	3301 Silver Lake Road NE	Saint Anthony (Henn Cty)	MN	55418	651-706-1166
ISD #282 - Saint Anthony Middle School	3303 33rd Avenue NE	Saint Anthony (Henn Cty)	MN	55418	651-703-1030

Government Facilities					
ISD #282 - Saint Anthony Village High School	3303 33rd Avenue NE	Saint Anthony (Henn Cty)	MN	55418	651-706-1100
ISD #282 - Wilshire Park Elementary School	3600 Highcrest Road	Saint Anthony (Henn Cty)	MN	55418	651-706-1200
Minnesota National Guard	20 West 12th Street	Saint Paul	MN	55155	651-268-8919
Minnesota National Guard - Cedar Street Armory	600 Cedar Street	Saint Paul	MN	55101	651-282-4044
Minnesota National Guard - East Saint Paul Armory	1530 Maryland Avenue E	Saint Paul	MN	55106	651-793-6522
Minnesota National Guard - Saint Paul Army Aviation Facility	206 Airport Road	Saint Paul	MN	55107	651-281-3400
Minnesota State Capitol Complex	75 Dr. Martin Luther King Jr. Blvd	Saint Paul	MN	55155	
Minnesota State Capitol Security	50 Sherburne Avenue	Saint Paul	MN	55155	651-296-6741
Ramsey County Board of Commissioners	15 West Kellogg Boulevard #220	Saint Paul	MN	55103	651-266-8370
Ramsey County Courthouse	15 West Kellogg Blvd	Saint Paul	MN	55102	651-266-8500
Ramsey County Emergency Communications Center	388 13th Street E	Saint Paul	MN	55101	651-767-0640
Ramsey County Emergency Management and Homeland Security	90 West Plato Blvd., #220	Saint Paul	MN	55107	651-266-1020
Ramsey County Historical Society @ 323 Landmark Center	75 West 5th Street	Saint Paul	MN	55102	651-222-0701
Ramsey County Law Library	15 West Kellogg Boulevard #1815	Saint Paul	MN	55102	651-266-8391
Ramsey County Managers Office	15 West Kellogg Boulevard #250	Saint Paul	MN	55102	651-266-8000
Ramsey County Offices - Plato Building	90 West Plato Blvd	Saint Paul	MN	55107	651-266-2000
Saint Paul/Ramsey County Public Health	90 Plato Boulevard West	Saint Paul	MN	55107	651-266-1200
Saint Paul/Ramsey County Public Health	555 Cedar Street	Saint Paul	MN	55101	651-266-1200
Union Depot	214 4th Street E, #300	Saint Paul	MN	55101	651-202-2700
United States Army Corps of Engineers	190 5th Street E	Saint Paul	MN	55101	651-290-5200
University of St. Thomas	2115 Summit Avenue	Saint Paul	MN	55105	651-962-5000
Ramsey County - Landmark Center	75 West 5th Street	Saint Paul	MN	55102	651-292-3233
Ramsey County Boys Totem Town	398/400 Totem Road	Saint Paul	MN	55119	
Ramsey County Courthouse	15 West Kellogg Boulevard	Saint Paul	MN	55102	651-266-8500
Ramsey County Government Center East	160 East Kellogg Boulevard	Saint Paul	MN	55101	651-266-8500
Ramsey County Juvenile & Family Service Center	25 West Seventh Street	Saint Paul	MN	55102	651-266-5150

Government Facilities					
Ramsey County Metro Square	121 Seventh Place East	Saint Paul	MN	55101	651-266-8500
Ramsey County Parks - Biff Adams Ice Arena	743 North Western Avenue	Saint Paul	MN	55104	651-558-2200
Ramsey County Parks - Charles M Schulz-Highland Arena	800 South Snelling Avenue	Saint Paul	MN	55116	651-695-3766
Ramsey County Parks - Gustafson Phalen Ice Arena	1320 Walsh Street	Saint Paul	MN	55106	651-772-6161
Ramsey County Parks - Harding Ice Arena	1496 East Sixth Street	Saint Paul	MN	55106	651-772-6190
Ramsey County Parks - Ken Yackel West Side	44 East Isabel Street	Saint Paul	MN	55107	651-215-0000
Ramsey County Parks - Lake McCarrons County Park	1795 North Rice Street	Saint Paul	MN	55113	
Ramsey County Parks - Oscar Johnson Arena	1039 DeCourcy Drive	Saint Paul	MN	55105	651-643-3000
Ramsey County Parks - Pleasant Arena	848 Pleasant Avenue	Saint Paul	MN	55102	651-215-9030
Ramsey County Sheriff's Law Enforcement Center	425 Grove Street	Saint Paul	MN	55101	651-266-1999
City of Shoreview City Hall	4600 Victoria St. N.	Shoreview	MN	55126	651-490-4625
ISD #621 - Career & Life Transition Program	4570 Victoria Street N	Shoreview	MN	55126	651-621-6000
ISD #621 - CLT Shoreview	1037A West Highway 96	Shoreview	MN	55126	651-621-7965
ISD #621 - Island Lake Elementary School	3555 Victoria Street N	Shoreview	MN	55126	651-621-7000
ISD #621 - Mounds View School District #621 Administration Offices	4570 Victoria Street N	Shoreview	MN	55126	651-621-6000
ISD #621 - Reach Academy	3490 Lexington Avenue	Shoreview	MN	55126	651-621-7900
ISD #621 - Snail Lake Kindergarten Center	350 Highway 96 W	Shoreview	MN	55126	651-621-8000
ISD #621 - Snail Lake Kindergarten Center	350 Highway 96 W	Shoreview	MN	55126	651-621-8000
ISD #621 - Turtle Lake Elementary School	1141 Lepak Court	Shoreview	MN	55126	651-621-7700
ISD #623 - Emmet D. Williams Elementary School	955 County Road D W	Shoreview	MN	55126	651-482-8624
Ramsey County Library - Administration	4560 Victoria Street N	Shoreview	MN	55126	651-486-2200
Ramsey County Library - Shoreview Branch	4570 North Victoria	Shoreview	MN	55126	
Ramsey County Parks - Island Lake County Park	3611 North Victoria Street	Shoreview	MN	55126	
Ramsey County Parks - Lake Owasso County Park	370 North Owasso Boulevard	Shoreview	MN	55126	
Ramsey County Parks - Shoreview Ice Arena	877 West Highway 96	Shoreview	MN	55126	651-766-4000
Ramsey County Parks - Snail Lake Regional Park	4191 Snail Lake Boulevard	Shoreview	MN	55126	

Government Facilities					
Ramsey County Parks - Turtle Lake County Park	4979 Hodgson Road	Shoreview	MN	55126	
Ramsey County Parks - Vadnais-Snail Lake Regional Park	4191 Snail Lake Boulevard	Shoreview	MN	55126	
Shoreview City Hall	4600 Victoria Street N	Shoreview	MN	55126	651-490-4600
Shoreview Community Center	4580 Victoria Street N	Shoreview	MN	55126	651-490-4700
Shoreview Maintenance Facility	4615 Victoria St. N.	Shoreview	MN	55126	651-490-4672
Shoreview Parks - Bobby Theisen Park	3575 Vivian Avenue	Shoreview	MN	55126	651-490-4750
Shoreview Parks - Bucher Park	5900 Mackubin Avenue	Shoreview	MN	55126	651-490-4750
Shoreview Parks - Lake Judy Park	900 Arbogast Street	Shoreview	MN	55126	651-490-4750
Shoreview Parks - McCullough Park	955 County Road I	Shoreview	MN	55126	651-490-4750
Shoreview Parks - Ponds Park	190 Sherwood Road	Shoreview	MN	55126	651-490-4750
Shoreview Parks - Rice Creek Fields	5880 Rice Creek Parkway	Shoreview	MN	55126	651-490-4750
Shoreview Parks - Shamrock Park	5623 Snelling Avenue	Shoreview	MN	55126	651-490-4750
Shoreview Parks - Shoreview Commons	4580 Victoria Street N	Shoreview	MN	55126	651-490-4750
Shoreview Parks - Sitzer Park	4344 Hodgson Road	Shoreview	MN	55126	651-490-4750
Shoreview Parks - Wilson Park	815 County Road F	Shoreview	MN	55126	651-490-4750
Shoreview Public Works	4600 Victoria Street N	Shoreview	MN	55126	651-490-4650
Saint Odilia School	3495 Victoria Street N	Shoreview	MN	55126	651-484-3364
Mounds View Parks - Lakeside Lions Park	7840 Pleasant View Drive	Spring Lake Park	MN	55432	651-717-4040
ISD #624 - Vadnais Heights Elementary School	3645 Centerville Road	Vadnais Heights	MN	55127	651-653-2858
ISD #916 Work Experience Life Skills - WELS-North	3500 Willow Lake Boulevard #500	Vadnais Heights	MN	55110	651-415-6280
Ramsey County Parks - Vadnais Sport Center	1490 County Road E	Vadnais Heights	MN	55110	651-481-1000
Ramsey County Parks - Vadnais-Sucker Lake Regional Park	4500 Rice Street	Vadnais Heights	MN	55127	
Saint Paul Regional Water Services - Watershed Operations	85 East Vadnais Boulevard	Vadnais Heights	MN	55127	651-766-4150
Vadnais Heights City Hall	800 East County Road E	Vadnais Heights	MN	55127	651-204-6000
Vadnais Heights Fire Department (North Station)	665 East County Road F	Vadnais Heights	MN	55127	651-204-6032
Vadnais Heights Fire Department (South Station)	3595 Arcade Street N	Vadnais Heights	MN	55127	651-204-6032

Government Facilities					
Vadnais Heights Parks - Berwood Park	780 Berwood Avenue	Vadnais Heights	MN	55127	651-204-6050
Vadnais Heights Parks - Bridgewood Park	4224 1/2 Bridgewood Terrace	Vadnais Heights	MN	55127	651-204-6050
Vadnais Heights Parks - Community Park	661 East County Road F	Vadnais Heights	MN	55127	651-204-6050
Vadnais Heights Parks - Elmwood Park	3892 Elmwood Avenue	Vadnais Heights	MN	55127	651-204-6050
Vadnais Heights Parks - Greenhaven Park	4470 Greenhaven Drive	Vadnais Heights	MN	55127	651-204-6050
Vadnais Heights Parks - Heritage Park	4345 Heritage Court	Vadnais Heights	MN	55127	651-204-6050
Vadnais Heights Parks - Kohler Meadows Park	365 East County Road F	Vadnais Heights	MN	55127	651-204-6050
Vadnais Heights Parks - Lily Pond Park	325 Lily Pond Lane	Vadnais Heights	MN	55127	651-204-6050
Vadnais Heights Parks - Morningside Park	4485 Morningside Drive	Vadnais Heights	MN	55127	651-204-6050
Vadnais Heights Parks - Oak Creek Park	485 Oak Creek Parkway	Vadnais Heights	MN	55127	651-204-6050
Vadnais Heights Parks - Westfield Park	520 Westfield Lane	Vadnais Heights	MN	55127	651-204-6050
Vadnais Heights Parks - Wolters Park	1351 Willow Lake Boulevard	Vadnais Heights	MN	55127	651-204-6050
Vadnais Heights Public Works	800 East County Road E	Vadnais Heights	MN	55127	651-204-6050
ISD #623 - Normandy Park Education Center	2482 East County Road F	White Bear Lake	MN	55110	651-653-3100
ISD #624 - Birch Lake Elementary School	1616 Birch Lake Avenue	White Bear Lake	MN	55110	651-653-2777
ISD #624 - Central Middle School (IB World School)	4857 Bloom Avenue	White Bear Lake	MN	55110	651-653-2888
ISD #624 - Insight Recovery High School	2449 Orchard Lane	White Bear Lake	MN	55110	651-773-6417
ISD #624 - Lakeaires Elementary Schools	3963 Van Dyke Street	White Bear Lake	MN	55110	651-653-2809
ISD #624 - Lincoln Elementary School	1961 Sixth Street	White Bear Lake	MN	55110	651-653-2820
ISD #624 - Matoska International (IB World School)	2530 Spruce Place	White Bear Lake	MN	55110	651-653-2847
ISD #624 - Otter Lake Elementary School	1401 County Road H2	White Bear Lake	MN	55110	651-653-2831
ISD #624 - Sunrise Park Middle School (IB World School)	2399 Cedar Avenue	White Bear Lake	MN	55110	651-653-2700
ISD #624 - White Bear Lake Area High School (North Campus)	5045 Division Street	White Bear Lake	MN	55110	651-653-2920
ISD #624 - White Bear Lake Area High School (South Campus)	3551 McKnight Road	White Bear Lake	MN	55110	651-773-6200

Government Facilities					
ISD #624 - White Bear Lake Area Learning Center	2449 Orchard Lane	White Bear Lake	MN	55110	651-773-6400
ISD #624 - White Bear Lake Schools District Office	4855 Bloom Avenue	White Bear Lake	MN	55110	651-407-7500
ISD #624 - White Bear Lake Senior Center	2484 East County Road F	White Bear Lake	MN	55110	651-653-3121
ISD #624 - Willow Lane Elementary School	3375 Willow Avenue	White Bear Lake	MN	55110	651-773-6170
ISD #916 Alternate Learning Program @ White Bear Lake HS (South)	3551 North McKnight Road	White Bear Lake	MN	55110	651-415-5440
ISD #916 Career & Technical Center	3300 Century Ave N	White Bear Lake	MN	55110	651-415-5537
ISD #916 Mahtomedi Academy	2735 County Road D	White Bear Lake	MN	55110	651-415-5680
ISD #916 Northeast Metro 916 Intermediate School District	2540 County Road F East	White Bear Lake	MN	55110	651-415-5500
Liberty Classical Academy (PreK-12)	3878 Highland Avenue	White Bear Lake	MN	55110	651-772-2777
Magnuson Christian School (K-8)	4000 Linden Street	White Bear Lake	MN	55110	651-429-5349
MnSCU - Century College	3300 Century Ave N	White Bear Lake	MN	55110	651-779-3300
MnSCU - Century College (West Campus)	3401 East County Line Road N	White Bear Lake	MN	55110	651-779-3360
Ramsey County Library - White Bear Lake Branch	2150 2nd Street	White Bear Lake	MN	55110	651-724-6007
Ramsey County Parks - Bald Eagle/Otter Lake Park Regional Park	5800 Hugo Road	White Bear Lake	MN	55110	
Ramsey County Parks - Manitou Ridge Golf Course	3200 North McKnight Road	White Bear Lake	MN	55110	651-777-2987
Ramsey County Parks - White Bear Ice Arena	2160 Orchard Lane	White Bear Lake	MN	55110	651-748-2515
Ramsey County Parks - White Bear Lake County Park	5050 Lake Avenue	White Bear Lake	MN	55110	
Saint Anne's Academy (1-12)	2445 County Road E East	White Bear Lake	MN	55110	651-770-9773
White Bear Lake Armory	2228 4th Street	White Bear Lake	MN	55110	651-429-8571
White Bear Lake City Hall	4701 Highway 61	White Bear Lake	MN	55110	651-429-8526
White Bear Lake Fire Department - Station #1	4701 Highway 61	White Bear Lake	MN	55110	651-429-8568
White Bear Lake Fire Department - Station #2	3595 McKnight Road	White Bear Lake	MN	55110	651-429-8568
White Bear Lake Parks - Bossard Park	3725 Prairie Road	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - Cottage Park Nature Preserve	White Bear Avenue & Cottage Park Road	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - Ebba Park	3450 Ebba Street	White Bear Lake	MN	55110	651-747-3650

Government Facilities					
White Bear Lake Parks - Hidden Hollow Park	4150 Myrle Avenue	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - Lakeview Park	2165 Lakeview Avenue	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - Lakewood Hills Park	2110 Orchard Lane	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - Lions Park	4410 Lake Avenue S	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - Matoska Park	4810 Lake Avenue N	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - McCarty Park	1799 Elm Street	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - Memorial Beach	4980 Lake Avenue N	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - Podvin Park	1700 9th Street	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - Railroad Park	4752 Highway 61	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - Ramaley Park	1883 Park Street	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - Rotary Nature Preserve	4840 White Bear Parkway	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - Spruce Park	3653 McKnight Road	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - Stellmacher Park	3930 Linden Street	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - Varney Lake Park	2051 Orchard Lane	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - Veterans Memorial Park	4500 Lake Avenue S	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - West Park	2350 11th Street	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - Weyerhauser Park	1705 9th Street	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - Willow Marsh Reserve	1710 Fair Oaks	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Parks - Yost Park	1856 Florence Street	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Police Department	4701 Highway 61	White Bear Lake	MN	55110	651-429-8511
White Bear Lake Public Works	3950 Hoffman Road	White Bear Lake	MN	55110	651-747-3650
White Bear Lake Sports Center	1328 Highway 96 E	White Bear Lake	MN	55110	651-429-8571
Ramsey County Parks - Otter Lake Regional Park	5750 Otter Lake Road	White Bear Township	MN	55110	
Ramsey County Parks - Poplar Lake County Park	5900 Sherwood Road	White Bear Township	MN	55110	
Ramsey County Parks - Tamarack Nature Center	5287 Otter Lake Road	White Bear Township	MN	55110	651-407-5350
White Bear Township City Hall	1281 Hammond Road	White Bear Township	MN	55110	651-747-2750

Government Facilities					
White Bear Township Parks - Anderson Park	1188 Anderson Lane	White Bear Township	MN	55127	651-747-2750
White Bear Township Parks - Apple Tree Park	4399 Oakmede Lane	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Bellaire Beach	2499 South Shore Boulevard	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Bellaire Park	2560 County Road F	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Birch Park	2150 Overlake Avenue	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Brandlwood Park	5801 Meadowview Drive	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Columbia Park	1759 Highway 96 E	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Deer Meadow Park	2625 Parkview Drive	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Eagle Park	5485 Township Drive	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Four Seasons Park	5287 Hugo Road	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Fox Meadow Park	4230 White Bear Parkway	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Garden Creek Park	5383 Portland Avenue	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Garley Park	5560 Peterson Road	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Glider Park	2626 Suzanne Circle	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Longville Park	5300 Portland Avenue	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Manor Park	2569 Stacker Boulevard	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Mead Park	5130 Dillon Street	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Meadowlands Park	4600 Stoddart Circle	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Moon Lake Park	4701 Greenhaven Drive	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Otter Park	5868 Otterview Trail	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Polar Lakes Park	1280 Hammond Road	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Red Pine Park	5860 Red Pine Boulevard	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Rutherford Park	2673 Lake Avenue	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Sandterra Park	5891 Pintail Lane	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Walhof Park	5335 Reed Place	White Bear Township	MN	55110	651-747-2750
White Bear Township Parks - Wright Park	4099 Bellaire Avenue	White Bear Township	MN	55110	651-747-2750

Government Facilities					
White Bear Township Public Works	1283 Hammond Road	White Bear Township	MN	55110	651-747-2777
ISD #625 - Crosswinds Interdistrict Arts & Sciences Middle School	600 Weir Drive	Woodbury (Wash Cty)	MN	55125	651-379-2600
ISD #916 Alternate Learning Program @ Valley Crossing	9900 Park Crossing	Woodbury (Wash Cty)	MN	55125	651-702-5722

Healthcare and Public Health					
ACR Homes Inc	1385 Cummings Lane	Arden Hills	MN	55112	651-636-7537
ACR Homes Inc	1335 Amble Road	Arden Hills	MN	55112	(651) 639-8228
ACR Homes Inc	4286 James Ave	Arden Hills	MN	55112	(651) 636-7167
Arden Hills Dialysis Unit	3900 Northwood Drive Suite 110	Arden Hills	MN	55112	651-483-3159
Ault Joan M	4586 Prior Ct	Arden Hills	MN	55112	(651) 631-2827
Besser Sherrie	1307 Karth Lake Circle	Arden Hills	MN	55112	(651) 481-1170
Bethel University Child Development Center	4021 Bethel Dr	Arden Hills	MN	55112	(651) 638-6147
Carlson Jenna	1401 Arden Oaks Dr	Arden Hills	MN	55112	(651) 340-6448
Chikvanaia Manana	4223 Hamline Ave North	Arden Hills	MN	55112	(651) 659-2264
Davidson Helen J	1405 Arden Place	Arden Hills	MN	55112	(651) 772-2039
Enrich Inc	4093 Valentine Crest Rd	Arden Hills	MN	55112	(651) 636-2425
Harmony Homes of Minnesota	4108 Gale Circle	Arden Hills	MN	55112	(651) 639-0501
Harris Krista Larae & Harris Christopher Clay	1886 Glenpaul Ave	Arden Hills	MN	55113	(612) 834-5406
Healthpartners Arden Hills Clinic	3930 Northwoods Dr.	Arden Hills	MN		
Johanna Shores	3220 Lake Johanna Boulevard	Arden Hills	MN	55112	651-631-6027
Johanna Shores	3200 Lake Johanna Blvd	Arden Hills	MN	55112	
Kindercare Learning Center	4545 N Hamline Ave	Arden Hills	MN	55112	(651) 631-8728
Lewandoski Ann	1290 Wyncrest Lane	Arden Hills	MN	55112	(651) 697-1423
Lui Ivan Michael & Fong Sherri Sandra	1118 Benton Way	Arden Hills	MN	55112	(612) 554-5393
Monahan Patricia A & Brezinka Ronald	3508 Glenarden Road	Arden Hills	MN	55112	(651) 260-0767
Now Medical Inc.	3717 Lexington Ave. N	Arden Hills	MN		
Ortloff Nancy	1803 Janet Court	Arden Hills	MN	55112	(651) 636-6298

Healthcare and Public Health					
Peterschick Renae	3130 Ridgewood Dr	Arden Hills	MN	55112	(651) 636-5381
Phoenix at Janet Court	1769 Janet Court	Arden Hills	MN	55112	(651) 227-7655
Presbyterian Homes of Arden Hills	3220 Lake Johanna Boulevard	Arden Hills	MN	55112	651-631-6000
Scheuneman Denise A	1169 Pleasant Cir	Arden Hills	MN	55112	(651) 636-8992
Tufenk Patrice	4578 Prior Ct	Arden Hills	MN	55112	(651) 639-8929
Walton Alicia	1316 Indian Oaks Cir	Arden Hills	MN	55112	(651) 636-3098
Wingspan Life Resources - Glenpaul	2009 Glenpaul Ave	Arden Hills	MN	55112	(651) 644-2665
Accessible Space Inc.	1746 Snelling Ave N	Falcon Heights	MN	55113	(651) 645-7271
Fong Joon K	1864 Pascal St N	Falcon Heights	MN	55113	(651) 649-0582
Labalestra Jennifer M	1712 Tatum St	Falcon Heights	MN	55113	(651) 470-0671
Parnell Melissa M & Parnell Jonathan E	1744 Asbury St	Falcon Heights	MN	55113	(919) 524-6877
REM Ramsey Inc - Hamline	1843 Hamline Ave N	Falcon Heights	MN	55113	(651) 646-3857
Wingspan Life Resources - Hoyt I	1489 W Hoyt Ave	Falcon Heights	MN	55108	(651) 649-0103
Cotant Lianna F & Lomen Christopher K	1737 Eustis St Apt 2	Lauderdale	MN	55113	(608) 212-8183
Dungarvin Eustis	1889 Eustis Ave	Lauderdale	MN	55113	(651) 638-9729
Nelson Sara	1784 Carl St	Lauderdale	MN	55113	(651) 592-8501
Tritabaugh Donna M	1758 Pleasant St	Lauderdale	MN	55113	(651) 644-6323
ACR Homes Inc	2480 Mcmenemy Ave	Little Canada	MN	55117	(651) 765-8444
AME Community Services, Inc Thunder Bay	3019 Thunder Bay Road	Little Canada	MN	55117	(651) 481-8524
Barrett Christine	2398 Reidmond Lane	Little Canada	MN	55117	(651) 771-3516
Bridges MN	203 Little Canada Rd E #250	Little Canada	MN	55117	(651) 772-4957
Cardigan Ridge	3300 Rice Street	Little Canada	MN	55117	651-484-8484
Children's Discovery Academy of Early Learning	433 E Little Canada Rd	Little Canada	MN	55117	(651) 484-4931
Christofore Christine C	329 Rose Lane	Little Canada	MN	55117	(651) 208-8573
Dunbar Renee M	3093 Maple Leaf Court	Little Canada	MN	55109	(651) 483-2240
Dungarvin Viking	415 Viking Dr	Little Canada	MN	55117	(651) 765-6818
Espelien Maureen A	2796 Noel Dr	Little Canada	MN	55117	(651) 399-9704
Faithful Beginnings at Saint John Preschool	2621 Mcmenemy St	Little Canada	MN	55117	(651) 484-3038
Good Samaritan Home Care	2885 Country Drive #165	Little Canada	MN	55117	651-488-7680
Grittner Lori A	793 Windward Way	Little Canada	MN	55109	(651) 484-3929

Healthcare and Public Health					
Harmony Homes of Minnesota	83 Maple Lane	Little Canada	MN	55117	(651) 484-0162
Hmong Minnesota Senior Center	2905 Country Dr Ste 140	Little Canada	MN	55117	(651) 770-0338
Jebens Susan D	812 Aspen Circle	Little Canada	MN	55109	(651) 481-0032
Kaposia Inc	223 Little Canada Rd Ste 100	Little Canada	MN	55117	(651) 224-6974
Kaposia Ramsey Employment Services	5 Viking Dr Ste A	Little Canada	MN	55117	(651) 222-6125
Lifespan Home Care Services In	93 W Little Canada Road # 103	Little Canada	MN	55117	651-765-6034
Little Canada Clinic	75 Little Canada Rd. W	Little Canada	MN		
Living Well Disability Services	2666 Schletty Dr	Little Canada	MN	55117	(651) 266-4258
Nelson Michelle Elizabeth	150 Big Circle Dr	Little Canada	MN	55117	(651) 815-2355
NER Adult Day Program	2626 Mcmenemy St	Little Canada	MN	55117	(651) 490-7965
Northeast Residence li	410 East Little Canada Road	Little Canada	MN	55117	651-765-0217
Northeast Residence Inc	600 Labore Road	Little Canada	MN	55117	(651) 483-9906
Northeast Residence Inc	410 E Little Canada Rd	Little Canada	MN	55117	(651) 765-0238
Northeast Residence Inc	549 Allen Ave	Little Canada	MN	55117	(651) 765-1305
Olson Donielle	115 Lake St E	Little Canada	MN	55117	(651) 888-2150
People Incorporated - Labore	425 Labore Road Unit 108	Little Canada	MN	55117	651-490-3130
People Incorporated - Montreal Court	425 Labore Road Unit 108	Little Canada	MN	55117	651-490-3130
Phoenix at Viking	645 Viking Drive E	Little Canada	MN	55117	(651) 227-7655
Pralutsky Wilma Jean	231 Twin Lake Trail	Little Canada	MN	55127	(651) 481-0759
Quast Dawn Marie	438 Labore Rd	Little Canada	MN	55117	(763) 280-2414
REM Ramsey Inc - Jackson	2555 Ruth St	Little Canada	MN	55117	(651) 488-3210
REM Ramsey Inc - Rodeo	2950 Payne Ave	Little Canada	MN	55117	(651) 482-8202
REM Ramsey Inc - Sextant	332 SEXTANT AVE E	Little Canada	MN		
Rescare Minnesota Inc	1585 Rice Street	Little Canada	MN	55117	612-490-8018
Restoration Counseling & Community Services LLC	900 Rice St	Little Canada	MN	55117	(651) 529-1600
Reynolds Anthony & Reynolds Janitta Maria	92 Hoyt Ave W	Little Canada	MN	55117	(651) 792-5760
South Metro Human Services	3066 Arcade St	Little Canada	MN	55109	(651) 765-7544
Taylor Charlayne S	376 Labore Rd #309	Little Canada	MN	55117	(651) 361-9826
Voyda Virginia	2701 Sylvan St	Little Canada	MN	55117	(651) 486-7028
Woldermariam Balaynesh	3092 Maple Leaf Court	Little Canada	MN	55109	(651) 675-7151
3M Employee Clinic (3M Center)	2501 Hudson Road	Maplewood	MN	55144	

Healthcare and Public Health					
Allergy and Asthma Care, PA	1675 Beam Avenue	Maplewood	MN	55109	
Allina Medical Clinic - Parkview Ob/Gyn - Maplewood	1560 Beam Avenue	Maplewood	MN	55109	
Aspen Medical Group-Maplewood (Allina)	1850 Beam Ave.	Maplewood	MN	55109	
Attending Physicians Internal Medicine, PA	1650 Beam Ave.	Maplewood	MN		
Brightstar Care of Saint Paul	2375 Ariel Street N Ste A	Maplewood	MN	55109	651-770-8427
Carefree Cottages of Maplewood	1801 Gervais Avenue	Maplewood	MN	55109	651-770-7687
Children's Theraplay Llc	2399 Ariel Street North	Maplewood	MN	55109	651-773-0354
Ecumen Lakeview Commons	1200 North Lakewood Drive	Maplewood	MN	55119	651-770-1111
Ecumen Seasons at Maplewood	1670 Legacy Parkway East	Maplewood	MN	55109	651-756-1859
Esslings Homes Plus Inc	1747 Gervais Ave	Maplewood	MN	55109	(651) 340-8873
Esslings Homes Plus, Inc.	2170 Snowshoe Lane	Maplewood	MN	55119	(651) 735-7259
Family Service Center	2001 Van Dyke Avenue	Maplewood	MN		
FHSM Afton Road Clinic	2716 Upper Afton Rd.	Maplewood	MN		
FHSM Maplewood Clinic	1814 North Saint Paul Rd.	Maplewood	MN		
FMC Maplewood Heights	2017 Woodlyn Avenue	Maplewood	MN	55109	651-748-5774
Furness House	1866 Furness Street	Maplewood	MN	55109	651-227-7655
Good Sam Society Maplewood	550 East Roselawn Avenue	Maplewood	MN	55117	651-774-9765
Healtheast - Maplewood Clinic - Pediatricians for Health	3100 Kennard St.	Maplewood	MN		
Healtheast Heart Care	1600 St Johns Boulevard	Maplewood	MN	55109	651-326-4327
Healtheast Maplewood Outpatient	1655 Beam Avenue	Maplewood	MN	55109	651-232-7780
Healtheast St John's Hospital	1575 Beam Avenue	Maplewood	MN	55109	651-232-7000
Healtheast Surgery Center Maplewood	1655 Beam Avenue	Maplewood	MN	55109	651-232-7787
Healthpartners Maplewood Clinic	2165 White Bear Ave.	Maplewood	MN		
Home Helpers of The Twin Cities	2515 White Bear Avenue A8-129	Maplewood	MN	55109	612-518-5741
Home Instead Senior Care #161	2480 White Bear Avenue Ste 101	Maplewood	MN	55109	651-747-8722
Howard House	1685 Howard Street North	Maplewood	MN	55109	651-227-7655
Lake Phalen Optho Llc	1870 East Shore Drive	Maplewood	MN	55109	651-777-7784

Healthcare and Public Health					
Living Well Brookview	2675 Brookview Drive East	Maplewood	MN	55119	651-731-1602
Living Well Cope	1362 East Cope Avenue	Maplewood	MN	55109	651-483-9596
Living Well Larpenteur	1951 Larpenteur Avenue East	Maplewood	MN	55109	651-770-7120
Living Well Maryland	2355 Maryland Avenue East	Maplewood	MN	55119	651-773-4074
Maple Hill Senior Living Llc	3030 Southlawn Drive	Maplewood	MN	55109	651-363-3687
Maplewood Care Center	1900 Sherren Ave	Maplewood	MN	55109	651-770-1365
Maplewood Care Residence	2338 Overlook Cir	Maplewood	MN	55119	763-550-1774
Maplewood Dialysis Center	2785 White Bear Avenue Ste 201	Maplewood	MN	55109	651-779-2222
Maplewood GW LLC	2300 Hazelwood Street	Maplewood	MN	55109	651-777-6522
Metro Funeral Home, Inc	1310 Frost Ave	Maplewood	MN		
Metro Nursing Services Llc	1312 Burke Circle East	Maplewood	MN	55109	651-230-9300
Metropolitan OB/GYN - Maplewood	1655 A Beam Ave.	Maplewood	MN		
Millennium Neurosurgery, PA	1675 A Beam Ave.	Maplewood	MN		
Minnesota Oncology Hematology, PA	1580 Beam Ave.	Maplewood	MN		
Minnesota Surgical Associates, PA	1973 Sloan Pl.	Maplewood	MN		
MN Eye Laser & Surgery Centers, Llc	1965 11th Avenue East #102	Maplewood	MN	55109	651-748-4444
MN Gastroenterology, PA Maplewood Clinic	1973 A Sloan Pl	Maplewood	MN		
MNGI ENDOSCOPY Maplewood	1997 SLOAN PLACE	Maplewood	MN	55117	612-871-1145
Partners Ob/Gyn, PA	1737 Beam Ave.	Maplewood	MN		
Pediatric and Young Adult Medicine - Maplewood	1655 B Beam Ave.	Maplewood	MN		
Rajwood	2951 Bartelmy Lane	Maplewood	MN	55109	651-483-1468
Ramsey County Care Center	2000 White Bear Avenue	Maplewood	MN	55109	651-777-7486
Rem Ramsey Inc - Mayhill	797 Mayhill Road North	Maplewood	MN	55119	651-644-7680
Renewed Spirit Res Care Home	319 Bellwood Ave	Maplewood	MN	55117	651-226-7123
Richangel Care Incorporated	2321 Highwood Avenue East	Maplewood	MN	55119	651-341-9099
Saint Paul Infectious Disease Associates, Ltd.	1959 Sloan Pl. Ste 200	Maplewood	MN		
Saint Paul Surgeons, Ltd.	1655 C Beam Ave.	Maplewood	MN		
Sunlight Services	1243 Skillman Avenue	Maplewood	MN	55109	651-528-8085

Healthcare and Public Health					
The Homestead at Maplewood	1890 Sherren Avenue East	Maplewood	MN	55109	651-770-3959
The Shores of Lake Phalen	1870 East Shore Drive	Maplewood	MN	55109	651-777-7784
VOA Home Health at Maplewood	1890 Sherren Avenue East	Maplewood	MN	55109	651-770-3959
Walker Methodist Hazel Ridge	2730 Hazelwood Street	Maplewood	MN	55109	651-779-9779
Abrahamson Bobbie J	1734 Flandrau Ave	Maplewood	MN	55109	(651) 770-0128
ACR Homes Inc	2697 Barclay St North	Maplewood	MN	55109	(651) 779-4662
ACR Homes Inc	2181 MacAfee Circle North	Maplewood	MN	55109	(651) 481-7034
Adamson Nancy J	221 Brookview Ct N	Maplewood	MN	55119	(651) 666-3842
Aloha House Childcare	1329 County Road C E	Maplewood	MN	55109	(612) 231-6917
Amlotte Jacqueline	151 E Roselawn Ave	Maplewood	MN	55117	(651) 487-6438
Arch Adult Day Care Services LLC	245 Roselawn Ave Ste 25	Maplewood	MN	55117	(651) 500-1513
Avalon Programs - Ramsey County Correctional Facility	297 S Century Ave	Maplewood	MN	55119	(651) 266-1496
Baby Zone Inc	2146 White Bear Ave	Maplewood	MN	55109	(651) 482-0404
Beverly Amelia	2511 Upper Afton Road	Maplewood	MN	55119	(651) 797-4058
Boe Stephanie & Boe Erik	2262 Tilsen Ct	Maplewood	MN	55119	(651) 578-7268
Burke Sarah	188 Crestview Dr N	Maplewood	MN	55119	(952) 270-8500
Busse Janet	384 Lark Ave	Maplewood	MN	55117	(651) 771-2738
Cantu Amanda Lee R	542 Skillman Ave E #205	Maplewood	MN	55117	(210) 478-9689
Choo Choo Montessori LLC	2617 Duluth St	Maplewood	MN	55109	(651) 490-7734
Chosen Ones Adoption Agency	1622 E Sandhurst Dr	Maplewood	MN	55109	(651) 770-5508
Close to My Heart	1740 Van Dyke St	Maplewood	MN	55109	(651) 307-1492
Cobbins Peggy Ann	2425 Larpentuer Ave #115	Maplewood	MN	55109	(651) 497-4398
Community Foundations	1096 Gervais Ave	Maplewood	MN	55109	(651) 221-9880
Cori's Kidz Childcare Inc	2280 Stillwater Ave E	Maplewood	MN	55119	(651) 739-6106
Cyrus Martha Nell & Cyrus Latasha Patrice	1996 E Co Rd D Apt 317	Maplewood	MN	55109	(651) 434-9162
DCI-Brookview	2675 Brookview Dr E	Maplewood	MN	55119	(651) 731-1602
DCI-Cope	1362 Cope Ave E	Maplewood	MN	55109	(651) 483-9596
DCI-Larpenteur	1951 Larpenteur Ave	Maplewood	MN	55109	(651) 770-7120
DCI-Maryland	2355 Maryland Ave	Maplewood	MN	55119	(651) 773-4074

Healthcare and Public Health					
Dependable Home Health Care Inc	2079 Lydia Avenue E	Maplewood	MN	55109	(651) 340-7866
Diekmann Jodi JP	877 New Century Blvd So	Maplewood	MN	55119	(651) 735-9735
Diesslin Mary T	1391 Belmont Ln E	Maplewood	MN	55109	(651) 779-1915
Dungarvin Chippewa	2366 Chippewa	Maplewood	MN	55109	(651) 770-0971
Edwards Sari Y	1265 Frost Ave #239	Maplewood	MN	55109	(612) 246-2246
Elert-Voss Tami J	1522 E Brooks Ave	Maplewood	MN	55109	(651) 777-3407
Esslings Homes Plus Inc	1729 Gervais Ave	Maplewood	MN	55109	(651) 493-3652
Estrem Catherine A	1594 Lakewood Drive	Maplewood	MN	55119	(651) 773-8931
Fairview Recovery Services Maplewood Outpatient	2365 Ariel St N	Maplewood	MN	55109	(651) 779-2200
Faithful Beginnings at Presentation of Mary School	1725 Kennard St	Maplewood	MN	55109	(651) 770-3093
Farrar Toya Orr	2226 Searle Street	Maplewood	MN	55117	(651) 772-2205
Flynn Diane	1887 Lakewood Drive N	Maplewood	MN	55109	(651) 779-0294
Foley Margaret L	1829 Furness St #107	Maplewood	MN	55109	(651) 777-2279
French Wendy	2429 Dolphin Drive	Maplewood	MN	55119	(651) 363-7566
Gethsemane Early Learning Center Gethsemane Lutheran School	2410 Stillwater Road	Maplewood	MN	55119	(651) 739-7540
Gohr Kelly B & Gohr Scott D	540 Ripley Ave	Maplewood	MN	55117	(651) 246-7175
Gonjobe Nasra S & Gonjobe Abdi G	1312 Burke Circle E	Maplewood	MN	55109	(651) 739-1269
Grays Alexa R	2367 Larpenteur Ave E #310	Maplewood	MN	55109	(651) 757-8840
Haas Christine L	162 Mt Vernon Ave	Maplewood	MN	55117	(651) 489-7270
Hagen Kimberly A	2350 Stillwater Rd #212	Maplewood	MN	55109	(651) 983-2559
Harder Mary M & Swystun Rachel	1457 Ripley Ave	Maplewood	MN	55109	(651) 748-9875
Harmony Homes of Minnesota	2423 King Ave E	Maplewood	MN	55119	(651) 739-9549
Helleland Tammy A	1425 Birchview Dr	Maplewood	MN	55119	(651) 779-0409
Hope Senior Center LLC	1730 Gervais Ave E	Maplewood	MN	55109	(651) 340-3887
Horejsh Michelle M & Horejsh David L	1459 Co Rd B E	Maplewood	MN	55109	(651) 777-6170
Howry Residential Services	1012 Dennis St S	Maplewood	MN	55119	(651) 793-4888
Huntsberger Carrie & Serrano Joseph	2296 Hoyt Ave E	Maplewood	MN	55119	(651) 353-0440
Johnson Jennifer K	76 Kingston Ave	Maplewood	MN	55117	(651) 487-4003
Johnson Kathleen	1783 Lakewood Dr	Maplewood	MN	55109	(651) 797-3836
Johnston Goodstar Caterina	1724 Edward St	Maplewood	MN	55109	(612) 965-3837

Healthcare and Public Health					
Kids Korner	384 E Roselawn Ave	Maplewood	MN	55117	(651) 771-1023
Kindercare Learning Center	1925 E County Road D	Maplewood	MN	55109	(651) 777-5133
Kindercare Learning Center	2036 East County Rd D	Maplewood	MN	55109	(651) 770-1239
Kipper Kathleen K	185 Mt Vernon Ave E	Maplewood	MN	55117	(651) 387-5656
Koskinen Roger & Koskinen Carol	2244 E Lydia Ave	Maplewood	MN	55109	(651) 332-1042
Kotke Lisa & Kotke Gerald	2428 Dolphin Dr	Maplewood	MN	55119	(651) 387-2820
Kraemer Susan M	1775 Onacrest Curve	Maplewood	MN	55117	(651) 488-7425
Kubesh Karen	1722 Edgerton St	Maplewood	MN	55117	(651) 776-2803
Lee Kong Meng	2439 Cypress St	Maplewood	MN	55109	(651) 247-4903
Loeffler Ann B	2355 Nebraska Ave E	Maplewood	MN	55119	(651) 779-7921
LSS PGA	1751 Gervais Ave Unit I	Maplewood	MN	55109	(651) 260-4259
LSS Tempo	1851 Dieter St	Maplewood	MN	55109	(866) 444-3743
LSS Victoria	122 Skillman Ave E	Maplewood	MN	55117	(651) 488-1628
Lutheran Church of Peace Preschool	47 Century Ave S	Maplewood	MN	55119	(651) 730-1064
Lynch Sue M	1439 Skillman Ave	Maplewood	MN	55109	(651) 773-9262
Maple Tree Monastery Chldcare Center (The)	2625 Benet Rd	Maplewood	MN	55109	(651) 770-0766
Mapletree Group Home, Inc.	2831 Southlawn Dr	Maplewood	MN	55109	(651) 777-7722
Marquardt Katherine & Marquardt Justin	1699 Barclay St	Maplewood	MN	55109	(651) 756-1927
Mcdonald John & Mcdonald Jennifer	830 Dorland Ave S	Maplewood	MN	55119	(651) 735-6005
Mercier Cheryl A	1286 Mayhill Rd	Maplewood	MN	55119	(651) 777-2758
Michlitsch Debra L & Michlitsch Michael J	2157 Woodlynn Ave	Maplewood	MN	55109	(651) 429-8376
Morency Rebecca Ann & Morency Kevin Michael	1341 Larpenteur Ave E	Maplewood	MN	55109	(651) 434-2204
Morisset Deborah	1526 Sherren Ave E	Maplewood	MN	55109	(651) 773-3169
Mounds Park Academy	2051 E Larpenteur Ave	Maplewood	MN	55109	(651) 777-2555
Multicultural Adult Day Services LLC	2355 Ariel St N	Maplewood	MN	55109	(651) 283-6108
Nelson Julie A	2277 Valley View Ave E	Maplewood	MN	55119	(651) 739-0922
New Direction Inc	1999 Edgemont St	Maplewood	MN	55117	(651) 776-8036
New Direction Inc	147 Crestview Drive	Maplewood	MN	55119	(651) 501-4988
New Horizon Academy	2251 Van Dyke St	Maplewood	MN	55109	(651) 770-3826
New Horizon Academy	586 Carlton Street	Maplewood	MN	55119	(651) 731-4693

Healthcare and Public Health					
Niezgocki Carrie C	2068 English St	Maplewood	MN	55109	(612) 384-4280
Northeast Residence Inc	3066 Duluth St	Maplewood	MN	55109	(651) 490-3300
Northeast Residence Inc	2083 Arcade St	Maplewood	MN	55109	(651) 777-2587
Northeast Residence Inc	785 Belmont Lane East	Maplewood	MN	55117	(651) 787-0615
Oconnell Susan M	2527 Bittersweet Lane	Maplewood	MN	55109	(651) 770-6107
Olson Cory D & Olson Jaclyn E	1653 Frost Ave	Maplewood	MN	55109	(402) 802-0783
Outcomes, Inc.-Rajwood	2951 Bartelmy Ln	Maplewood	MN	55109	(651) 770-1296
Paulfranz Lynn	1787 Jackson	Maplewood	MN	55117	(612) 860-3765
Pelofske Nickaline Marie	3005 Mary Ct	Maplewood	MN	55109	(651) 777-6324
Pen Fannie	479 Mary St S	Maplewood	MN	55119	(651) 578-3892
Peterson Julie A & Ruhnnow Sara M	1871 White Bear Ave	Maplewood	MN	55109	(651) 278-8795
Peterson Karen L	2444 Standridge Ave	Maplewood	MN	55109	(651) 770-1767
Phoenix at Carver	2465 Carver	Maplewood	MN	55119	(651) 227-7655
Phoenix Recovery Programs Inc	2055 White Bear Ave	Maplewood	MN	55109	(651) 403-6409
Phoenix Recovery Programs Inc Maplewood	1936 Craig Place	Maplewood	MN	55109	(651) 209-0560
Phoenix Residence, Inc. Lydia (The)	2146 Lydia Ave E	Maplewood	MN	55109	(651) 779-6855
Phoenix Residence-Furness House	1866 Furness St	Maplewood	MN	55109	(651) 777-6349
Phoenix Residence-Howard House	1685 Howard St N	Maplewood	MN	55109	(651) 777-6754
PKT Enterprises Inc	2475 Southcrest Ave	Maplewood	MN	55119	(651) 730-4773
Playschool Child Care	1709 N Mcknight Rd	Maplewood	MN	55109	(651) 779-7926
Rabell Antonia Aysia & Rabell Luis Angel	1985 Clark St	Maplewood	MN	55117	(651) 214-8596
REM Ramsey Inc - Bridges	1818 Jackson St	Maplewood	MN	55117	(651) 330-1680
REM Ramsey Inc - Jordan	407 Laurie Road East	Maplewood	MN	55117	(651) 483-3093
REM Ramsey Inc - Lakewood	975 Lakewood Drive South	Maplewood	MN	55119	(651) 647-9243
REM Ramsey Inc - Laurie	347 Laurie Rd E	Maplewood	MN	55117	(651) 528-7961
REM Ramsey Inc - Mccarrons	1708 Sylvan Street	Maplewood	MN	55117	(651) 489-4232
REM Ramsey Inc - Mcknight	932 S Mcknight Rd	Maplewood	MN	55119	(651) 501-2832
REM Ramsey Inc - Pondview	2575 Ivy Ave, #116	Maplewood	MN	55119	(651) 777-5993
REM Ramsey Inc - Prosperity	1778 Prosperity Ave	Maplewood	MN	55109	(651) 770-6224
REM Ramsey Inc - Standridge	2316 Stanridge Ave	Maplewood	MN	55109	(651) 773-1250
Rescare Minnesota Inc	1082 Lakewood Dr S	Maplewood	MN	55119	(651) 735-9783

Healthcare and Public Health					
Rescare Minnesota Inc	1562 Lakewood Dr N	Maplewood	MN	55119	(651) 770-1082
Rescare Minnesota Inc	2946 Mcknight Road	Maplewood	MN	55109	(651) 773-7023
Rescare Minnesota Inc	1560 Sandhurst Ave	Maplewood	MN	55109	(651) 773-3455
Rescare Minnesota Inc	749 Skillman Ave E	Maplewood	MN	55117	(651) 501-2378
Rescare Minnesota Inc	584 Crestview Drive	Maplewood	MN	55119	(651) 735-1416
Rescare Minnesota Inc	2982 Frederick Parkway	Maplewood	MN	55109	(651) 777-9224
Rescare Minnesota Inc	1158 Glendon St	Maplewood	MN	55119	(651) 578-2696
Rescare Minnesota Inc	2647 Brookview Dr	Maplewood	MN	55119	(651) 739-4362
Rhoades Tammie K	2150 Edgerton Street	Maplewood	MN	55117	(651) 776-8639
Riesco Inc	926 Mcknight Rd	Maplewood	MN	55119	(612) 867-8115
Rise Adult Day Program Maplewood	2100 White Bear Ave N	Maplewood	MN	55109	(763) 567-0626
Rubbelke Gregory	750 E Viking Drive	Maplewood	MN	55117	(651) 214-9586
Salvation Army	2080 Woodlynn Ave	Maplewood	MN	55109	(651) 779-9177
Saum Theresa & Saum Douglas	379 Lark Ave E	Maplewood	MN	55117	(651) 398-1906
Schomburg Brian Lee & Okeson Candice Lynn	1968 Ide St	Maplewood	MN	55109	(651) 894-4171
Schommer Summers	1840 E Shore Dr	Maplewood	MN	55109	(651) 774-3674
Schultz Deborah	2079 Mcmenemy St	Maplewood	MN	55117	(651) 771-6584
Scott Willie & Scott Fay C	1976 E Co Rd B	Maplewood	MN	55109	(651) 770-1736
Senior Recovery Program	235 Roselawn Ave Ste 13	Maplewood	MN	55117	(651) 773-0473
Shay Catharine Briarly & Stephens Christopher Michael	805 New Century Blvd	Maplewood	MN	55119	(651) 578-0022
Sobaski Sheryl L	1205 Junction Ave	Maplewood	MN	55109	(651) 239-0525
Sorensen Kimberly	2660 Keller Pkwy	Maplewood	MN	55109	(651) 483-9015
South Metro Human Services	1276 Mayhill Road	Maplewood	MN	55119	(651) 770-1348
South Metro Human Services	2088 Bradley Ave	Maplewood	MN	55117	(651) 771-4100
Spadino Mandanah D & Spadino Roland	2963 Chisholm Pkwy	Maplewood	MN	55109	(651) 773-0663
St Johns Chemical Dependency Maplewood	1655 Beam Ave Ste 207	Maplewood	MN	55109	(651) 326-3147
Stute Jessica & Stute Jason	2332 Hillwood Dr E	Maplewood	MN	55119	(651) 755-0030
Sullivan Maureen	2628 Nemitz Ave	Maplewood	MN	55119	(651) 731-1740
Sunshine Preschool	759 E Cty Rd B	Maplewood	MN	55117	(651) 776-1547
Sykes Nancy Jane	543 Sterling St	Maplewood	MN	55119	(651) 343-6826
Thao Houaha Y	2389 Brenner Ave E	Maplewood	MN	55109	(763) 807-0940

Healthcare and Public Health					
Trinka Dorothy Anna & Trinka Charles James	2137 Sloan St	Maplewood	MN	55117	(651) 771-8862
TSE - Roselawn	1983 Sloan Place #13 & #14	Maplewood	MN	55117	(651) 793-0373
Tubman Safe Journeys Youth Program	1725 Monastery Way	Maplewood	MN	55109	(651) 770-0777
Turchin Heather N	1889 Flandrau St	Maplewood	MN	55109	(651) 226-2224
Vanderwaal Patty	2009 Maryknoll Ave	Maplewood	MN	55109	(651) 770-9423
Wackerfuss Sandra Marie	2181 Birmingham St	Maplewood	MN	55109	(651) 779-8193
Wallace Zeporah & Ferguson Anthony	2675 Midvale Place E	Maplewood	MN	55119	(651) 373-4414
Wessel Angela K	1730 Kennard St	Maplewood	MN	55109	(651) 771-0087
Wettschreck Kirk William & Wettschreck Angela Louise	1400 Mary St N	Maplewood	MN	55119	(651) 335-8945
Wilson James L & Wilson Carol J	2664 Barclay St	Maplewood	MN	55109	(651) 770-2725
Wingspan Life Resources - Demont	975 Demont Ave E	Maplewood	MN	55109	(651) 644-2665
Wodesso Elsa & Elmo Feyisa	504 Crestview Dr S	Maplewood	MN	55119	(651) 731-5278
Yang Phoua & Vang Rocky	1702 Abell Ave	Maplewood	MN	55117	(651) 266-2632
Zuk Nicole Marie	2799 Southlawn Dr N	Maplewood	MN	55109	(612) 267-8002
Lao Seniors Quality of Life	2648 W Broadway Ave	Minneapolis	MN	55411	(612) 767-1684
Loyde Robbie II	430 30th Ave N	Minneapolis	MN	55411	(612) 598-1023
Abiding Savior Lutheran Preschool	8211 Red Oak Dr NE	Mounds View	MN	55112	(763) 784-5326
ACR Homes Inc	2863 Sherwood Place	Mounds View	MN	55112	(763) 717-2253
Aeshliman Shannon Dawn	2221 KingSWay Lane	Mounds View	MN	55112	(612) 802-8392
AME Community Services, Inc. Fairchild	8378 Fairchild Ave	Mounds View	MN	55112	(763) 780-6282
Asnake Aynalem	8464 Sunnyside Rd	Mounds View	MN	55112	(763) 717-9738
Axis on St Michael	5533 St Michael Street	Mounds View	MN	55112	(763) 717-4967
Aynalem Asnake	8464 Sunnyside Rd	Mounds View	MN	55112	(763) 717-2158
Bel Rae Senior Living	2330 Mounds View Blvd	Mounds View	MN	55112	(763) 784-7633
Braun Claire & Braun Warren	5308 Clifton Dr	Mounds View	MN	55112	(763) 780-2978
Bujold Mary	5170 Longview Dr	Mounds View	MN	55112	(763) 439-8110
Chamberlain Karalyn	7969 Sunnyside Rd	Mounds View	MN	55112	(763) 786-1978
Cobb Karen	5243 Sunnyside Rd	Mounds View	MN	55112	(763) 780-7165
Creative Kids Academy Inc	5394 Edgewood Dr	Mounds View	MN	55112	(763) 792-4077
Curry Nicole	2736 Co Rd H2	Mounds View	MN	55112	(612) 327-3887

Healthcare and Public Health					
Flores Fioravanti Andres & Flores Fioravanti Melissa K	5240 Greenwood Dr	Mounds View	MN	55112	(612) 301-1046
Hayes Michelle L & Hayes Gerald S	8171 Red Oak Court	Mounds View	MN	55112	(763) 784-2503
Hoff Heidi Margaret	37 14th Ave SW	Mounds View	MN	55112	(612) 804-0663
Hruza Brenda A	7917 Eastwood Road	Mounds View	MN	55112	(763) 785-0314
Johnson Colleen	2341 Oakwood Dr	Mounds View	MN	55112	(763) 780-4197
Johnson June B	6986 Pleasant View Drive	Mounds View	MN	55112	(612) 554-8760
Johnston Clarissa	5108 Eastwood Rd	Mounds View	MN	55112	(763) 218-9764
Joy Dick	8059 Red Oak Dr	Mounds View	MN	55112	(763) 784-7049
Katzmarek Annette	7730 Edgewood Dr	Mounds View	MN	55112	(763) 783-3650
Kayser Beth A	2370 Hillview	Mounds View	MN	55112	(763) 784-0036
Kindercare Learning Center	2791 Hwy 10	Mounds View	MN	55112	(763) 780-4304
Kloti Joy	2741 Sherwood Rd	Mounds View	MN	55112	(612) 554-0093
Laurent Clerc Services, Inc	8470 Groveland Rd	Mounds View	MN	55112	(763) 862-3676
Mcmahon William & McMahon Ann	8425 Fairchild Ave	Mounds View	MN	55112	(763) 786-3315
Medtronic North Child Care Center	8200 Coral Sea St	Mounds View	MN	55112	
Messiah Preschool Early Education Program	2848 County Rd H2	Mounds View	MN	55112	(763) 784-1786
Mills Cynthia	7594 Greenfield Ave	Mounds View	MN	55112	(763) 784-8908
Mitchell Theresa	8391 Spring Lk Rd	Mounds View	MN	55112	(763) 786-4678
Morke Tracy	7505 Edgewood Dr	Mounds View	MN	55112	(763) 205-5937
Mounds View Gables	2670 County Road I	Mounds View	MN	55112	651-639-9799
MSOCS Crestview	2406 Woodcrest Dr	Mounds View	MN	55112	(763) 785-5625
Mugoodwin Romaney R	2287 Terrace Dr	Mounds View	MN	55112	(651) 354-7731
Owens & Minor Distribution, Inc.	2151 County Road H2W	Mounds View	MN		
Palzer Ann K	8375 Greenwood Dr	Mounds View	MN	55112	(763) 780-4637
Phoenix at Ludden	7717 Long Lake Rd	Mounds View	MN	55112	(651) 227-7655
REM Ramsey Inc - Hillview	2665 Hillview Rd	Mounds View	MN	55112	(763) 283-5160
REM Ramsey Inc - Pleasant View	8198 Pleasant View Court	Mounds View	MN	55112	(651) 643-6766
REM Ramsey Inc - Sherwood	2641 Sherwood Rd	Mounds View	MN	55112	(763) 792-1029
Rise Adult Day Program Mounds View	5394 Edgewood Dr	Mounds View	MN	55112	(763) 777-8753
Sandstrom Kari M	8484 Long Lake Rd	Mounds View	MN	55112	(763) 780-4604
Scenic Hills Alternative Care	2517 County Road I	Mounds View	MN	55112	651-735-7259

Healthcare and Public Health					
Scenic Hills Alternative Care	2517/2519 County Rd I	Mounds View	MN	55112	
Schlag Becky	5343 St Stephens St	Mounds View	MN	55112	(763) 438-8206
Schrader Cheryl	2566 Hillview Rd	Mounds View	MN	55112	(651) 285-0729
Silver View Education Center	2574 Mounds View Blvd	Mounds View	MN	55112	(651) 621-6222
Smith Kathryn & Smith Micheal	2142 Belle Lane	Mounds View	MN	55112	(763) 780-0960
Sunrise Christian Academy	7687 Long Lake Rd	Mounds View	MN	55112	(763) 780-9516
Thomas Jann Suzann	2432 Ridge Lane	Mounds View	MN	55112	(763) 232-6361
ACR Homes Inc	862 Redwood Ln	New Brighton	MN	55112	(651) 635-9060
ACR Homes Inc	1054 Robin Court	New Brighton	MN	55112	(651) 636-5654
ACR Homes Inc	2466 Walnut Ave	New Brighton	MN	55112	(651) 635-9015
ACR Homes Inc	2234 Bicentennial Court	New Brighton	MN	55112	(651) 639-1102
ACR Homes Inc	260 Oakwood Drive SW	New Brighton	MN	55112	(651) 635-0778
ACR Homes Inc	1309 16th Ave Northwest	New Brighton	MN	55112	(651) 628-4079
Amethyst Outpatient CD Program	1403 Silver Lk Rd	New Brighton	MN	55112	(651) 633-4532
APRIA HEALTHCARE LLC	601 CAMPUS DRIVE SUITE 10	New Brighton	MN	55112	651-523-8888
BEACON HAVEN	1200 LONG LAKE ROAD	New Brighton	MN	55112	651-379-0100
Benedictine Health Center at Innsbruck	1101 Black Oak Drive	New Brighton	MN	55112	651-633-1686
Britzus Crystal M	627 9th Ave NW	New Brighton	MN	55112	(612) 532-5097
Calguire Lawrence Michael	2265 Leona Drive	New Brighton	MN	55112	(651) 639-9106
Canfield Tara C	879 9th Ave NW	New Brighton	MN	55112	(651) 631-0008
Carroll Denise S & Carroll Jeffrey S	825 Forest Dale Rd	New Brighton	MN	55112	(612) 269-0637
Children's Choice Daycare, Inc	2455 Long Lk Rd	New Brighton	MN	55112	(651) 786-4986
Clementson Bonnie	2789 13th Terrace NW	New Brighton	MN	55112	(651) 636-0432
Comfort Care Home Inc	126 Wedgewood Ct	New Brighton	MN	55112	(952) 452-3765
Dirir Faiza	567 13th Ave NW	New Brighton	MN	55112	(763) 568-8503
Drake Andrea	2273 Stinson Blvd	New Brighton	MN	55112	(651) 808-3527
Dungarvin 15th	98 15th Ave	New Brighton	MN	55112	(651) 636-3989
Dungarvin Stinson	1879 Stinson Blvd	New Brighton	MN	55112	(651) 697-9199
Eckert Linda	811 23rd Ave	New Brighton	MN	55112	(612) 910-8492
Elmi Hodan M & Mohamed Abdiladif	2194 Co Rd E W	New Brighton	MN	55112	(651) 207-6218
Fairview Northeast Clinic	1151 Silver Lake Road NW	New Brighton	MN	55112	612-706-4500

Healthcare and Public Health					
FMCNA New Brighton DIAL CTR	550 COUNTY ROAD D STE 7	New Brighton	MN	55112	651-631-0885
Harbon Montessori Schools Inc	1500 29th Ave NW	New Brighton	MN	55112	(651) 631-1919
Health & Rehab of New Brighton	825 1st Avenue NW	New Brighton	MN	55112	651-633-7875
Iacarella Rita & Burgmeier Sue	2139 Violet Lane	New Brighton	MN	55112	(651) 628-0618
Integrity Living Options Inc	593 23rd Ave NW	New Brighton	MN	55112	(651) 636-0551
King Jacqueline A & King Joseph	2032 Thorndale Ave	New Brighton	MN	55112	(651) 631-0683
King's Kids	1980 Silver Lk Rd	New Brighton	MN	55112	(651) 633-2240
Kinsella Corporation	1405 Silver Lake Road Ste 3	New Brighton	MN	55112	651-666-2094
Knudsen Joni	2553 Eastman Drive	New Brighton	MN	55112	(651) 784-3693
Kreig Susan M	920 Mooney Dr E	New Brighton	MN	55112	(651) 636-4934
Meadowood Shores Senior Housin	2100 Silver Lake Road	New Brighton	MN	55112	651-604-2900
Merwin Iv & Specialty Pharmacy	1811 Old Highway 8 NW Ste C	New Brighton	MN	55112	651-540-6290
Miller Brighton Funeral Home	706 4th Ave NW	New Brighton	MN		
Minnesota Vascular Sur Ctr Llc	600 County Road D Ste 2	New Brighton	MN	55112	763-432-4300
Moseti Rose B & Magaki Richard M	815 7th Ave NW	New Brighton	MN	55112	(651) 633-6346
Mounds View Head Start	2101 NW 14th St	New Brighton	MN	55112	(651) 639-6147
Mowll Aryati	1965 County Rd E West	New Brighton	MN	55112	(612) 702-9658
New Brighton Care Center	805 6th Avenue NW	New Brighton	MN	55112	651-633-7200
New Brighton Senior Assisted L	2700 Rice Creek Road	New Brighton	MN	55112	651-633-6484
Nystrom And Associates	1900 Silver Lake Road #110	New Brighton	MN	55112	651-628-9566
Okonkwo Sheri	1533 2nd St SW	New Brighton	MN	55112	(651) 357-8131
Paredes Garcia Rosi	2318 Long Lake Rd	New Brighton	MN	55112	(651) 675-8662
PKT Enterprises Inc	669 Inca Lane	New Brighton	MN	55112	(651) 636-8558
PKT Enterprises Inc	2774 Valley View Lane	New Brighton	MN	55112	(651) 784-7874
Reiland Karla	1923 3rd St NW	New Brighton	MN	55112	(651) 636-0420
REM Ramsey Inc - Brightway	1695 29th Ave NW	New Brighton	MN	55112	(651) 489-3323
REM Ramsey Inc - Hidden Oaks	1598 26th Ave Northwest	New Brighton	MN	55112	(651) 631-1784
Rescare Minnesota Inc	1456 12th Terrace NW	New Brighton	MN	55112	(651) 604-9254
Rivers Catherine L	1485 16th Terr NW	New Brighton	MN	55112	(651) 202-7389
Rodkewich Tessie M	198 16th Ave SW	New Brighton	MN	55112	(612) 281-7198

Healthcare and Public Health					
Salem Preschool @ Salem Covenant Church	2655 5th Street NW	New Brighton	MN	55112	(651) 633-0158
Senior Suites of New Brighton	805 6th Avenue NW	New Brighton	MN	55112	651-403-5241
Sheppard Mary	115 16th Avenue NW	New Brighton	MN	55112	(651) 636-2777
Silver Oaks	3277 Rice Creek Road	New Brighton	MN	55112	651-450-1802
St. John's Little Lights Preschool	835 2nd Ave NW	New Brighton	MN	55112	(651) 633-8333
Thill Kathleen Marie	2469 10th St NW	New Brighton	MN	55112	(651) 353-5104
Thomas Allen Inc	3277 Rice Creek Rd	New Brighton	MN	55112	(651) 636-0546
Thorndale Apartments	1050 Thorndale Avenue	New Brighton	MN	55112	651-639-9799
Toupal Mark	1563 14th Ave NW	New Brighton	MN	55112	(651) 631-2987
Vannurden Jeryl	187 2nd Ave SE	New Brighton	MN	55112	(651) 633-5122
Wilmet Gretchen	2087 Tioga Blvd	New Brighton	MN	55112	(651) 636-1667
Brookdale North Oaks	300 Village Center Drive	North Oaks	MN	55127	651-482-8111
Enrich Inc	22 Deer Hills Drive	North Oaks	MN	55127	(651) 765-8787
Havenor Funeral Home and Cremation	4600 Greenhaven Drive	North Oaks	MN	55127	
Musical Montessori (The)	5050 Hodgson Rd	North Oaks	MN	55127	(651) 274-6569
North Oaks Preschool	5 Mink Ln	North Oaks	MN	55127	(651) 484-1594
Northern Stars Home Care Llc	63 E Pleasant Lake Road	North Oaks	MN	55127	651-528-6649
Presbyterian Homes of North Oaks	5919 Centerville Road	North Oaks	MN	55127	651-765-4063
Suite Living Senior Care	855 Village Center Drive	North Oaks	MN	55127	651-444-8796
Waverly Gardens	5919 Centerville Road	North Oaks	MN	55127	651-765-4000
Clare Bridge of North Oaks	300 Village Center Dr	NORTH OAKS	MN	55127	
ACR Homes Inc	2200 Jennifer Ct	North Saint Paul	MN	55109	(651) 487-6260
Allen Dale	1986 Parkway Dr	North Saint Paul	MN	55109	(651) 774-5310
Bergstrom Lindsey	2301 Shawnee Dr	North Saint Paul	MN	55109	(651) 230-2017
Burke Constance J	2753 Apache Road	North Saint Paul	MN	55109	(651) 770-8704
Claye Enterprises, Inc.	1925 Betty Jane Court	North Saint Paul	MN	55109	(651) 779-6393
Collins Elisabeth Marietta	2434 7th Ave E	North Saint Paul	MN	55109	
Cory Karen C & Cory Nadine Y	2219 Holloway Ave	North Saint Paul	MN	55109	(651) 773-3015
Dismuke Myhre Candace Marie	2209 Skillman Ave E Apt 102	North Saint Paul	MN	55109	(612) 499-7469
Faithful Beginnings at St Peter Catholic School	2620 N Margaret St	North Saint Paul	MN	55109	(651) 777-3091

Healthcare and Public Health					
FHSM North Saint Paul Clinic	2601 Centennial Dr.	North Saint Paul	MN	55109	
Fyksen Brenton T	2265 15th Ave E Lower	North Saint Paul	MN	55109	(651) 245-2078
Fyksen Patricia M	2265 15th Ave E Main	North Saint Paul	MN	55109	(651) 248-2196
Gallati Becky	2600 7th Ave E	North Saint Paul	MN	55109	(651) 399-3470
Giving Back Inc.	2363 Eldridge Ave E	North Saint Paul	MN	55109	(651) 777-8115
Healthstar Home Health	2586 7th Avenue East Ste 302	North Saint Paul	MN	55109	651-633-7300
Hillside Funeral Home	2600 19th Ave E	North Saint Paul	MN		
Hynes Susan	2732 8th Ave E	North Saint Paul	MN	55109	(651) 765-1827
Keen Richard L & Keen Vivian E	2254 Ryan Court E	North Saint Paul	MN	55109	(651) 770-3548
Loida Dorothy A	2387 Eldridge Ave E	North Saint Paul	MN	55109	(651) 770-1595
LSS Gateway	2110 Castle Ave	North Saint Paul	MN	55109	(651) 415-0757
Mcdonald Austin J & Mcdonald Cody J	2505 12th Ave E	North Saint Paul	MN	55109	(651) 600-6932
Merrick Inc	2497 7th Ave East	North Saint Paul	MN	55109	(651) 788-9107
More Jennifer N	1959 Northwood Dr	North Saint Paul	MN	55109	(651) 307-5169
Morrisette Dave L	2312 13th Ave E	North Saint Paul	MN	55109	(651) 330-0361
Negussie Tsegereda	2051 Eldridge Ave E	North Saint Paul	MN	55109	(651) 773-3905
Nesset Michael	2720 Park Row	North Saint Paul	MN	55109	(651) 773-8770
North Saint Paul Transitional Care Center	2375 Skillman Ave. E	North Saint Paul	MN		
Northeast Residence Inc	2707 9th Ave E	North Saint Paul	MN	55109	(651) 777-6173
Outcomes Inc - Hillcrest	2522 Cowern Place	North Saint Paul	MN	55109	(651) 777-0602
Pathways to Community	2709 Mcknight Rd N	North Saint Paul	MN	55109	(651) 797-2782
Polar Ridge Senior Living	2365 Helen Street North	North Saint Paul	MN	55109	651-770-4028
REM Ramsey Inc - 5th Avenue	2670 5th Ave E	North Saint Paul	MN	55109	(651) 773-3273
REM Ramsey Inc - North Oaks	2570 Holloway Ave E	North Saint Paul	MN	55109	(651) 738-6603
REM Ramsey Inc - The Woods	2021 Margaret St	North Saint Paul	MN	55109	(651) 771-5892
Sandberg Funeral & Cremation Services	2593 7th Ave E	North Saint Paul	MN		
South Metro Human Services	2305 14th St E	North Saint Paul	MN	55109	(651) 748-0662
St. Mark's Preschool	2499 N Helen St	North Saint Paul	MN	55109	(651) 773-9884
Treasured Tykes	2675 E Highway 36	North Saint Paul	MN	55109	(651) 770-6784
Trumble-Schwan Kathleen T	2795 Mcknight Rd	North Saint Paul	MN	55109	(651) 779-3000
Wilson Nichol Marie & Wilson Kevin Lemont	2168 Belmont Lane E	North Saint Paul	MN	55109	(651) 353-6757

Healthcare and Public Health					
World Around Us Child Development Center, Inc.	2290 11th Ave E	North Saint Paul	MN	55109	(651) 773-1400
Polar Ridge Senior Living	2365 Helen St	North Saint Paul	MN	55109	
A-I Reliable Home Care Inc	2345 Woodbridge Street	Roseville	MN	55113	952-393-7857
ACR At Home Healthcare LLC	2437 Rice Street	Roseville	MN	55113	651-294-4799
ACR Homes Inc	2528 Lydia Ave W	Roseville	MN	55113	(651) 636-7172
ACR Homes Inc	1094 Brooks Ave	Roseville	MN	55113	(651) 486-3885
ACR Homes Inc	2206 Fulham Street	Roseville	MN	55113	(651) 415-9991
ACR Homes Inc	1759 Lydia Ave W	Roseville	MN	55113	(651) 633-8097
ACR Homes Inc	1535 W County Road B2	Roseville	MN	55113	(651) 638-9585
ACR Homes Inc	1822 Dale Court	Roseville	MN	55113	(651) 488-1088
Adair Andrea M & Adair Alphonse D	373 Sandhurst Dr W	Roseville	MN	55113	(651) 340-8617
Adeniyi Christianah	2645 Matilda St	Roseville	MN	55113	(651) 490-3199
Adjei Mavis	765 Terrace Dr	Roseville	MN	55113	(651) 489-0640
After School Kids at Calvary Church	2120 N Lexington Ave	Roseville	MN	55113	(651) 487-2855
Alphonse D & Andrea Adair	373 Sandhurst Dr W	Roseville	MN	55113	(651) 340-8617
Aplus Health Care Llc	2355 Highway 36 West Suite 400	Roseville	MN	55113	612-276-3300
Arthur's Residential Care	1854 Alta Vista Dr	Roseville	MN	55113	
Arthur's Residential Care - Al	1854 Alta Vista Drive	Roseville	MN	55113	651-294-4798
Arthur's Residential Care Llc	2437 Rice Street	Roseville	MN	55113	651-294-4798
Arthurs Residential Care on Me	3310 Emmert Street	Roseville	MN	55126	651-294-4798
Associated Medical and Dental Clinic	2381 Rice St.	Roseville	MN	55113	
Axis on Belmont	692 Belmont Lane West	Roseville	MN	55113	651-489-4630
Axis on Eldridge	651 Eldridge Avenue West	Roseville	MN	55113	651-488-2237
Bennett Toni	2544 Herschel Street	Roseville	MN	55113	(651) 633-2851
Bilingual Child Care & Education Center Inc	1125 Co Rd B W	Roseville	MN	55113	(651) 644-2405
Burke Rhondalyn P	2551 Western Ave N	Roseville	MN	55113	(651) 490-7524
Cherrywood Pointe of Roseville	2666 Lexington Avenue North	Roseville	MN	55113	952-525-4555
Cherrywood Pointe Senior Living	2996 Cleveland N Ave	ROSEVILLE	MN	55113	
Cherrywood Pointe Senior Living	Lexington Ave.	ROSEVILLE	MN		
Clay Enterprises, Inc.	3006 Simpson Ave	Roseville	MN	55113	(651) 638-0751

Healthcare and Public Health					
Claye Enterprises, Inc.	1446 W County Road B	Roseville	MN	55113	(651) 636-5780
Communities of Care	1700 Highway 36 West Ste 530	Roseville	MN	55113	651-482-0549
Curtis Claudia	2499 Matilda St	Roseville	MN	55113	(651) 483-5722
Day Break Adult Day Care LLC	2727 North Victoria Street	Roseville	MN	55113	(651) 486-2428
Desdamona Racheli F T	176 Mccarrons Blvd	Roseville	MN	55117	(651) 271-9282
Diop Ndeye Anta	1800 Chatsworth St N	Roseville	MN	55113	(651) 224-1355
Dr. Erskine Caperton, Rheumatology	2233 Hamline Ave. N	Roseville	MN		
Dungarvin Farrington	2708 Farrington St	Roseville	MN	55113	(651) 765-9183
Dungarvin Jessamine	436 Lovell Ave	Roseville	MN	55113	(651) 779-8592
Dungarvin Roselawn	1261 Roselawn Ave W	Roseville	MN	55113	(651) 659-0199
Eagle Crest Arbor	2955 Lincoln Drive	Roseville	MN	55113	651-628-3000
Eaglecrest Arbor	2955 Lincoln Dr	ROSEVILLE	MN	55113	
Eaglecrest Senior Housing Llc	2945 Lincoln Drive	Roseville	MN	55113	651-628-3000
Edwards Jessica Evelyn	3005 Asbury St	Roseville	MN	55113	(651) 792-6474
Erickson Mary L	1653 Millwood Ave	Roseville	MN	55113	(651) 631-8526
Espinoza Gloria & Espinoza Daniel	1415 Burke Ave W	Roseville	MN	55113	(651) 389-2556
Fishback Janet T	2895 Hamline Ave North	Roseville	MN	55113	(651) 636-7046
FMC Dialysis Services Roseville	2045 Rice Street	Roseville	MN	55113	651-489-3312
Frost Amber Rose & Frost Timothy James	2039 Irene Street	Roseville	MN	55113	(651) 295-4518
Godbout Barbara P	3110 Mildred Drive	Roseville	MN	55113	(651) 635-0663
Golden Living Community Lk Rdg	2727 North Victoria	Roseville	MN	55113	651-483-5431
Golden Living Community-Lake Ridge	2727 Victoria N St	ROSEVILLE	MN	55113	
Good Samaritan Soc Heritage Pl	563 County Road B West	Roseville	MN	55113	651-489-3293
Green Margaret S	2942 Pascal Street	Roseville	MN	55113	(651) 260-8490
Gurule Monica L	569 S Owasso Blvd	Roseville	MN	55113	(651) 483-1438
Hand in Hand Christian Montessori	2129 Fairview Ave	Roseville	MN	55113	(651) 784-7988
Healthpartners North Suburban Family Physicians-Roseville	2831 Snelling Ave. N	Roseville	MN		
Heartland Home Healthcare and Hospice	2685 Long Lake Road Ste 105	Roseville	MN	55113	651-633-6522
Heffernan Karie	893 Co Rd C2 W	Roseville	MN	55113	(651) 210-5172
Home Healthcare Agency	2489 Rice Street Ste 295	Roseville	MN	55113	651-493-6877

Healthcare and Public Health					
Interim Healthcare	2680 Arthur Street	Roseville	MN	55113	651-917-3634
Intrepid USA Hospice	2277 Highway 36 West Ste 101	Roseville	MN	55113	651-633-6404
Ittner Lorraine J & Anderson Rick C	1130 Sandhurst Dr W	Roseville	MN	55113	(612) 559-3764
Johnson Nancy J & Johnson David J	3070 Victoria St N	Roseville	MN	55113	(651) 486-0894
Jones Charlene A	545 W Sandhurst Dr #204	Roseville	MN	55113	(651) 399-6772
Kaposia Retirement Services	2459 N Rice St	Roseville	MN	55113	(651) 488-6909
Keystone Communities of Roseville	2750 Victoria N St	Roseville	MN	55113	
Keystone Roseville	2750 North Victoria Street	Roseville	MN	55113	651-482-1611
Kinderberry Hill Child Development Center	2360 Lexington Ave N	Roseville	MN	55113	(651) 481-8069
Kindercare Learning Center	2186 Fairview Ave N	Roseville	MN	55113	(651) 631-0735
Kindercare Learning Center	181 W County Rd B2	Roseville	MN	55113	(651) 490-1403
Kinderhaus Montessori School	3115 Victoria St N	Roseville	MN	55113	(651) 482-7925
Kindred at Home	1970 Oakcrest Avenue Ste 107	Roseville	MN	55113	651-636-6330
King of Kings Lutheran Church and School	2330 North Dale Street	Roseville	MN	55113	(651) 484-9206
Lake Ridge Child Care Center	2561 Victoria Street	Roseville	MN	55113	(651) 483-6141
Langton Place	1910 West County Road D	Roseville	MN	55112	651-631-6200
Larpenteur Ave Dialysis	1739 Lexington Avenue North	Roseville	MN	55113	651-489-9260
Ling Sandra M	2801 Woodbridge St	Roseville	MN	55113	(651) 493-0090
Lo Medical Clinic	2353 Rice St.	Roseville	MN		
Lopez Joy K & Lopez Edgar N	387 Judith Ave	Roseville	MN	55113	(651) 487-9412
LSS Lexington	2680 Marion Street	Roseville	MN	55113	(651) 482-0309
Miniapple International Montessori	1875 W Perimeter Dr	Roseville	MN	55113	(651) 628-9575
MN Chinese Day Care & Learning Center	2300 N Hamline Ave	Roseville	MN	55113	(651) 633-6239
Mueller Bies Funeral Home	2130 Dale St N	Roseville	MN		
Multicare Associates - Roseville Medical Center	1835 County Rd. C West	Roseville	MN		
Nehi Christian Preschool and Childcare	2701 N Rice St	Roseville	MN	55113	(651) 797-7938
New Horizon Academy	3050 Centre Pt Dr #900	Roseville	MN	55113	(651) 631-3579
New Perspective Roseville	2750 North Victoria Street	Roseville	MN	55113	651-482-1611

Healthcare and Public Health					
Nguyen Hoa	506 Reservoir Woods Circle	Roseville	MN	55113	(651) 489-9282
North Como Preschool	965 W Larpenteur Ave	Roseville	MN	55113	(651) 488-7137
Northeast Contemporary Services, Inc	2770 Cleveland Ave N	Roseville	MN	55113	(651) 636-8050
Northeast Residence Inc	2646 Virginia Ave	Roseville	MN	55113	(651) 777-7346
Northeast Residence Inc	470 Co Rd B2 W	Roseville	MN	55113	(651) 490-3115
Northeast Residence Inc	1492 Brenner Ave	Roseville	MN	55113	(651) 633-2855
Northern Voices	1660 W County Rd B	Roseville	MN	55113	(651) 639-2535
Now Medical Inc.	1955 County Rd. B2 West	Roseville	MN		
O'Connor Norma L	541 Woodhill Drive	Roseville	MN	55113	(651) 484-1735
Oneill Beth	2871 Kent St	Roseville	MN	55113	(612) 210-5872
Option Care	2750 Arthur Street	Roseville	MN	55113	651-635-9272
Options Family & Behavior Services	2675 Long Lake Rd Ste 125	Roseville	MN	55113	(952) 564-3000
Orion Corporation of Minnesota Inc	1122 Sextant Ave	Roseville	MN	55113	(651) 771-8799
Partners in Recovery Llc	1611 County Road B West Ste 102	Roseville	MN	55113	(651) 433-5505
Partnership for Minnesota Futures	2205 Midlothian Road	Roseville	MN	55113	(651) 426-2718
Peake Kathleen Ann	2599 N Lexington Ave #323	Roseville	MN	55113	(651) 285-6406
Pediatric Home Service	2800 Cleveland Avenue North	Roseville	MN	55113	651-642-1825
Phoenix Residence, Inc. - Western (The)	2692 Western Ave N	Roseville	MN	55113	(651) 486-7350
PKT Enterprises Inc	396 County Road C	Roseville	MN	55113	(651) 766-6992
PKT Enterprises Inc	1072 Parker Ave	Roseville	MN	55113	(612) 788-3998
Portermain Paula K	494 Terrace Drive	Roseville	MN	55113	(651) 486-8123
Presbyterian Assisted Living	2845 Hamline Avenue North	Roseville	MN	55113	651-631-6197
Presbyterian Homes of Roseville	1910 West County Road D	Roseville	MN	55112	651-746-8200
Rem Ramsey Inc - Brenner	2010 Brenner Ave	Roseville	MN	55113	(651) 643-6739
Rem Ramsey Inc - Brooks	420 Brooks Ave	Roseville	MN	55113	(651) 482-6102
Rem Ramsey Inc - Hand	2065 Hand Ave	Roseville	MN	55113	(651) 487-9706
Rem Ramsey Inc - Oakcrest	388 Oakcrest	Roseville	MN	55113	(651) 483-4118
Rescare Minnesota Inc	3095 Mount Ridge Road	Roseville	MN	55113	(651) 697-1037
Rescare Minnesota Inc	693 Eldridge Ave W	Roseville	MN	55113	(651) 487-0148
Richards Michelle	1058 Roma	Roseville	MN	55113	(651) 489-5918

Healthcare and Public Health					
Riesco Inc	2680 Farrington Street	Roseville	MN	55113	(651) 486-2799
Rivera Maria D	2275 N Snelling Ave #414	Roseville	MN	55113	(612) 255-3398
Rose of Sharon Manor	1000 Lovell Avenue	Roseville	MN	55113	651-484-3378
Roselawn Cemetery	803 Larpenteur Ave W	Roseville	MN		
Roselawn Village Apartments	1074 Roselawn Avenue West	Roseville	MN	55113	651-645-7271
Roseville Lutheran Church	1200 W Ryan Ave	Roseville	MN	55113	(651) 488-7991
Roseville Memorial Chapel	2245 Hamline Ave N	Roseville	MN		
Roy Veronica K	2753 Kent Street	Roseville	MN	55113	(651) 766-7687
Saint Paul Metro Treatment Center	2311 Woodbridge St	Roseville	MN	55113	(651) 773-0832
Saint Paul Rheumatology, PA	2680 Snelling Ave. N	Roseville	MN		
Sarin Mary	1875 Dellwood Ave	Roseville	MN	55113	(612) 578-8424
Schroeder Denise L	1031 W Burke Avenue	Roseville	MN	55113	(651) 489-3612
Schultz Joseph H & Schultz Traci J	3091-Wheeler St N	Roseville	MN	55113	(651) 491-3378
Severson Yolanda Y & Severson Ronald L	2716 Merrill St	Roseville	MN	55113	(651) 447-2273
Skogstad Teresa	3042 Woodbridge Street	Roseville	MN	55113	(651) 484-6332
Sunrise Assisted Living of Ros	2555 Snelling Avenue North	Roseville	MN	55113	651-636-4800
Sunrise Assisted Living of Roseville	2555 Snelling N Ave	Roseville	MN	55113	
Synergy Home Care MSP Metro	2336 Lexington Avenue N Ste L	Roseville	MN	55113	612-455-2585
Thao Isabel	1144 Dionne Ave Apt 108	Roseville	MN	55113	(651) 497-1344
Thao Kazoua M	2713 Marion Street	Roseville	MN	55113	(651) 481-1241
The Estates at Roseville Llc	2727 North Victoria	Roseville	MN	55113	651-483-5431
The Friendship Home Community	500 Roselawn Avenue W	Roseville	MN	55113	651-398-2294
The Friendship Home Community	947 Lydia Drive West	Roseville	MN	55113	651-398-2294
The Friendship Home Community	567 Owasso Hills Drive	Roseville	MN	55113	651-398-2294
The Friendship Home Community, Llc	947 Lydia W Dr	Roseville	MN	55113	
Tierney Virginia A	1011 Draper Ave	Roseville	MN	55113	(651) 489-5928
Tomy Kari Jo	683 Belmont Lane W	Roseville	MN	55113	(252) 876-7721
Tschida Kathleen M	387 Woodhill Dr	Roseville	MN	55113	(651) 483-9314

Healthcare and Public Health					
TSE - Mccarrons	2027 Rice St	Roseville	MN	55113	(651) 489-2595
University of Northwestern Child Development Center	2945 Lincoln Dr	Roseville	MN	55113	(651) 628-3110
Viken Kevin J & Viken Julie A	1964 Prior Ave N	Roseville	MN	55113	(612) 419-6290
Wahl Paultet Ann & Wahl Jeffrey Carl	1467 Centennial Dr	Roseville	MN	55113	(651) 341-9908
Waldemarsen Lynn R	1201 W County Road B2	Roseville	MN	55113	(651) 483-3156
Warnest Laura Susan	2420 Pascal St	Roseville	MN	55113	(612) 965-4761
Widerski Chrsitenson Shirley	2585 N Wheeler St	Roseville	MN	55113	(651) 636-9381
Wingspan Life Resources - Fairview	2906 Fairview Ave N	Roseville	MN	55113	(651) 646-3846
Wingspan Life Resources - Skillman	1307 Skillman Ave W	Roseville	MN	55113	(651) 699-4918
Wingspan Life Resources - Troseth	2939 Troseth Road	Roseville	MN	55113	(651) 636-2983
Woodruff Mary P	2567 Avon St N	Roseville	MN	55113	(651) 483-8415
Woody Deborah M	2186 Bossard Dr	Roseville	MN	55113	(651) 457-1875
Zheng Lucy S	2970 Western Ave N	Roseville	MN	55113	(651) 621-5851
Zimmermann Swenson Margaret A & Swenson John C	705 Roma Ave	Roseville	MN	55113	(651) 696-1838
Chandler Place Home Health Car	3701 Chandler Drive	Saint Anthony	MN	55421	612-788-7321
Complete Home Health Services	4001 Stinson Boulevard Ne #332	Saint Anthony	MN	55421	612-788-2273
Dahlberg Christy L	3933 Fordham Dr Ne	Saint Anthony	MN	55421	(612) 750-6460
Pearl Garden	3700 Foss Road Ne	Saint Anthony	MN	55421	612-788-9673
Pearl Garden	3700 Foss Rd	Saint Anthony	MN	55421	
Premier Health Homes Inc	2817 Anthony Lane #205	Saint Anthony	MN	55418	651-307-9898
Raivo Lynch Elizabeth & Barquero Salazar Martin	3020 Harding St Ne	Saint Anthony	MN	55418	(612) 703-9232
Saint Anthony Health & Rehab	3700 Foss Road Ne	Saint Anthony	MN	55421	612-788-9673
Saint Anthony Health Center	3700 Foss Road NE	Saint Anthony	MN		
St Charles Borromeo Preschool	2727 Stinson Blvd	Saint Anthony	MN	55418	(612) 781-2643
402 University Ave (Mental Health/Detox/Court)	402 University Ave	Saint Paul	MN	55102	
Ramsey County Human Services Mental Health Center	1919 University Ave #200	Saint Paul	MN	55104	(651) 266-7999
Ramsey County Juvenile Detention Center	25 West 7th Street	Saint Paul	MN	55102	(651) 266-5255
Ramsey County Medical Examiner's Office	300 East University Avenue	Saint Paul	MN	55130	651-266-1700
Regions Hospital	640 Jackson Street	Saint Paul	MN	55101	651-254-2377
Saint Paul/Ramsey County Public Health	90 Plato Boulevard West	Saint Paul	MN	55107	651-266-1200

Healthcare and Public Health					
Saint Paul/Ramsey County Public Health	555 Cedar Street	Saint Paul	MN	55101	651-266-1200
St Joseph's Hospital Inpatient Chemical Dependency Program	45 W 10th St	Saint Paul	MN	55102	(651) 232-3644
United Hospital	333 Smith Avenue N	Saint Paul	MN	55102	651-241-8000
ACR Homes Inc	191 Dawn Ave	Shoreview	MN	55126	(651) 486-0380
Adcock Elizabeth Anne	1951 Bluestem Ln	Shoreview	MN	55126	(651) 207-6872
Ahlberg Jamie L	1090 Nelson Dr	Shoreview	MN	55126	(651) 208-6564
Allergy Asthma and Immunology Clinic	4625 Churchill St. Suite 211	Shoreview	MN		
Allina Clinic (W/Urgent Care)	4194 Lexington Avenue	Shoreview	MN	55126	651-483-5461
Allina Medical Clinic - Shoreview	4194 Lexington Ave. N	Shoreview	MN		
ARTHUR'S RESIDENTIAL CARE	3310 EMMERT DR	Shoreview	MN	55126	
Ascheman Angela Louise	4138 Lexington Ave N #3202	Shoreview	MN	55126	(651) 295-0588
Axis on Glenhill	1083 Glenhill Road	Shoreview	MN	55126	651-482-0562
Badger Casey C & Badger Maren L	478 Lake Wabasso Court	Shoreview	MN	55126	(651) 483-1974
Bayada Home Health Care Inc	3490 Lexington Ave N Ste 310	Shoreview	MN	55126	651-482-8400
Besser Robert J & Beyer Tracy A	640 Taylor Ave	Shoreview	MN	55126	(651) 245-3980
Brasel Marina S	699 Emil Ave	Shoreview	MN	55126	(651) 481-7194
Briggs Michelle	256 North Owasso Blvd	Shoreview	MN	55126	(651) 484-9397
Children's Way Preschool	3382 North Lexington Ave	Shoreview	MN	55126	(651) 484-5719
Collins Jacquelyne Jane	3215 Park Overlook Dr	Shoreview	MN	55126	(651) 207-5683
Cooney Mary Ann	5750 Royal Oaks Dr	Shoreview	MN	55126	(651) 483-1817
Dungarvin Arner	549 Arner Ave	Shoreview	MN	55126	(651) 482-0193
DUNGARVIN CAMARA	3989 VIRGINIA CIRCLE	Shoreview	MN	55126	651-699-6050
Dungarvin Minnesota LLC Camara	3989 Virginia Circle	Shoreview	MN	55126	(651) 483-8377
Dungarvin Richmond	3515 Richmond Ave	Shoreview	MN	55126	(651) 481-9883
Dungarvin Suzanne	546 Suzanne Ave	Shoreview	MN	55126	(651) 486-7442
Dungarvin Turtle Lane	4944 Turtle Ln	Shoreview	MN	55116	(651) 699-6050
Dungarvin Victoria	3490 Victoria St	Shoreview	MN	55126	(651) 482-2089
Dungarvin Virginia	3979 Virginia Circle	Shoreview	MN	55126	(651) 771-8108
Enrich Inc	3744 Rustic Place	Shoreview	MN	55126	(651) 493-8865

Healthcare and Public Health					
Enrich Inc	470 Lake Wabasso Court	Shoreview	MN	55126	(651) 414-9565
Enrich Inc	3720 Rustic Place	Shoreview	MN	55126	(651) 482-7775
Entria Family Clinic	404 West Highway 96	Shoreview	MN	55126	651-483-8283
Everhart Brenda J & Everhart Steven L	179 Wendy Court	Shoreview	MN	55126	(651) 766-2793
Foster Karen C	3149 Christopher Lane	Shoreview	MN	55126	(651) 486-0442
Generations Women's Health Center	1030 County Rd. E West	Shoreview	MN		
Handt Elizabeth W	615 Tanglewood Drive	Shoreview	MN	55126	(651) 484-9115
Holcomb Henry Boom Funeral Home & Cremation	515 Highway 96 W	Shoreview	MN		
Incarnation Preschool	4880 Hodgson Rd	Shoreview	MN	55126	(651) 484-7213
Jordan Anthony	3754 Rustic Pl	Shoreview	MN	55126	(651) 636-7537
Justin Diane M	5553 Donegal Dr	Shoreview	MN	55126	(651) 481-3139
Kautto Connie	344 Oakwood Drive	Shoreview	MN	55126	(651) 484-0275
KIDS ABILITIES	490 WEST HIGHWAY 96 SUITE 300	Shoreview	MN	55126	651-451-3016
Kindercare Learning Center	3420 Lexington Ave N	Shoreview	MN	55126	(651) 482-7689
Kindercare Learning Center	4650 Hodgson Rd	Shoreview	MN	55126	(651) 482-9598
Kinsel Shelley L	1035 Mercury Dr	Shoreview	MN	55126	(651) 247-7581
Kommann Sheri L	5700 Deer Trail E	Shoreview	MN	55126	(763) 843-9222
Kuehn Rebecca L	5928 Pond View Drive	Shoreview	MN	55126	(651) 633-6711
Lake Owasso Residence	210 Owasso Boulevard North	Shoreview	MN	55126	651-765-7703
Laviolette Sheryl I	1565 Oakwood Ter	Shoreview	MN	55126	(651) 780-5244
Lifespan	529 W Cty Rd E	Shoreview	MN	55126	(651) 287-6022
LSS Deer Hollow	935 Amble Rd	Shoreview	MN	55126	(651) 484-0985
LSS Fernwood	5932 Fernwood	Shoreview	MN	55126	(651) 478-4972
LSS Stillwater Place	925 Amble Rd	Shoreview	MN	55126	(651) 484-6718
Mankowski Kimberlee K	3475 Soo St	Shoreview	MN	55126	(651) 484-6749
Manning Rebecca A	4550 Chatsworth Street	Shoreview	MN	55126	(651) 484-8613
Martin Gillian Mary & Martinson Katherine Louise	270 Cottage Place	Shoreview	MN	55126	(651) 210-2436
Mary T & Associates Inc	4408 Victoria St	Shoreview	MN	55126	(651) 490-5078
Mary T & Associates Inc	360 Lilac Lane	Shoreview	MN	55126	(651) 490-5962
Mcdonough Kathleen R	240 Dawn Ave	Shoreview	MN	55126	(651) 484-6476
Midwest Special Services, Inc.- Shoreview Center	1045 Tomlyn Ave	Shoreview	MN	55126	(651) 483-3000

Healthcare and Public Health					
Miller Jennifer R	391 E Horse Shoe Dr	Shoreview	MN	55126	(612) 382-4095
Northeast Residence Inc	545 Gramsie Rd	Shoreview	MN	55126	(651) 653-0024
Northeast Residence Inc	909 Edgewater Ave	Shoreview	MN	55126	(651) 765-0217
Northeast Youth & Family Services	3490 Lexington Ave N Ste 205	Shoreview	MN	55126	(651) 486-3808
Nygaard Susan L	5675 Schutta Road	Shoreview	MN	55126	(651) 780-1093
Oak Hill Montessori School	4665 Hodgson Rd	Shoreview	MN	55126	(651) 484-8242
Olafson Alyssa Jean	1690 Terrace Drive	Shoreview	MN	55126	(763) 443-5630
Orthopaedic Partners, PA	4625 Churchill St. Suite 300	Shoreview	MN		
Otis James Sheffield & Otis Deirdre Mccarrell	3199 Owasso Blvd W	Shoreview	MN	55126	(612) 381-4086
Peake Nancy J	4805 Hodgson Road Connection	Shoreview	MN	55126	(651) 481-0102
Peterson Jacqueline M	5539 Asbury Street	Shoreview	MN	55126	(651) 780-2424
REM Ramsey Inc - Hodgson	5091 Hodgson Road	Shoreview	MN	55126	651-644-7680
REM Ramsey Inc - Victoria	3133 Victoria St N	Shoreview	MN	55126	(651) 291-8054
Rescare Minnesota Inc	1012 Mercury Drive	Shoreview	MN	55126	(651) 490-7905
Rescare Minnesota Inc	914 Dawn Ave	Shoreview	MN	55126	(651) 490-1410
Rescare Minnesota Inc	655 Heidi Lane	Shoreview	MN	55126	(651) 481-9338
Rescare Minnesota Inc	3905 Highland Drive	Shoreview	MN	55126	(651) 766-8303
Rescare Minnesota Inc	767 Cannon Ave	Shoreview	MN	55126	(651) 482-9575
Riesco Inc	3267 Churchill St	Shoreview	MN	55126	(612) 867-8115
Riesco Inc	251 Dawn Avenue	Shoreview	MN	55126	(612) 867-8115
Saint Therese At St. Odilia	3500 Vivian Ave	Shoreview	MN	55126	
Scandia Shores	418 Highway 96	Shoreview	MN	55126	651-415-9793
Schlemmer Alicia M	552 Kent Court	Shoreview	MN	55126	(651) 484-7681
Schmidt Diane M	608 Donegal Circle	Shoreview	MN	55126	(651) 494-9464
Schuneman Mary E	1490 Terrace Dr	Shoreview	MN	55126	(651) 784-5042
Schwieters Emily S	5986 Ridge Creek Rd	Shoreview	MN	55126	(651) 784-7720
Shepherd of The Hills Preschool	3920 N Victoria St	Shoreview	MN	55126	(651) 483-6885
Shoreview SENIOR LIVING	4710 CUMBERLAND STREET	Shoreview	MN	55126	651-484-9822
Shoreview Senior Living, Llc	4710 Cumberland St	Shoreview	MN	55127	
Shoreview Ymca Early Childhood Learning Center	3760 Lexington Ave	Shoreview	MN	55126	(651) 229-6423
Silver Lake Clinic (North Memorial)	4625 Churchill St.	Shoreview	MN	55126	

Healthcare and Public Health					
Sister Group Home	1075 Nelson Dr	Shoreview	MN	55126	(651) 490-3456
Sister Group Home	549 Emil Ave	Shoreview	MN	55126	(651) 765-0734
South Metro Human Services	5934 Alameda Ave	Shoreview	MN	55126	(651) 486-6315
Speak Right Now Llc	439 Carol Lane	Shoreview	MN	55126	612-308-6132
St Odilia Child Care/St Odilia Catholic School	3495 Victoria St	Shoreview	MN	55126	(651) 484-3364
St Therese Home Inc	3500 Vivian Avenue	Shoreview	MN	55126	651-842-6780
Teske Debbie Lynn	300 Dennison Ave	Shoreview	MN	55126	(651) 483-3498
Thomas Allen Inc	3987 Victoria St N	Shoreview	MN	55126	(651) 483-2327
Urick Janet	4201 Reiland Ln	Shoreview	MN	55126	(651) 483-5897
Visiting Angels	3550 Lexington Avenue N #211	Shoreview	MN	55126	651-633-4487
Voyen Cynthia L	856 Tanglewood Drive	Shoreview	MN	55126	(651) 484-4126
Wells Courtney L	221 Lion Lane	Shoreview	MN	55126	(773) 355-1216
Wingspan Life Resources - Harriet	707 Harriet Avenue	Shoreview	MN	55126	651-646-3846
Winkel Maureen E	5530 Snelling Ave North	Shoreview	MN	55126	(651) 786-0213
Yang Marine Mayly	1083 Amble Dr	Shoreview	MN	55126	(651) 890-6744
Zerrath Martina & Zerrath Axel Frank	1366 Viewcrest Rd	Shoreview	MN	55126	(651) 239-0300
Allegiant Home Health Care Llc	69 County Rd. F	Vadnais Heights	MN	55127	651-895-2018
Ally People Solutions Vadnais Heights Branch	380 Oak Grove Pkwy Ste 500	Vadnais Heights	MN	55127	(651) 641-0709
Barnard Marissa	678 Greenhaven Terrace	Vadnais Heights	MN	55127	(651) 399-9716
Beaulieu Kimberly Ann	3250 Belmar Drive	Vadnais Heights	MN	55127	(651) 483-4185
Canfield Jonathan Matthew & Canfield Kari Anne	3782 Mcmenemy St	Vadnais Heights	MN	55127	(612) 205-0747
Children's Discovery Academy of Early Learning	3665 Talmage Circle	Vadnais Heights	MN	55110	(651) 653-9871
Dungarvin Centerville	3488 Centerville Rd	Vadnais Heights	MN	55127	(651) 490-3147
Enrich Inc	118 Suzanne Ct	Vadnais Heights	MN	55127	(651) 486-0895
Family Options Services LLC	3625 Talmage Circle Ste 202	Vadnais Heights	MN	55110	(651) 408-3889
FHSM Vadnais Heights Clinic	3550 Labore Rd.	Vadnais Heights	MN		
Gable Pines at Vadnais Heights	1260 County Road E East	Vadnais Heights	MN	55110	651-829-3171
Gable Pines at Vadnais Heights	1260 E County Road E	Vadnais Heights	MN	55110	
Gerhard Bonnie	3994 Woodview Dr	Vadnais Heights	MN	55127	(651) 484-0987
Guynup Roxanne	171 Star Circle	Vadnais Heights	MN	55127	(651) 486-0308
Hamerly Lori S & Magnuson Mary Jo	397 Koehler Rd	Vadnais Heights	MN	55127	(651) 402-4061

Healthcare and Public Health					
Healtheast - Vadnais Heights Clinic	1055 Centerville Circle	Vadnais Heights	MN		
Hearts Home Care Llc	3537 Arcade Street	Vadnais Heights	MN	55127	651-330-4892
Hernandez Lilia & Juarez Jaime Antonio	1015 Co Rd De Apt 306	Vadnais Heights	MN	55109	(952) 923-6558
Hernandez Tricia M	3431 Arcade St	Vadnais Heights	MN	55127	(651) 269-3611
Hesse Sally & Lemon Tanya	4497 S Oakleaf Ct	Vadnais Heights	MN	55127	(651) 762-9590
Huisman Misha Rose & Kilton Jonathan Alan	3238 Moray Ave	Vadnais Heights	MN	55127	(651) 497-0994
Knowledge Beginnings #071702	570 Oak Grove Pkwy	Vadnais Heights	MN	55127	(651) 765-0555
Knutson Mary R	545 Vadnais Rd	Vadnais Heights	MN	55127	(651) 482-9553
Kohls Theresa Diane	4347 Bramblewood Ave	Vadnais Heights	MN	55127	(612) 998-5152
Mains' Services Inc	4489 Mcmenemy Ave	Vadnais Heights	MN	55127	(651) 415-1702
Mcquiston Laurie Anne & Mcquiston John Henry	717 Stockdale Rd	Vadnais Heights	MN	55127	(651) 653-0868
Mork Mary R	3870 Mcmenemy	Vadnais Heights	MN	55127	(651) 426-4905
Newell Franklin Wayne & Newell Patsy Ann	4404 Oakhurst Ave	Vadnais Heights	MN	55127	(651) 429-6480
Northeast Pediatric Clinic	4520 Centerville Rd.	Vadnais Heights	MN		
Northeast Residence Inc	4430 Morningside Ave	Vadnais Heights	MN	55127	(651) 762-5665
Northern Lights Pediatrics and Adolescent Medicine	3555 Willow Lake Blvd.	Vadnais Heights	MN		
Outcomes, Inc.-Springhill	531 Springhill Rd	Vadnais Heights	MN	55127	(651) 429-5686
Peterson Shirley M & Miller Clayton W	4526 Greenhaven Drive	Vadnais Heights	MN	55110	(651) 426-0005
Phoenix at Centerville	785 E County Rd E	Vadnais Heights	MN	55127	(651) 486-9342
Phoenix at English	1336 E County Rd E	Vadnais Heights	MN	55110	(651) 484-3278
Pinnacle Home Health Care Llc	3580 Arcade Street Suite 200	Vadnais Heights	MN	55127	651-261-1717
Prelude Home & Services Llc	355 Commerce Court	Vadnais Heights	MN	55127	651-501-6507
Price Lillian	3493 Montmorency St	Vadnais Heights	MN	55110	(651) 808-8503
Regency Home Health Care Service	417 Oak Creek Court	Vadnais Heights	MN	55127	651-488-4655
Rem Ramsey Inc - Neumanns	4228 Mcmenemy St	Vadnais Heights	MN	55127	(651) 773-1003
Rem Ramsey Inc - Winthrop	110 County Rd F	Vadnais Heights	MN	55127	(951) 773-1003
Rescare Minnesota Inc	4416 Wood Duck Drive	Vadnais Heights	MN	55127	(651) 407-9858
Rescare Minnesota Inc	577 Springhill Road	Vadnais Heights	MN	55127	(651) 426-5098
Rescare Minnesota Inc	4557 Birch Bend Lane	Vadnais Heights	MN	55127	(651) 429-9011

Healthcare and Public Health					
Sandstrom Mary Pat	755 Clearbrook Lane	Vadnais Heights	MN	55127	(651) 653-0830
Springhill	531 Springhill Road	Vadnais Heights	MN	55127	651-483-1468
Suite Lvg Memory Care & Assist	580 Liberty Way	Vadnais Heights	MN	55127	651-770-2273
Summit Recovery Suites	3580 Arcade Street Ste 250	Vadnais Heights	MN	55127	651-261-1717
Tschida Shelley A	4394 Rosebriar Ave	Vadnais Heights	MN	55127	(651) 214-9844
Tse - Lakeridge	103 105 Vadnais Blvd	Vadnais Heights	MN	55127	(651) 484-6230
Vadnais Heights Surgery Center	3580 Arcade Street Ste 200	Vadnais Heights	MN	55127	651-968-5790
Vintage Moments	4559 Bramblewood Ave	VADNAIS HEIGHTS	MN	55127	
Vintage Moments Memory Care In	4559 Bramblewood Avenue	Vadnais Heights	MN	55127	651-653-4883
Wells Cassandra L	4556 Evergreen Dr	Vadnais Heights	MN	55127	(651) 755-6582
Willey Donald W	4216 Bridgewood Terrace	Vadnais Heights	MN	55127	(651) 429-1621
Yang Mee	3244 Greenbrier St	Vadnais Heights	MN	55127	(651) 486-6214
ACR Homes Inc	5927 Pintail Lane	White Bear	MN	55110	(651) 653-3721
Boyd Margaret	5020 Wood Ave	White Bear	MN	55110	(651) 429-0800
Brinker Colleen L	5236 Otter Lk Rd	White Bear	MN	55110	(651) 429-5580
Daley Terri M	2537 2nd St	White Bear	MN	55110	(612) 760-4537
Golubowicz June E	2291 Cedar	White Bear	MN	55110	(651) 429-0935
Klawitter Martha	1905 Clarence	White Bear	MN	55110	(651) 426-4365
Lang Mary Jo	1597 Park Ave	White Bear	MN	55110	(651) 426-5614
Lewis Beverly A	1708 Stillwater Street	White Bear	MN	55110	(651) 426-8613
Mcclanahan Karen A	3409 Vandyke Street	White Bear	MN	55110	(651) 779-6800
Northeast Residence Inc	5317 Cedarwood Court	White Bear	MN	55110	(651) 762-1579
Aalfa Family Clinic	4465 White Bear Pkwy.	White Bear Lake	MN		
Abernathy Lisa Marie	1620 Hammond Rd	White Bear Lake	MN	55110	(651) 653-5821
Accessible Space Inc	2461 Cedar Ave	White Bear Lake	MN	55110	(651) 426-3382
Advanced Medical Home Care Llc	2074 East County Road E	White Bear Lake	MN	55110	612-267-6154
Al-Shormani Basem A	3802 St Regis Dr	White Bear Lake	MN	55110	(651) 762-1159
Anderson Carol	4202 White Bear Parkway	White Bear Lake	MN	55110	(651) 653-3708
Arcand Karen	1591 Seneca Trail	White Bear Lake	MN	55110	(651) 324-3724
Aspen Medical Group-White Bear Lake (Allina)	2555 County Rd. E East	White Bear Lake	MN	55110	
Associates in Newborn Medicine	4770 White Bear Pkwy.	White Bear Lake	MN	55110	

Healthcare and Public Health					
Axis Alternatives Inc	2319 Co Rd E	White Bear Lake	MN	55110	(651) 340-7682
Axis on White Bear Ave	3516 White Bear Ave N	White Bear Lake	MN	55110	(651) 330-3542
Berthiaume Leah M	3788 Hoffman Rd	White Bear Lake	MN	55110	(651) 653-3750
Biehn Mary Beth & Biehn Douglas H	1949 11th St	White Bear Lake	MN	55110	(651) 429-2240
Bridgeman Kate S	2068 Dotte Dr	White Bear Lake	MN	55110	(651) 762-4737
Brom Mary G	1743 Pioneer Lane	White Bear Lake	MN	55110	(651) 426-8680
Burke Melissa M & Burke Ryan M	2645 Roth Place	White Bear Lake	MN	55110	(651) 734-8545
Busta Carrie Lynn	1647 Hammond Rd	White Bear Lake	MN	55110	(612) 600-9727
Carlson Jennifer Ann & Carlson Scott Richard	3808 Dennis Lane	White Bear Lake	MN	55110	(651) 399-9309
Carson Linda F & Carson James B	3425 Mcknight Rd N	White Bear Lake	MN	55110	(651) 773-7040
Carter Jessie E & Hughes James P	2130 Division Ct	White Bear Lake	MN	55110	(651) 247-2368
Cebula David E & Cebula Joline A	4952 Division	White Bear Lake	MN	55110	(651) 426-4857
Cerensity Care Center WBL	1900 Webber Street	White Bear Lake	MN	55110	651-232-1821
Cerensity Residence of White Be	4615 2nd Avenue	White Bear Lake	MN	55110	651-232-1868
Cerensity Residence of White Be	4615 2nd Avenue	White Bear Lake	MN	55110	651-232-1868
Chaves Denise M	2264 Roth Place	White Bear Lake	MN	55110	(651) 426-0972
Christensen Candice Lynn	2149 8th St.	White Bear Lake	MN	55110	(651) 429-8453
Community Living Options - Hal	1289 Halper Way	White Bear Lake	MN	55110	763-856-4866
Community Living Options Inc -	4849 Carolyn Lane	White Bear Lake	MN	55110	763-856-4866
Conway Nicholas Anthony	1812 Birch St Apt 1B	White Bear Lake	MN	55110	(651) 387-0713
Dehoop Thompson Melinda K	3750 Hazel St	White Bear Lake	MN	55110	(651) 815-9022
Dependable Home Healthcare Inc	2305 Emerald Dr	White Bear Lake	MN	55110	(651) 330-5636
Ehrman Sherrie	4014 Bellaire Ave	White Bear Lake	MN	55110	(612) 414-2553
Ek-Pangerl Jacqueline M	2465 Jansen Ave	White Bear Lake	MN	55110	(651) 777-0590
Engh Ronald James	1565 5th St	White Bear Lake	MN	55110	(651) 303-3101
Evans Teresa L	3785 White Bear Ave N	White Bear Lake	MN	55110	(651) 399-3386
Felema Gebi	3441 Homewood Ave	White Bear Lake	MN	55110	(763) 923-4532
FHSM Banning Avenue Clinic	4786 Banning Ave.	White Bear Lake	MN		
FHSM White Bear Clinic	3220 Belaire Ave.	White Bear Lake	MN		
First Discoveries Preschool Center	2401 E Buffalo St	White Bear Lake	MN	55110	(651) 653-6419

Healthcare and Public Health					
Frassati Catholic Academy	4690 Bald Eagle Ave	White Bear Lake	MN	55110	(651) 429-7771
Freer Lorna C	2208 Floral Drive	White Bear Lake	MN	55110	(651) 429-5885
Garden of Hope Montessori	2446 E County Rd F	White Bear Lake	MN	55110	(651) 762-3923
Golden Pond WBL	4624 Stoddart Circle	White Bear Lake	MN	55127	763-447-7717
Hauer Nancy	1990 Ridgewood Ave	White Bear Lake	MN	55110	(651) 426-4917
Healthpartners White Bear Lake Clinic	1430 Highway 96 E	White Bear Lake	MN		
Healy Laurie E	5912 Pintail Lane	White Bear Lake	MN	55110	(651) 331-8266
Heininger Barbara J	5487 Jenni Ln	White Bear Lake	MN	55110	(651) 426-9162
Hoffman Teresa	5904 Bayberry Dr	White Bear Lake	MN	55110	(651) 429-3220
Honsa Family Funeral Home	2460 County Road E E	White Bear Lake	MN		
Integrity Living Options Inc	2354 Circle Drive	White Bear Lake	MN	55110	(651) 407-7335
Jegade Jennifer	3642 White Bear Ave	White Bear Lake	MN	55110	(651) 263-1128
Johnson Angela Marie	5909 Bayberry Drive	White Bear Lake	MN	55110	(651) 762-8499
Johnson Peterson Funeral Home & Cremation	2130 2nd St	White Bear Lake	MN		
Josephs Lisa K	4119 Oakmede Lane	White Bear Lake	MN	55110	(651) 426-2568
Kids Under Construction Educational Preschool, Inc.	4821 Bloom Ave	White Bear Lake	MN	55110	(651) 762-9596
Kindercare Learning Center	1000 Meadowlands Dr	White Bear Lake	MN	55127	(651) 429-6316
Lake Area Discovery Center	3770 Bellaire Ave	White Bear Lake	MN	55110	(651) 762-7884
Lake Area Discovery Center @ First Lutheran Church	4000 Linden St	White Bear Lake	MN	55110	(651) 233-6407
Lakeview Cemetery Association	1877 4th St	White Bear Lake	MN		
Lang Megan L	3650 Glen Oaks Ave	White Bear Lake	MN	55110	(651) 283-7716
Larson Julie A	2588 South Shore Blvd	White Bear Lake	MN	55110	(651) 762-1490
Larson Kristine A	3721 Howard Ave	White Bear Lake	MN	55110	(651) 653-5066
Legacy Endeavors Inc	2708 Spruce Place	White Bear Lake	MN	55110	(651) 704-9598
Legacy Endeavors Inc	3694 Rollingview Dr	White Bear Lake	MN	55110	(651) 776-4694
Leto Amanda	4057 Gisella Blvd	White Bear Lake	MN	55110	(952) 393-2514
Life Time Fitness White Bear Lake	4800 White Bear Pkwy	White Bear Lake	MN	55110	(651) 292-2300
Lifesteps Family Physicians	4520 Centerville Rd.	White Bear Lake	MN		
LSS Monarch	3656 Hoffman Rd Apt 129	White Bear Lake	MN	55110	(612) 770-8756

Healthcare and Public Health					
Martinson-Rotter Ann	3779 Howard Ave	White Bear Lake	MN	55110	(651) 426-4582
Mcdonald Thomas & Mcdonald Dianne	1650 4th Street	White Bear Lake	MN	55110	(651) 407-9574
Mcinerney Stephen James & Mcinerney Sandra Lee	4848 Bald Eagle Ave	White Bear Lake	MN	55110	(651) 429-2575
Mossbarger Tabitha Alice & Mossbarger Luke Reid	1895 Kathy Lane	White Bear Lake	MN	55110	(651) 777-2274
Mueller Lake Mortuary	4738 Bald Eagle Ave	White Bear Lake	MN		
Murphy Joy J	4839 Peggy Lane	White Bear Lake	MN	55110	(651) 307-3855
Nelson Dawn M	3219 Century Ave N	White Bear Lake	MN	55110	(651) 587-5969
New Direction Inc	4672 Stoddart Lane	White Bear Lake	MN	55127	(651) 762-2679
New Direction Inc	1320 Birchcrest Dr	White Bear Lake	MN	55110	(651) 407-8821
Northeast Contemporary Services Inc Senior Service	2100 Orchard Lane	White Bear Lake	MN	55110	(651) 770-6330
Northeast Residence Inc	4095 White Bear Ave	White Bear Lake	MN	55110	(651) 762-8331
Northeast Residence Inc	3518 Rollingview Court	White Bear Lake	MN	55110	(651) 770-7386
Okelley Linda G & Okelley Michael R	4013 E Co Line Rd	White Bear Lake	MN	55110	(651) 307-4860
Olson Michele & Olson Philip	5231 Parker Ave	White Bear Lake	MN	55110	(651) 266-4247
Outcomes Inc	2728 County Rd D East	White Bear Lake	MN	55110	(651) 483-9500
Parnell Janice & Parnell Michael	1316 Wagon Wheel Ct	White Bear Lake	MN	55110	(651) 426-4434
Parnell Jennifer L & Hanson Michael T	1707 Florence St	White Bear Lake	MN	55110	(651) 582-5664
Phoenix Alternatives Inc	3700 Hwy 61 N Ste 200	White Bear Lake	MN	55110	(651) 407-7174
Phoenix Alternatives Inc - Commerce	1754 Commerce Ct	White Bear Lake	MN	55110	(651) 747-8740
Phoenix Alternatives Inc - Linden Suite A	3595 Linden Ave Suite A	White Bear Lake	MN	55110	(651) 777-5622
Phoenix Alternatives Inc - Linden Suite B	3595 Linden Ave S Suite B	White Bear Lake	MN	55110	(651) 777-5622
Phoenix Alternatives Inc - Parkway	4453 White Bear Parkway	White Bear Lake	MN	55110	(651) 426-2484
Phoenix at Casswell	2168 12th St	White Bear Lake	MN	55110	(651) 227-7655
Phoenix Recovery Programs Inc White Bear Lake	3601 Christine Place	White Bear Lake	MN	55110	(651) 209-0560
Pilz Judy A	3867 Oak Terrace	White Bear Lake	MN	55110	(651) 426-3570
Ploeckelmann Carol C	5208 Anderlie Ln	White Bear Lake	MN	55110	(651) 429-6354
Prelude Home & Services Llc	4650 White Bear Parkway	White Bear Lake	MN	55110	651-501-6507
Prelude Homes & Services	4650 White Bear Pkwy	White Bear Lake	MN	55110	
Raising Stars Childcare	2600 County Rd D E	White Bear Lake	MN	55110	(651) 773-7074

Healthcare and Public Health					
REM Ramsey Inc - Anderson Lane	1106 Anderson Lane	White Bear Lake	MN	55127	(651) 426-2944
REM Ramsey Inc - Cedar	2514 Cedar Ave	White Bear Lake	MN	55110	(651) 762-8106
REM Ramsey Inc - Highland	3618 Highland Avenue	White Bear Lake	MN	55110	(651) 779-6187
REM Ramsey Inc - Lakeview	1379 Highway 96 E	White Bear Lake	MN	55110	(651) 702-5418
REM Ramsey Inc - Oak Knoll	1967 Oak Knoll Ave	White Bear Lake	MN	55110	(651) 407-8566
REM Ramsey Inc - Sierra	2299 Randy Ave	White Bear Lake	MN	55110	(651) 778-8108
REM Ramsey Inc - Southwood	2182 County Road F	White Bear Lake	MN	55110	(651) 407-1743
Rescare Minnesota Inc	2532 Oak Drive	White Bear Lake	MN	55110	(651) 779-0506
Rescare Minnesota Inc	1679 Florence St	White Bear Lake	MN	55110	(651) 653-1947
Rutherford Theresa	5099 Cottage Lane	White Bear Lake	MN	55110	
Schaefer Susan	5335 Anderlie Ln	White Bear Lake	MN	55110	(651) 653-3603
Schmidt Eileen & Schmidt Terry	3823 Keri Ann Lane	White Bear Lake	MN	55110	(651) 426-1855
Schoonmaker Carrie Jo	3391 Auger Ave	White Bear Lake	MN	55110	(651) 307-5106
Shaw Jill	2107 Dorothy Ave	White Bear Lake	MN	55110	(651) 426-2636
South Shore Trinity Lutheran Church Preschool	2480 S Shore Blvd	White Bear Lake	MN	55110	(651) 429-4293
Speten Kurt N & Speten Lois E	6230 Otter Lake Rd	White Bear Lake	MN	55110	(651) 426-0030
St Regis	2312 Circle Drive	White Bear Lake	MN	55110	(651) 426-2317
Steinmueller Cathy J	5961 Norway Pine Ct	White Bear Lake	MN	55110	(651) 429-3404
Summers Lori Ann	2152 8th Street	White Bear Lake	MN	55110	(651) 653-9949
Symphony Senior Services Inc	4711 Clark Avenue	White Bear Lake	MN	55110	651-330-3841
The Waters of White Bear Lake	3820 Hoffman Road	White Bear Lake	MN	55110	651-313-6440
The Waters of White Bear Lake	3820 Hoffman Rd	White Bear Lake	MN	55110	
Tocko Amanda J	2274 Lakeaires Blvd	White Bear Lake	MN	55110	(507) 271-8984
Tutor Time of White Bear Lake	4673 White Bear Pkwy	White Bear Lake	MN	55110	(651) 653-8877
Vadnais Ann	4742 Otter Lake Road	White Bear Lake	MN	55110	(651) 429-4423
Vandenberg Sharon L & Vandenberg Leonard	3578 Glen Oaks Ave	White Bear Lake	MN	55110	(612) 753-0822
Vandenberg Angela Dawn & Scienski Michael Joseph	3568 Emerald Drive	White Bear Lake	MN	55110	(651) 587-7239
Vision Quest Property Manageme	5771 Meadowview Drive	White Bear Lake	MN	55110	651-428-0646
Walczak Kerry K	1802 7th St	White Bear Lake	MN	55110	(651) 429-8476
Wanna Elizabeth Anne	5241 Elk St	White Bear Lake	MN	55110	(651) 306-9674
White Bear Heights	4650 Centerville Road	White Bear Lake	MN	55127	651-653-3288

Healthcare and Public Health					
White Bear Heights	4650 Centerville Rd	White Bear Lake	MN	55110	
White Bear Lake White Pine	1235 Gun Club Road	White Bear Lake	MN	55110	651-757-3800
White Bear Montessori School	1201 E County Rd E	White Bear Lake	MN	55110	(651) 429-3710
White Pine Senior Living	1235 Gun Club Rd	White Bear Lake	MN	55110	
World Around Us Child Development Center	5065 Stewart Ave	White Bear Lake	MN	55110	(651) 773-1406
Xiong Vang Yang	3703 Midland Ave	White Bear Lake	MN	55110	
Zitzloff Laura Marie & Zitzloff Scott Jeffrey	3750 Van Dyke St	White Bear Lake	MN	55110	(952) 220-8569
Anderson Christina M	1677 Garden Ln	White Bear Township	MN	55110	(763) 400-6974
Appleton Juanita	5445 Franklin Ave	White Bear Township	MN	55110	(651) 653-1432
Axis on Seneca	1586 Seneca Trail	White Bear Township	MN	55110	651-426-3546
Axis on Seneca	1586 Seneca Trail	White Bear Township	MN	55110	(651) 426-3546
Castro Lori Ann	1600 Stillwater St	White Bear Township	MN	55110	(651) 762-2803
Northeast Residence Inc	2580 Norway Pine Dr	White Bear Township	MN	55110	(651) 765-2829
Northeast Residence Inc	2420 5th St	White Bear Township	MN	55110	(651) 402-6937
REM Ramsey Inc - Prospect	5474 Prospect Avenue	White Bear Township	MN	55110	651-644-7680
Simpkins Shannon & Simpkins Timothy	1310 Wagon Wheel Ct	White Bear Township	MN	55110	(651) 278-5148

Manufacturing					
Hood Packaging Corp	1887 Gateway Blvd	Arden Hills	MN	55112	
International Paper Co	1300 Red Fox Rd	Arden Hills	MN	55112	
Pace Industries, Saint Paul Div.	3737 N Lexington Ave	Arden Hills	MN	55112	
Twin City Die Castings Company	1070 33rd Ave Se	Lauderdale	MN		
Lapham/Hickey Steel	3250 Spruce Street	Little Canada	MN	55117	
Minnesota Mining and Manufacturing (3M) Main Campus	3M Center	Maplewood	MN	55109	
Premier Grain Cleaner Co.	85 2nd Ave Southeast	New Brighton	MN	55112	
Wolkerstorfer Co., Inc.	348 1st St SW	New Brighton	MN	55112	
Artistic Finishes, Inc.	2224 Terminal Rd	Roseville	MN	55113	
International Paper	2425 Terminal Rd	Roseville	MN	55113	

Manufacturing					
Stone Container Corp. / Corr Container Div.	3075 Long Lake Rd	Roseville	MN	55113	
Tsi Inc.	500 Cardigan Rd.	Shoreview	MN	55126	
Par Systems	707 County Rd. E. W	Shoreview	MN	55126	
Westinghouse	889 Highway 96	Shoreview	MN	55126	
International Rectifier	1185 Willow Lake Blvd, Suite 100	Vadnais Heights	MN	55127	
Herold Precision Metals	1370 Hammond Rd	White Bear Lake	MN	55110	
International Paper Co.	1699 W 9th St	White Bear Lake	MN	55110	
Schwing America, Inc.	5900 Centerville Rd	White Bear Lake	MN	55110	
Universal Forest Products Western Division, Inc.	4141 Hoffman Rd	White Bear Lake	MN	55110	
Water Gremlin Company	1610 Whitaker St.	White Bear Lake	MN	55110	

Postal & Shipping					
FedEx Ship Center	2303 White Bear Avenue	Maplewood	MN	55109	651-779-9000
New Brighton Post Office	525 Main Street	New Brighton	MN	55112	651-639-9306
New Brighton Carrier Annex Post Office	200 5th Avenue NW	New Brighton	MN	55112	
North Saint Paul Post Office	2523 7th Avenue E	North Saint Paul	MN	55109	651-770-2919
Roseville Post Office	2000 County Road B2 W	Roseville	MN	55113	651-631-0628
FedEx Ship Center	2275 Walnut Street	Roseville	MN	55113	800-463-3339
FedEx Freight Center	2323 Terminal Rd	Roseville	MN	55113	800-308-3960
Vadnais Heights Post Office	1056 Highway 96 E	Vadnais Heights	MN	55127	651-407-9864
Vadnais Heights Carrier Annex Post Office	4390 McMenemy Street	Vadnais Heights	MN	55127	
White Bear Lake Post Office	2223 5th Street	White Bear Lake	MN	55110	651-762-1437

Transportation					
Arden Hills Public Works	1425 Paul Kirkwold Drive	Arden Hills	MN	55112	651-792-7800
Benson Airport (Owner: White Bear Township)	5860 US Highway 61 N	White Bear Township	MN	55110	651-747-2750
Blaine Public Works (Anoka County)	1801 101st Ave NE	Blaine	MN	55449	763-785-6165
Falcon Heights Public Works	2077 Larpenteur Ave W	Falcon Heights	MN	55113	651-792-7600
ISD #622 Bus Garage	2710 E 13th Ave	North St. Paul	MN		

Transportation					
ISD #624 - Bus Garage	5005 Division Street	White Bear Lake	MN	55110	
Lauderdale Public Works	1891 Walnut St	Lauderdale	MN		
Little Canada Public Works	515 Little Canada Road E	Little Canada	MN	55117	651-766-4029
Maplewood Public Works	1902 County Road B East	Maplewood	MN	55109	651-249-2400
Metro Transit - East Metro Transit Facility	820 L'Orient Street	Saint Paul	MN	55130	651-373-3333
Metro Transit - Green Line Light Rail Operations Center & Maintenance Facility	340 Broadway Street	Saint Paul	MN	55101	651-373-3333
Metro Transit - Overhaul Base	515 North Cleveland Avenue	Saint Paul	MN	55114	651-373-3333
Metro Transit - Transfer Road (East Police Command)	677 Transfer Road	Saint Paul	MN	55114	612-349-7200
Metro Transit Green Line - 10th Street Station	519 Cedar Street	Saint Paul	MN	55101	651-373-3333
Metro Transit Green Line - Capitol/Rice Street Station	130 University Avenue W	Saint Paul	MN	55103	651-373-3333
Metro Transit Green Line - Central Station	56 5th Street E	Saint Paul	MN	55101	651-373-3333
Metro Transit Green Line - Dale Street Station (eastbound)	616 University Avenue W	Saint Paul	MN	55103	651-373-3333
Metro Transit Green Line - Dale Street Station (westbound)	641 University Avenue W	Saint Paul	MN	55103	651-373-3333
Metro Transit Green Line - Fairview Avenue Station	1863 University Avenue W	Saint Paul	MN	55104	651-373-3333
Metro Transit Green Line - Hamline Avenue Station (eastbound)	1324 University Avenue W	Saint Paul	MN	55104	651-373-3333
Metro Transit Green Line - Hamline Avenue Station (westbound)	1359 University Avenue W	Saint Paul	MN	55104	651-373-3333
Metro Transit Green Line - Lexington Parkway Station (eastbound)	1100 University Avenue W	Saint Paul	MN	55104	651-373-3333
Metro Transit Green Line - Lexington Parkway Station (westbound)	1117 University Avenue W	Saint Paul	MN	55104	651-373-3333
Metro Transit Green Line - Raymond Avenue Station	2305 University Avenue W	Saint Paul	MN	55114	651-373-3333
Metro Transit Green Line - Robert Street Station	613 Robert Street N	Saint Paul	MN	55101	651-373-3333
Metro Transit Green Line - Snelling Avenue Station (eastbound)	1572 University Avenue W	Saint Paul	MN	55104	651-373-3333
Metro Transit Green Line - Snelling Avenue Station (westbound)	1595 University Avenue W	Saint Paul	MN	55104	651-373-3333

Transportation					
Metro Transit Green Line - Union Depot Station	210 4th Street E	Saint Paul	MN	55101	651-373-3333
Metro Transit Green Line - Victoria Street Station (eastbound)	844 University Avenue W	Saint Paul	MN	55104	651-373-3333
Metro Transit Green Line - Victoria Street Station (westbound)	875 University Avenue W	Saint Paul	MN	55104	651-373-3333
Metro Transit Green Line - Western Avenue Station (eastbound)	358 University Avenue W	Saint Paul	MN	55103	651-373-3333
Metro Transit Green Line - Western Avenue Station (westbound)	401 University Avenue W	Saint Paul	MN	55103	651-373-3333
Metro Transit Green Line - Westgate Station (eastbound)	2646 University Avenue W	Saint Paul	MN	55114	651-373-3333
Metro Transit Green Line - Westgate Station (westbound)	2671 University Avenue W	Saint Paul	MN	55114	651-373-3333
MnDOT - Transportation Building	395 John Ireland Boulevard	Saint Paul	MN	55155	651-296-3000
MnDOT Arden Hills Truck Station	1905 County Road I West	Arden Hills	MN	55126	651-639-4054
MnDOT Central Services Building	6000 Minnehaha Avenue	Saint Paul	MN	55111	
MnDOT Driver & Vehicle Services	445 Minnesota Street	Saint Paul	MN	55101	651-297-2126
MnDOT License Bureau	425 Rice Street	Saint Paul	MN	55103	651-292-9791
MnDOT Maplewood Truck Station	1779 McMenemy		MN		
MnDOT Office of Aeronautics	222 Plato Boulevard	Saint Paul	MN	55107	651-234-7200
MnDOT Office of Materials	1400 Gervais Avenue	Maplewood	MN	55109	651-366-5592
MnDOT Training & Conference Centers	1900 County Road I West	Arden Hills	MN	55126	651-366-5252
MnDOT Waters Edge District Headquarters	1500 County Road B2 West	Roseville	MN	55113	651-234-7500
Mounds View Public Works	2401 Mounds View Boulevard	Mounds View	MN	55112	651-717-4050
New Brighton Public Works Facility	700 5th Street NW	New Brighton	MN	55112	651-638-2111
North Saint Paul Public Works	2400 Margaret Street N	North Saint Paul	MN	55109	651-747-2409
Ramsey County Public Works Garage & Administration	1425 Paul Kirkwold Drive	Arden Hills	MN	55112	651-266-7100
Ramsey County Yard Waste Site - Arden Hills	3530 Hudson Avenue	Arden Hills	MN	55112	
Ramsey County Yard Waste Site - Battle Creek	389 South Winthrop Street	Saint Paul	MN	55119	
Ramsey County Yard Waste Site - Bay West, Inc. (hazmat)	5 Empire Drive	Saint Paul	MN	55103	

Transportation					
Ramsey County Yard Waste Site - Como Park	1149 Beulah Lane	Saint Paul	MN	55108	
Ramsey County Yard Waste Site - Frank & Sims	1150 Sims Avenue	Saint Paul	MN	55106	
Ramsey County Yard Waste Site - Maplewood Police (meds)	1830 County Road B East	Maplewood	MN	55109	
Ramsey County Yard Waste Site - Midway	1943 Pierce Butler Route	Saint Paul	MN	55114	
Ramsey County Yard Waste Site - Mounds View	8307 Long Lake Road	Mounds View	MN	55112	
Ramsey County Yard Waste Site - New Brighton Public Safety (meds)	785 Old Highway 8 NW	New Brighton	MN	55112	
Ramsey County Yard Waste Site - North St Paul Police (meds)	2400 Margaret Street	North Saint Paul	MN	55109	
Ramsey County Yard Waste Site - Public Works (hazmat)	1352 Ben Franklin Road	Arden Hills	MN	55112	
Ramsey County Yard Waste Site - Ramsey County LEC (meds)	425 Grove Street	Saint Paul	MN	55101	
Ramsey County Yard Waste Site - Ramsey County Patrol (meds)	1411 Paul Kirkwood Drive	Arden Hills	MN	55112	
Ramsey County Yard Waste Site - Saint Paul Mobile Site	848 Pleasant Avenue	Saint Paul	MN	55102	
Ramsey County Yard Waste Site - Summit Hill	870 Pleasant Avenue	Saint Paul	MN	55102	
Ramsey County Yard Waste Site - White Bear Lake Police (meds)	4701 Highway 61	White Bear Lake	MN	55110	
Ramsey County Yard Waste Site - White Bear Township	5900 Sherwood Road	White Bear Township	MN	55110	
Roseville Public Works	2660 Civic Center Drive	Roseville	MN	55113	651-792-7041
Ryder Transportation Services #0638a	2580 Long Lake Rd	Roseville	MN		
Shoreview Maintenance Facility	4615 Victoria St. N.	Shoreview	MN	55126	651-490-4672
T.A. Schifsky & Sons (snow plowing contractor - Gem Lake)	2370 Highway 36	North Saint Paul	MN	55109	651-777-1313
Union Station, St Paul, MN	214 E 4th St	Saint Paul	MN		
Vadnais Heights Public Works	800 East County Road E	Vadnais Heights	MN	55127	651-204-6050
White Bear Lake Public Works	3950 Hoffman Road	White Bear Lake	MN	55110	651-747-3650
White Bear Township Public Works	1283 Hammond Road	White Bear Township	MN	55110	651-747-2777
White Bear Township Public Works Complex	1281 Hammond Rd	White Bear	MN		

Water					
Arden Hills Public Works			MN		
RCWD - County Road E2 South Wetland Baffle Weir	1837 County Road E2 W	Arden Hills	MN	55112	
RCWD - Lake Johanna Outlet Structure	1761 Lake Johanna Boulevard	Arden Hills	MN	55112	
Blaine Public Works (Anoka County)	1801 101st Ave NE	Blaine	MN	55449	763-785-6165
Fairgrounds Tank	1491 Snelling Ave N	Falcon Heights	MN		
North Oaks Sanitary Sewer Lift Station #9	1400 Ash Street (Anoka County)	Lino Lakes	MN	55038	
Beebe Rd Pump Station	1695 Beebe Road	Maplewood	MN		
Cope Ave Tank	1989 Cope Ave E	Maplewood	MN		
Ferndale Ave Tank	1060 Sterling St N	Maplewood	MN		
Highwood Standpipe	Mcknight Rd and Hillwood	Maplewood	MN		
Mailand Rd Pump Station	2287 Mailand Rd	Maplewood	MN		
McKnight Rd Standpipe	393 McKnight Rd N	Maplewood	MN		
Roselawn Ave Pump Station	16 Roselawn Ave E	Maplewood	MN		
Saint Paul Regional Water Services	1900 Rice Street	Maplewood	MN	55113	651-266-6350
City of Mounds View - Well #3	2426 Bronson Dr	Mounds View	MN		
City of Mounds View - Well #5	5100 Long Lake Rd	Mounds View	MN		
City of Mounds View - Well #6	7545 Groveland Rd	Mounds View	MN		
New Brighton PGAC Plant	3001 5th Street NW	New Brighton	MN	55112	651-638-2111
New Brighton Water Reservoir	2400 Mississippi Street	New Brighton	MN	55112	651-638-2111
New Brighton Well #10	660 5th Street SW	New Brighton	MN	55112	651-638-2111
New Brighton Well #11	1375 7th Street NW	New Brighton	MN	55112	651-638-2111
RCWD - Hansen Park Project	1375 7th Street	New Brighton	MN	55112	
RCWD - Jones Lake Outlet Weir	375 5th Avenue SW	New Brighton	MN	55112	
RCWD - Long Lake Sedimentation Basin	1174 Rockstone Court	New Brighton	MN	55112	
RCWD - Mirror Pond	3821 Foss Road	New Brighton	MN	55112	
RCWD - New Brighton Family Services Center Wetland Improvements	400 10th Street NW	New Brighton	MN	55112	
RCWD - Ramsey County Ditch 2		New Brighton	MN		

Water					
RCWD - Ramsey County Ditch 3		New Brighton	MN		
North Oaks Sanitary Sewer Lift Station #1	68 1/2 Pleasant Lake Road W	North Oaks	MN	55127	
North Oaks Sanitary Sewer Lift Station #10	28 Osprey Court	North Oaks	MN	55127	
North Oaks Sanitary Sewer Lift Station #11	16 Phoebe Lane	North Oaks	MN	55127	
North Oaks Sanitary Sewer Lift Station #12	24A Maycomb	North Oaks	MN	55127	
North Oaks Sanitary Sewer Lift Station #2	58 1/2 Pleasant Lake Road W	North Oaks	MN	55127	
North Oaks Sanitary Sewer Lift Station #3	16 1/2 Lake Court	North Oaks	MN	55127	
North Oaks Sanitary Sewer Lift Station #4	52 Wildflower Way	North Oaks	MN	55127	
North Oaks Sanitary Sewer Lift Station #5	1 Peterson Place	North Oaks	MN	55127	
North Oaks Sanitary Sewer Lift Station #6	4 Pine Road	North Oaks	MN	55127	
North Oaks Sanitary Sewer Lift Station #7	14 1/2 White Pine Road	North Oaks	MN	55127	
North Oaks Sanitary Sewer Lift Station #8	901 Wilkinson Lake Boulevard	North Oaks	MN	55127	
Pleasant Lake (raw water supply)	W Pleasant Lake Rd & Long Marsh Ln	North Oaks	MN	55127	
Dale St Reservoir	1901 Alta Drive	Roseville	MN		
RCWD - Oasis Pond Weir	2875 Snelling Avenue N	Roseville	MN	55113	
RCWD - Ramsey County Ditch 4		Roseville	MN		
RCWD - Ramsey County Ditch 5		Roseville	MN		
Roseville Lift Station #1 - Center Street	201 Center Street	Roseville	MN		
St Anthony Water treatment	3305 Silver Lake Road	Saint Anthony	MN		
Highland Park Pump Station #1	750 Snelling Ave S A	Saint Paul	MN		
Highland Park Pump Station #3	750 Snelling Ave S B	Saint Paul	MN		
Highland Park Pump Tank #2	750 Snelling Ave S C	Saint Paul	MN		
Highland Park Pump Tank #3	750 Snelling Ave S D	Saint Paul	MN		
Highland Park Pump Tower	750 Snelling Ave S E	Saint Paul	MN		
Metro Wastewater Treatment Plant	390 ROBERT ST N	Saint Paul	MN		
Snelling Ave Reservoir #1	750 Snelling Ave S F	Saint Paul	MN		

Water					
Snelling Ave Reservoir #2	750 Snelling Ave S G	Saint Paul	MN		
City of Shoreview Booster Station	883 W Hwy 96	Shoreview	MN		
City of Shoreview Well #6	4965 N Hodgson Rd	Shoreview	MN		
RCWD - Ramsey County Ditch 1		Shoreview	MN		
RCWD - Ramsey County Ditch 8		Shoreview	MN		
Shoreview Water Tower	745 County Road E	Shoreview	MN		
Shoreview Water Tower #2	5880 Lexington Ave N	Shoreview	MN		
Shoreview Booster Station	885 West Highway 96	Shoreview	MN	55126	651-490-4661
Shoreview Lift Station - #1 (North Lexington)	4680 Lexington Avenue	Shoreview	MN	55126	651-490-4661
Shoreview Lift Station - #10 (Reiland Lane)	4338 Reiland Lane	Shoreview	MN	55126	651-490-4661
Shoreview Lift Station - #11 (Gramsie)	875 Gramsie Road	Shoreview	MN	55126	651-490-4661
Shoreview Lift Station - #12 (Woodbridge)	3121 Woodbridge Street	Shoreview	MN	55126	651-490-4661
Shoreview Lift Station - #13 (Cohansey)	3580 Cohansey Street	Shoreview	MN	55126	651-490-4661
Shoreview Lift Station - #14 (South Carlson)	3194 1/2 West Owasso Boulevard	Shoreview	MN	55126	651-490-4661
Shoreview Lift Station - #15 (North Carlson)	3212 West Owasso Boulevard	Shoreview	MN	55126	651-490-4661
Shoreview Lift Station - #16 (South Lexington)	3366 Lexington Avenue	Shoreview	MN	55126	651-490-4661
Shoreview Lift Station - #17 (Chatsworth)	4468 Chatsworth	Shoreview	MN	55126	651-490-4661
Shoreview Lift Station - #18 (Hwy 96)	591 Highway 96	Shoreview	MN	55126	651-490-4661
Shoreview Lift Station - #19 (Bucher)	740 Bucher Avenue	Shoreview	MN	55126	651-490-4661
Shoreview Lift Station - #2 (Lake Beach)	1088 Lake Beach Drive	Shoreview	MN	55126	651-490-4661
Shoreview Lift Station - #3 (Turtle Lake)	5024 East Turtle Lane	Shoreview	MN	55126	651-490-4661
Shoreview Lift Station - #4 (Oakridge)	915 Oakridge	Shoreview	MN	55126	651-490-4661
Shoreview Lift Station - #5 (Schifsky)	699 Schifsky	Shoreview	MN	55126	651-490-4661
Shoreview Lift Station - #6 (Dale & 96)	636 West Highway 96	Shoreview	MN	55126	651-490-4661
Shoreview Lift Station - #7 (Rice & Bridge)	4465 Rice Street	Shoreview	MN	55126	651-490-4661
Shoreview Lift Station - #8 (Snail Lake Stub)	4412 Snail Lake Road	Shoreview	MN	55126	651-490-4661

Water					
Shoreview Lift Station - #9 (Snail Lake)	4307 Snail Lake Road	Shoreview	MN	55126	651-490-4661
Shoreview Reservoir	885 West Highway 96	Shoreview	MN	55126	651-490-4661
Shoreview Water Tower #1	745 West County Road E	Shoreview	MN	55126	651-490-4661
Shoreview Water Tower #2	5880 Lexington Avenue	Shoreview	MN	55126	651-490-4661
Shoreview Water Treatment Plant	881 West Highway 96	Shoreview	MN	55126	651-490-4661
Shoreview Well #2	883 West Highway 96	Shoreview	MN	55126	651-490-4661
Shoreview Well #3	4675 North Victoria	Shoreview	MN	55126	651-490-4661
Shoreview Well #4	902 1/2 Monterey Drive	Shoreview	MN	55126	651-490-4661
Shoreview Well #5	750 Mound	Shoreview	MN	55126	651-490-4661
Shoreview Well #6	4965 Hodgson Road	Shoreview	MN	55126	651-490-4661
Shoreview Well #7	785 West Highway 96	Shoreview	MN	55126	651-490-4661
City of White Bear Lake-Water Treatment	2393 Orchard Ln	White Bear Lake	MN		
RCWD - Ramsey County Ditch 11		White Bear Lake	MN		
RCWD - Highway 61/Judicial Ditch No.1 Treatment Basin	2460 Meehan	White Bear Township	MN	55110	
RCWD - Ramsey Washington Judicial Ditch 1 Fish Barrier	5543 Hugo Road	White Bear Township	MN	55110	
White Bear Township Pump House #1	2569 Stacker Boulevard	White Bear Township	MN	55110	
White Bear Township Pump House #2 (closed?)	3970 Lakewood Avenue	White Bear Township	MN		
White Bear Township Pump House #2A	4099 Bellaire Avenue	White Bear Township	MN	55110	
White Bear Township Pump House #3	2230 Park Avenue	White Bear Township	MN	55110	
White Bear Township Pump House #4	5130 Dillon Street	White Bear Township	MN	55110	
White Bear Township Pump House #5	4295 Otter Lake Road	White Bear Township	MN	55110	
White Bear Township Pump House #6	2525 Buffalo Street	White Bear Township	MN	55110	
White Bear Township Sanitary Sewer Lift Station #1	2701 County Road F	White Bear Township	MN	55110	
White Bear Township Sanitary Sewer Lift Station #10	2545 Buffalo Street	White Bear Township	MN	55110	
White Bear Township Sanitary Sewer Lift Station #2	2629 South Shore Boulevard	White Bear Township	MN	55110	
White Bear Township Sanitary Sewer Lift Station #3	5520 Bald Eagle Boulevard W	White Bear Township	MN	55110	

Water					
White Bear Township Sanitary Sewer Lift Station #4	5675 Hugo Road	White Bear Township	MN	55110	
White Bear Township Sanitary Sewer Lift Station #5	1375 County Road H2	White Bear Township	MN	55110	
White Bear Township Sanitary Sewer Lift Station #6	5563 Otter View Trail	White Bear Township	MN	55110	
White Bear Township Sanitary Sewer Lift Station #7	5937 Otter View Trail	White Bear Township	MN	55110	
White Bear Township Sanitary Sewer Lift Station #8	1230 Bibeau Road	White Bear Township	MN	55110	
White Bear Township Sanitary Sewer Lift Station #9	4351 Otter Lake Road	White Bear Township	MN	55110	
White Bear Township Water Tower #1 (South Tower)	3955 Effress Road	White Bear Township	MN	55110	
White Bear Township Water Tower #2 (Hammond Tower)	1283 Hammond Road	White Bear Township	MN	55110	
White Bear Township Water Tower #3 (Northeast Tower)	5858 Highway 61 N	White Bear Township	MN	55110	
RCWD - Ramsey Washington Judicial Ditch I		White Bear Twp.	MN		
Met Council - Metropolitan Council Administration	300 Robert Street N	Saint Paul	MN	55101	651-602-1000
Met Council - Metropolitan Wastewater Treatment Plant	2400 Childs Road	Saint Paul	MN	55106	651-602-1000
MDH Well #200874 - Northern States Power	1550 Century Avenue	Maplewood	MN	55109	
MDH Well #200105 - Spetz and Berg	2206 Lexington Avenue N	Roseville	MN	55113	
MDH Well #244345 - Maplewood Bowl	1955 English Street	Maplewood	MN	55109	
MDH Well #200443 - Goodrich Golf Course	1820 Van Dyke Street	Maplewood	MN	55109	

Historic structures, sites, and districts			
Gibbs, Heman, Farmstead	2097 Larpentuer Ave.	Falcon Heights	MN
Foss House	321 Silver Lake Rd.	New Brighton	MN
Hill's James, J., North Oaks Farm, Dairy Building	Red Barn Rd., jct. with Hill Farm Cir.	North Oaks	MN
Hill's, James J., North Oaks Farm, Dairy Building, Granary Root Cellar and Auxiliary Buildings, Boundary Increase	Red Barn Rd., jct. of Hill Farm Circle and Evergreen Rd.	North Oaks	MN
Minnesota Building	46 E. 4th St.	Saint Paul	MN
Shubert, Sam S., Theatre and Shubert Building	10 E Exchange St and 488 N Wabasha St	Saint Paul	MN

Historic structures, sites, and districts			
Minnesota Milk Company Building	370 W. University Ave.	Saint Paul	MN
Euclid View Flats	234-238 Bates Ave.	Saint Paul	MN
Brooks, Edward, Sr. and Markell, House	176 N. Mississippi River Blvd.	St. Paul	MN
St. Paul Municipal Grain Terminal	266 Old Shepard Rd.	St. Paul	MN
Payne Avenue State Bank	965 Payne Ave.	St. Paul	MN
Commerce Building	10 E. Fourth St.	St. Paul	MN
Riverside Hangar	690 Bayfield St., Bldg. 690-01-01	St. Paul	MN
O'Donnell Shoe Company Building	509 Sibley St.	St. Paul	MN
Thompson, Charles, Memorial Hall	1824 Marshall Ave.	St. Paul	MN
Hamline Methodist Episcopal Church	1514 Englewood Ave.	St. Paul	MN
St. Paul Union Depot (Boundary Increase)	214 E. 4th St.	St. Paul	MN
Indian Mounds Park Mound Group	1075 Mounds Blvd.	St. Paul	MN
United States Post Office and Custom House	180 Kellogg Blvd. E.	St. Paul	MN
3M Administration Building	777 Forest St.	St. Paul	MN
Hill, James J., House	240 Summit Ave.	St. Paul	MN
Old Federal Courts Building	109 W. 5th St.	St. Paul	MN
Ramsey, Alexander, House	265 S. Exchange St.	St. Paul	MN
Burbank-Livingston-Griggs House	432 Summit Ave.	St. Paul	MN
Fitzgerald, F. Scott, House	599 Summit Ave.	St. Paul	MN
Minnesota State Capitol	Aurora Between Cedar and Park Sts.	St. Paul	MN
Irvine Park Historic District	Roughly bounded by Irvine Park, W. 7th, Walnut, and Sherman	St. Paul	MN
Minnesota Historical Society Building	690 Cedar St.	St. Paul	MN
Como Park Conservatory	Como Park	St. Paul	MN
Irvine, Horace Hills, House	1006 Summit Ave.	St. Paul	MN
Kellogg, Frank B., House	633 Fairmount Ave.	St. Paul	MN
Merchants National Bank	366--368 Jackson St.	St. Paul	MN
McGill, Andrew R., House	2203 Scudder Ave.	St. Paul	MN
Pioneer and Endicott Buildings	4th and Robert Sts.	St. Paul	MN

Historic structures, sites, and districts			
St. Paul Cathedral--Catholic	Summit Ave. at Shelby Ave.	St. Paul	MN
St. Paul Union Depot	214 E. 4th St.	St. Paul	MN
Assumption School	68 Exchange St.	St. Paul	MN
Blair Flats	165 Western Ave.	St. Paul	MN
Brunson, Benjamin, House	485 Kenny Rd.	St. Paul	MN
Church of the Assumption--Catholic	51 W. 9th St.	St. Paul	MN
Lauer Flats	226 Western Ave.	St. Paul	MN
Luckert, David, House	480 Iglehart St.	St. Paul	MN
Muench, Adolf, House	653 E. 5th St.	St. Paul	MN
Norway Lutheran Church	2375 Como Ave., W.	St. Paul	MN
Ramsey, Justus, Stone House	252 W. 7th St.	St. Paul	MN
Rau/Strong House	2 George St.	St. Paul	MN
St. Joseph's Academy	355 Marshall Ave.	St. Paul	MN
St. Paul Public/James J. Hill Reference Library	80--90 W. 4th St.	St. Paul	MN
Historic Hill District	Irregular pattern from Pleasant and Grand Aves. to Holly and Marshall Aves., from Lexington Pkwy. to 4th and Pleasant	St. Paul	MN
Spangenberg, Frederick, House	375 Mt. Curve Blvd.	St. Paul	MN
Beebe, Dr. Ward, House	2022 Summit Ave.	St. Paul	MN
C.S.P.S. Hall	381--383 Michigan St.	St. Paul	MN
Germania Bank Building	6 W. 5th St.	St. Paul	MN
Old Main, Macalester College	1600 Grand Ave.	St. Paul	MN
Ramsey County Poor Farm Barn	2020 White Bear Ave.	St. Paul	MN
University Hall-Old Main, Hamline University	1536 Hewitt Ave.	St. Paul	MN
Hinkel, Ann Charlotte and Jacob, House	531 Brainerd Ave.	St. Paul	MN
Woodland Park District	Roughly bounded by Marshall and Selby Aves., Arundel and Dale Sts.	St. Paul	MN
Church of St. Agnes--Catholic	548 Lafond Ave.	St. Paul	MN
Rochat-Louise-Sauerwein Block	261--277 W. 7th St.	St. Paul	MN
Triune Masonic Temple	1898 Iglehart Ave.	St. Paul	MN

Historic structures, sites, and districts			
Butler, Pierce and Walter, House	1345-1347 Summit Ave.	St. Paul	MN
Finch, Vanslyck and McConville Dry Goods Company Building	366 Wacouta St.	St. Paul	MN
Minnesota Boat Club Boathouse on Raspberry Island	1 S. Wabasha St.	St. Paul	MN
St. Paul Women's City Club	305 St. Peter St.	St. Paul	MN
Armstrong, John M., House	225 Eagle Parkway	St. Paul	MN
Central Presbyterian Church	500 Cedar St.	St. Paul	MN
Church of St. Bernard--Catholic	197 W. Geranium Ave.	St. Paul	MN
First Baptist Church of St. Paul	499 Wacouta St.	St. Paul	MN
Giesen-Hauser House	827 Mound St.	St. Paul	MN
Krank Manufacturing Company	1855 W. University Ave.	St. Paul	MN
Lowertown Historic District	Roughly bound by Kellogg Blvd., Broadway, 7th and Jackson Sts.	St. Paul	MN
Mickey's Diner	36 W. 9th St.	St. Paul	MN
Northern Pacific Railway Company Como Shops Historic District	Energy Park Dr. and Bandanna Blvd.	St. Paul	MN
Salvation Army Women's Home and Hospital	1471 W. Como Ave.	St. Paul	MN
Church of St. Casimir--Catholic	937 E. Jessamine Ave.	St. Paul	MN
St. Paul City Hall and Ramsey County Courthouse	15 W. Kellogg Blvd.	St. Paul	MN
Davern, William and Catherine, Farm House	1173 S. Davern St.	St. Paul	MN
St. Matthew's School	7 W. Robie St.	St. Paul	MN
Arlington Hills Library	1105 Greenbrier St.	St. Paul	MN
Lee, Olaf, House	955 N. Jessie St.	St. Paul	MN
Riverview Branch Library	1 E. George St.	St. Paul	MN
St. Anthony Park Branch Library	2245 W. Como Ave.	St. Paul	MN
Schneider, Charles W., House	1750 E. Ames Pl.	St. Paul	MN
SchorNSTein Grocery and Saloon	707 E. Wilson Ave. and 223 N. Bates Ave.	St. Paul	MN
Vienna and Earl Apartment Buildings	682-688 Holly Ave.	St. Paul	MN
Derham Hall and Our Lady of Victory Chapel, College of St. Catherine	2004 Randolph Ave.	St. Paul	MN
United Church Seminary	2481 Como Ave.	St. Paul	MN

Historic structures, sites, and districts			
Highland Park Tower	1570 Highland Pkwy.	St. Paul	MN
St. Paul, Minneapolis, & Manitoba Railway Company Shops Historic District	Jackson St. and Pennsylvania Ave.	St. Paul	MN
Manhattan Building	360 N. Robert St.	St. Paul	MN
Yoerg, Anthony, Sr., House	215 W. Isabel St.	St. Paul	MN
St. Agatha's Conservatory of Music and Arts	26 E. Exchange St.	St. Paul	MN
Walsh Building	189--191 E. 7th St.	St. Paul	MN
Mendota Road Bridge	Water St. over Pickerel Lake Outlet	St. Paul	MN
Seventh Street Improvement Arches	E. 7th St. over Burlington Northern right-of-way	St. Paul	MN
Intercity Bridge	Ford Pkwy. over Mississippi River	St. Paul	MN
Bridges No. L-5853 and 92247	Lexington Ave. in Como Park	St. Paul	MN
Robert Street Bridge	Robert St. over Mississippi River	St. Paul	MN
Colorado Street Bridge	E side of S. Wabasha St. near Terrace Park	St. Paul	MN
Fitzpatrick Building	465--467 N. Wabasha St.	St. Paul	MN
Pilgrim Baptist Church	732 W. Central Ave.	St. Paul	MN
Holman Field Administration Building	644 Bayfield St.	St. Paul	MN
Harriet Island Pavilion	75 Water St.	St. Paul	MN
West Summit Avenue Historic District	Summit Ave. between Lexington Pkwy. and Mississippi R. Blvd.	St. Paul	MN
Bullard, Casiville, House	1282 Folsom St.	St. Paul	MN
Hamm Building	408 Saint Peter St.	St. Paul	MN
Minnesota Mutual Life Insurance Company Building	345 Cedar St.	St. Paul	MN
St. Paul, Minneapolis and Manitoba Railway Company Shops Historic District Boundary Increase	Jackson St. & Pennsylvania Ave.	St. Paul	MN
Noyes, Charles P., Cottage	4735 Lake Ave.	White Bear Lake	MN
Cobb, Cyrus B., House	2199 1st St.	White Bear Lake	MN
First National Bank of White Bear	4744 Washington Ave.	White Bear Lake	MN

Historic structures, sites, and districts			
Hobe, E. H., House-Solheim	5590 W. Bald Eagle Blvd.	White Bear Lake	MN

# **Appendix C**

## **Ramsey County Hazard Events**

The National Centers for Environmental Information Severe Storm Events database was queried for all notable events since 1950. However, some categories of events do not have records prior to 1996. Data was available through April of 2018.

Table C - 1. All tornadoes recorded by the NCEI, 1950-April 2018

Location or County	Date	Magnitude	Deaths	Injuries	Property Damage
Shoreview	7/18/2015	EF0	0	0	\$500,000
Mounds View	5/22/2011	EF0	0	0	\$20,000
Roseville	5/15/1998	F1	0	0	\$150,000,000
Ramsey Co.	4/26/1984	F3	0	0	\$25,000,000
Ramsey Co.	6/14/1981	F3	1	60	\$25,000,000
Ramsey Co.	6/28/1979	F1	0	0	\$250,000
Ramsey Co.	5/6/1965	F4	0	108	\$25,000,000
<b>Highest Value Property Damage</b>					<b>\$150,000,000</b>

Table C - 2. All severe hail storm events recorded by the NCEI, 1950-April 2018

Location or County	Date	Size in Inches	Deaths	Injuries	Property Damage
St. Paul	7/9/2017	1	0	0	unknown
St. Paul	7/9/2017	1	0	0	unknown
Lauderdale	6/11/2017	1	0	0	unknown
Shoreview	6/11/2017	1.5	0	0	unknown
Shoreview	5/16/2017	1.5	0	0	unknown
Arden Hills	9/21/2016	0.88	0	0	unknown
North Oaks	9/21/2016	1	0	0	unknown
Shoreview	9/21/2016	1	0	0	unknown
Falcon Heights	8/16/2016	1.5	0	0	unknown
Roseville	8/16/2016	0.88	0	0	unknown
Shoreview	8/16/2016	1	0	0	unknown
St. Paul	8/16/2016	0.88	0	0	unknown
New Brighton	8/4/2016	0.75	0	0	unknown
New Brighton	6/29/2015	1	0	0	unknown
St. Paul	6/29/2015	1.5	0	0	unknown
Gem Lake	5/3/2015	1	0	0	unknown
Little Canada	5/3/2015	1	0	0	unknown
Little Canada	5/3/2015	1.25	0	0	unknown
Little Canada	7/7/2014	0.88	0	0	unknown
St. Paul	6/21/2013	0.88	0	0	unknown

Location or County	Date	Size in Inches	Deaths	Injuries	Property Damage
Arden Hills	5/31/2013	1	0	0	unknown
Falcon Heights	5/31/2013	1	0	0	unknown
Falcon Heights	5/31/2013	1.25	0	0	unknown
Falcon Heights	5/31/2013	1.25	0	0	unknown
Falcon Heights	5/31/2013	0.75	0	0	unknown
Lauderdale	5/31/2013	0.88	0	0	unknown
North Oaks	5/31/2013	0.75	0	0	unknown
Shoreview	5/31/2013	1	0	0	unknown
Shoreview	5/31/2013	1	0	0	unknown
Shoreview	5/31/2013	0.88	0	0	unknown
St. Paul	5/19/2013	0.75	0	0	unknown
Arden Hills	6/19/2012	0.75	0	0	unknown
Vadnais Heights	6/19/2012	1	0	0	unknown
Falcon Heights	6/14/2012	1	0	0	unknown
Lauderdale	6/14/2012	1	0	0	unknown
Little Canada	6/14/2012	1	0	0	unknown
Little Canada	6/14/2012	1	0	0	unknown
North St. Paul	6/14/2012	0.88	0	0	unknown
North St. Paul	6/14/2012	0.75	0	0	unknown
North St. Paul	6/14/2012	0.75	0	0	unknown
North St. Paul	6/14/2012	0.75	0	0	unknown
North St. Paul	6/14/2012	1	0	0	unknown
North St. Paul	6/14/2012	0.75	0	0	unknown
St. Paul	6/14/2012	0.75	0	0	unknown
St. Paul	6/14/2012	0.75	0	0	unknown
St. Paul	6/14/2012	0.88	0	0	unknown
St. Paul	6/14/2012	0.88	0	0	unknown
St. Paul	6/14/2012	0.75	0	0	unknown
Falcon Heights	5/27/2012	1	0	0	unknown
St. Paul	5/19/2012	0.88	0	0	unknown
St. Paul	5/19/2012	0.75	0	0	unknown
St. Paul	5/19/2012	0.88	0	0	unknown
St. Paul	5/19/2012	1.75	0	0	unknown
St. Paul	5/19/2012	1	0	0	unknown
St. Paul	8/1/2011	0.75	0	0	unknown
Arden Hills	7/19/2011	1	0	0	unknown
Arden Hills	7/19/2011	1	0	0	unknown
Falcon Heights	7/19/2011	1	0	0	unknown
Lauderdale	7/19/2011	1	0	0	unknown
New Brighton	7/19/2011	1	0	0	unknown

Location or County	Date	Size in Inches	Deaths	Injuries	Property Damage
Roseville	7/19/2011	1.25	0	0	unknown
St. Paul	7/19/2011	1.25	0	0	unknown
St. Paul	7/19/2011	0.88	0	0	unknown
Arden Hills	7/11/2011	0.88	0	0	unknown
Roseville	5/30/2011	0.75	0	0	unknown
Vadnais Heights	5/30/2011	0.75	0	0	unknown
White Bear Lake	5/30/2011	1	0	0	unknown
St. Paul	9/21/2010	1.5	0	0	\$5,000,000
St. Paul	7/10/2010	0.75	0	0	unknown
North St. Paul	6/25/2010	0.88	0	0	unknown
Roseville	6/25/2010	0.75	0	0	unknown
St. Paul	6/25/2010	1.75	0	0	unknown
New Brighton	7/24/2009	1	0	0	unknown
North Oaks	7/24/2009	1.25	0	0	unknown
North Oaks	7/24/2009	1.5	0	0	unknown
North St. Paul	7/24/2009	1.75	0	0	\$15,000
Little Canada	7/21/2009	0.88	0	0	unknown
St. Paul	7/21/2009	0.75	0	0	unknown
White Bear Lake	5/25/2008	0.75	0	0	unknown
New Brighton	9/20/2007	0.75	0	0	unknown
St. Paul	9/20/2007	0.75	0	0	unknown
St. Paul	8/28/2007	1	0	0	unknown
St. Paul	8/28/2007	1	0	0	unknown
Maplewood	8/13/2007	1	0	0	unknown
Mounds View	8/13/2007	1	0	0	unknown
North Oaks	8/13/2007	2	0	0	unknown
Vadnais Heights	8/13/2007	1	0	0	unknown
Vadnais Heights	8/13/2007	1.5	0	0	unknown
White Bear Lake	8/13/2007	1.75	0	0	unknown
White Bear Lake	8/13/2007	0.88	0	0	unknown
White Bear Lake	8/13/2007	1.5	0	0	unknown
White Bear Lake	8/13/2007	2.5	0	0	unknown
St. Paul	7/8/2007	1.5	0	0	unknown
St. Paul	6/2/2007	0.75	0	0	unknown
North St. Paul	8/24/2006	0.75	0	0	unknown
St. Paul	7/24/2006	1.5	0	0	unknown
St. Paul	7/24/2006	0.88	0	0	unknown
St. Paul	5/29/2006	0.88	0	0	unknown
St. Paul	4/6/2006	1	0	0	unknown
St. Anthony	9/21/2005	1	0	0	unknown

Location or County	Date	Size in Inches	Deaths	Injuries	Property Damage
New Brighton	6/27/2005	0.75	0	0	unknown
Maplewood	6/20/2005	0.75	0	0	unknown
St. Paul	6/20/2005	0.75	0	0	unknown
St. Paul	6/20/2005	1.75	0	0	unknown
Maplewood	6/13/2005	0.75	0	0	unknown
New Brighton	6/13/2005	0.75	0	0	unknown
North St. Paul	6/13/2005	0.75	0	0	unknown
St. Paul	6/13/2005	1	0	0	unknown
St. Paul	6/13/2005	1	0	0	unknown
St. Paul	6/13/2005	1	0	0	unknown
Vadnais Heights	6/13/2005	0.75	0	0	unknown
Vadnais Heights	6/7/2005	1	0	0	unknown
White Bear Lake	6/7/2005	1	0	0	unknown
Vadnais Heights	10/30/2004	0.75	0	0	unknown
St. Paul	7/31/2004	0.75	0	0	unknown
Vadnais Heights	6/30/2004	0.75	0	0	unknown
Vadnais Heights	6/23/2004	0.75	0	0	unknown
Maplewood	5/9/2004	0.75	0	0	unknown
New Brighton	5/9/2004	0.75	0	0	unknown
North St. Paul	5/9/2004	1	0	0	unknown
St. Paul	5/9/2004	0.88	0	0	unknown
New Brighton	8/12/2002	0.88	0	0	unknown
New Brighton	5/5/2002	0.88	0	0	unknown
New Brighton	5/5/2002	0.88	0	0	unknown
North St. Paul	5/5/2002	0.75	0	0	unknown
St. Paul	5/5/2002	0.75	0	0	unknown
Vadnais Heights	5/5/2002	1	0	0	unknown
Maplewood	4/18/2002	0.75	0	0	unknown
North St. Paul	4/18/2002	0.75	0	0	unknown
St. Paul	4/18/2002	1	0	0	unknown
White Bear Lake	6/16/2001	0.75	0	0	unknown
Maplewood	6/11/2001	0.75	0	0	unknown
St. Paul	5/1/2001	1.25	0	0	\$2,000,000
St. Paul	5/1/2001	1	0	0	unknown
St. Paul	5/1/2001	1	0	0	unknown
Vadnais Heights	5/1/2001	0.88	0	0	unknown
Maplewood	7/7/2000	1.75	0	0	unknown
North St. Paul	7/7/2000	2	0	0	unknown
Vadnais Heights	7/7/2000	1.5	0	0	unknown
White Bear Lake	7/7/2000	0.75	0	0	unknown

Location or County	Date	Size in Inches	Deaths	Injuries	Property Damage
White Bear Lake	9/7/1999	0.75	0	0	unknown
White Bear Lake	6/5/1999	0.75	0	0	unknown
St. Paul	8/9/1998	1.25	0	0	unknown
St. Paul	8/9/1998	0.88	0	0	unknown
St. Paul	8/9/1998	0.75	0	0	unknown
St. Paul	6/16/1998	0.75	0	0	unknown
St. Paul	6/16/1998	1	0	0	unknown
St. Paul	5/15/1998	1	0	0	unknown
Mounds View	6/28/1997	0.88	0	0	unknown
St. Paul	6/28/1997	0.75	0	0	unknown
St. Paul	6/15/1997	0.75	0	0	unknown
New Brighton	7/14/1995	1.5	0	0	unknown
Shoreview	5/30/1994	1.75	0	0	unknown
Ramsey County	5/28/1991	1	0	0	unknown
Ramsey County	8/31/1989	1.75	0	0	unknown
Ramsey County	5/7/1988	2.5	0	0	unknown
Ramsey County	5/7/1988	1.75	0	0	unknown
Ramsey County	7/20/1987	1.75	0	0	unknown
Ramsey County	6/28/1987	1	0	0	unknown
Ramsey County	8/16/1986	1.75	0	0	unknown
Ramsey County	8/5/1986	1.75	0	0	unknown
Ramsey County	6/23/1986	1	0	0	unknown
Ramsey County	5/12/1986	1.5	0	0	unknown
Ramsey County	3/31/1986	1	0	0	unknown
Ramsey County	5/9/1985	1.75	0	0	unknown
Ramsey County	5/9/1985	1.75	0	0	unknown
Ramsey County	5/9/1985	1.25	0	0	unknown
Ramsey County	7/23/1981	1.75	0	0	unknown
Ramsey County	6/23/1981	1.75	0	0	unknown
Ramsey County	9/19/1980	1.5	0	0	unknown
Ramsey County	6/25/1980	1	0	0	unknown
Ramsey County	7/10/1979	1.75	0	0	unknown
Ramsey County	6/26/1979	1.75	0	0	unknown
Ramsey County	7/12/1978	2.5	0	0	unknown
Ramsey County	6/20/1974	0.75	0	0	unknown
Ramsey County	7/8/1966	1.75	0	0	unknown
Ramsey County	7/21/1962	1	0	0	unknown
Ramsey County	6/23/1962	1.75	0	0	unknown
Ramsey County	4/23/1960	1	0	0	unknown

Location or County	Date	Size in Inches	Deaths	Injuries	Property Damage
<b>Highest Value Property Damage</b>					<b>\$5,000,000</b>

Table C - 3. All severe thunderstorm wind events recorded by NCEI, 1950-April 2018

Location or County	Date	Type	Magnitude (knots)	Deaths	Injuries	Property Damage
St Paul	6/13/2017	Thunderstorm Wind	56	0	0	unknown
St. Paul	6/11/2017	Thunderstorm Wind	50	0	2	unknown
St. Paul	7/27/2016	Thunderstorm Wind	53	0	0	unknown
St. Paul	7/5/2016	Thunderstorm Wind	58	0	0	unknown
Lauderdale	7/5/2016	Thunderstorm Wind	52	0	0	\$25,000
Roseville	7/5/2016	Thunderstorm Wind	52	0	0	unknown
St Paul	7/5/2016	Thunderstorm Wind	52	0	0	unknown
St. Paul	7/17/2015	Thunderstorm Wind	54	0	0	unknown
North St Paul	7/17/2015	Thunderstorm Wind	52	0	0	unknown
St. Anthony	7/17/2015	Thunderstorm Wind	61	0	0	unknown
Ramsey Co.	6/14/2014	High Wind	39	0	0	unknown
St. Paul	6/21/2013	Thunderstorm Wind	52	0	0	unknown
Falcon Heights	6/21/2013	Thunderstorm Wind	52	0	0	unknown
Gem Lake	6/21/2013	Thunderstorm Wind	56	0	0	unknown
Mounds View	6/21/2013	Thunderstorm Wind	52	0	0	unknown
St Paul	6/21/2013	Thunderstorm Wind	56	0	0	unknown
St Paul	6/21/2013	Thunderstorm Wind	56	0	0	unknown
St. Paul	6/16/2013	Thunderstorm Wind	52	0	0	unknown
North St Paul	6/15/2013	Thunderstorm Wind	52	0	0	unknown
North St Paul	11/10/2012	Thunderstorm Wind	52	0	0	unknown
St Paul	11/10/2012	Thunderstorm Wind	61	0	0	unknown
St Paul	11/10/2012	Thunderstorm Wind	56	0	0	\$50,000
Falcon Heights	8/3/2012	Thunderstorm Wind	51	0	0	unknown
North St Paul	8/3/2012	Thunderstorm Wind	52	0	0	unknown
North St Paul	6/19/2012	Thunderstorm Wind	52	0	0	unknown
Little Canada	6/17/2012	Thunderstorm Wind	51	0	0	unknown
St Paul	6/10/2012	Thunderstorm Wind	61	0	0	\$50,000
North St Paul	5/27/2012	Thunderstorm Wind	51	0	0	unknown
St Paul	5/19/2012	Thunderstorm Wind	50	0	0	unknown
Falcon Heights	8/1/2011	Thunderstorm Wind	52	0	0	unknown
White Bear Lake	7/1/2011	Thunderstorm Wind	50	0	0	unknown
Ramsey Co.	10/26/2010	High Wind	35	0	0	\$20,000
St Paul	9/21/2010	Thunderstorm Wind	52	0	0	unknown
Lauderdale	7/17/2010	Thunderstorm Wind	52	0	0	unknown

Location or County	Date	Type	Magnitude (knots)	Deaths	Injuries	Property Damage
Mounds View	7/17/2010	Thunderstorm Wind	61	0	0	\$25,000
North St Paul	7/17/2010	Thunderstorm Wind	55	0	0	\$5,000
St Paul	7/17/2010	Thunderstorm Wind	55	0	0	unknown
White Bear Lake	7/17/2010	Thunderstorm Wind	52	0	0	unknown
St Paul	7/14/2010	Thunderstorm Wind	51	0	0	unknown
New Brighton	8/8/2009	Thunderstorm Wind	52	0	0	unknown
Ramsey Co.	11/6/2008	High Wind	52	0	0	unknown
St Paul	7/11/2008	Thunderstorm Wind	50	0	0	unknown
North St Paul	6/14/2008	Thunderstorm Wind	54	0	0	unknown
St Paul	5/25/2008	Thunderstorm Wind	55	0	0	unknown
St Paul	9/20/2007	Thunderstorm Wind	50	0	0	unknown
St. Paul	8/28/2007	Thunderstorm Wind	52	0	0	unknown
St Paul	8/28/2007	Thunderstorm Wind	50	0	0	unknown
North Oaks	8/13/2007	Thunderstorm Wind	52	0	0	unknown
Falcon Heights	8/11/2007	Thunderstorm Wind	60	0	1	unknown
St Paul	8/11/2007	Thunderstorm Wind	55	0	0	unknown
St Paul	7/26/2007	Thunderstorm Wind	55	0	0	unknown
Ramsey Co.	5/6/2007	High Wind	50	0	0	unknown
St Paul	7/24/2006	Thunderstorm Wind	53	0	0	unknown
Arden Hills	6/16/2006	Thunderstorm Wind	55	0	0	unknown
Ramsey Co.	9/21/2005	Thunderstorm Wind	65	0	1	\$25,000,000
St Paul	9/12/2005	Thunderstorm Wind	50	0	0	unknown
Little Canada	7/23/2005	Thunderstorm Wind	52	0	0	unknown
Maplewood	7/23/2005	Thunderstorm Wind	52	0	0	unknown
North St Paul	7/23/2005	Thunderstorm Wind	52	0	0	unknown
Roseville	7/23/2005	Thunderstorm Wind	52	0	0	unknown
St Paul	7/23/2005	Thunderstorm Wind	52	0	0	unknown
Vadnais Heights	7/23/2005	Thunderstorm Wind	52	0	0	unknown
White Bear Lake	7/23/2005	Thunderstorm Wind	55	0	0	unknown
White Bear Lake	6/27/2005	Thunderstorm Wind	52	0	0	unknown
St Paul	6/20/2005	Thunderstorm Wind	52	0	0	unknown
St Paul	6/20/2005	Thunderstorm Wind	57	0	0	unknown
North St Paul	6/8/2005	Thunderstorm Wind	52	0	0	unknown
St Paul	6/8/2005	Thunderstorm Wind	50	0	0	unknown
Vadnais Heights	6/7/2005	Thunderstorm Wind	52	0	0	unknown
Ramsey Co.	12/12/2004	Strong Wind	35	0	0	\$100
Arden Hills	9/23/2004	Thunderstorm Wind	50	0	0	unknown
Maplewood	9/23/2004	Thunderstorm Wind	52	0	0	unknown
Roseville	9/23/2004	Thunderstorm Wind	50	0	0	unknown
St Paul	9/23/2004	Thunderstorm Wind	58	0	0	unknown

Location or County	Date	Type	Magnitude (knots)	Deaths	Injuries	Property Damage
Arden Hills	6/30/2004	Thunderstorm Wind	50	0	0	unknown
Maplewood	6/11/2004	Thunderstorm Wind	50	0	0	unknown
St. Paul	5/9/2004	Thunderstorm Wind	63	0	0	\$330,000
Ramsey Co.	4/18/2004	High Wind	52	0	0	unknown
Maplewood	4/18/2004	Thunderstorm Wind	50	0	0	unknown
Vadnais Heights	4/18/2004	Thunderstorm Wind	50	0	0	unknown
Maplewood	6/24/2003	Thunderstorm Wind	50	0	0	unknown
St. Paul	6/24/2003	Thunderstorm Wind	52	0	0	unknown
St. Paul	6/23/2003	Thunderstorm Wind	50	0	0	unknown
White Bear Lake	9/5/2002	Thunderstorm Wind	50	0	0	unknown
Mounds View	8/3/2002	Thunderstorm Wind	50	0	0	unknown
Little Canada	7/7/2000	Thunderstorm Wind	55	0	0	unknown
Maplewood	7/7/2000	Thunderstorm Wind	60	0	0	unknown
New Brighton	7/7/2000	Thunderstorm Wind	65	0	0	unknown
North St. Paul	7/7/2000	Thunderstorm Wind	55	0	0	unknown
Vadnais Heights	7/7/2000	Thunderstorm Wind	70	0	0	unknown
White Bear Lake	7/7/2000	Thunderstorm Wind	65	0	0	unknown
Ramsey Co.	4/5/2000	High Wind	64	0	0	unknown
Little Canada	7/23/1999	Thunderstorm Wind	50	0	0	unknown
St. Paul	6/6/1999	Thunderstorm Wind	60	0	0	unknown
Ramsey Co.	3/17/1999	High Wind	55	0	0	unknown
Vadnais Heights	7/14/1998	Thunderstorm Wind	55	0	0	unknown
St. Paul	6/26/1998	Thunderstorm Wind	55	0	0	unknown
St. Paul	6/26/1998	Thunderstorm Wind	50	0	0	unknown
St. Paul	6/26/1998	Thunderstorm Wind	65	0	0	unknown
St. Paul	6/25/1998	Thunderstorm Wind	60	0	0	unknown
Vadnais Heights	6/25/1998	Thunderstorm Wind	65	0	0	unknown
St. Paul	5/30/1998	Thunderstorm Wind	67	0	0	unknown
St. Paul	5/15/1998	Thunderstorm Wind	61	0	0	unknown
St. Paul	5/15/1998	Thunderstorm Wind	61	0	0	unknown
Maplewood	6/28/1997	Thunderstorm Wind	50	0	0	unknown
Ramsey Co.	10/29/1996	High Wind	64	0	0	unknown
Maplewood	8/6/1996	Thunderstorm Wind	70	0	0	unknown
St. Paul	8/6/1996	Thunderstorm Wind	60	0	0	unknown
St. Paul	5/19/1996	Thunderstorm Wind	54	0	0	unknown
Gem Lake	7/15/1995	Thunderstorm Wind	0	0	0	unknown
St. Paul	6/10/1994	Thunderstorm Wind	0	0	0	unknown
Maplewood	4/26/1994	Thunderstorm Wind	0	0	0	unknown
Ramsey Co.	6/30/1991	Thunderstorm Wind	0	0	0	unknown
Ramsey Co.	5/28/1991	Thunderstorm Wind	0	0	1	unknown

Location or County	Date	Type	Magnitude (knots)	Deaths	Injuries	Property Damage
Ramsey Co.	7/17/1990	Thunderstorm Wind	0	0	0	unknown
Ramsey Co.	7/8/1990	Thunderstorm Wind	54	0	0	unknown
Ramsey Co.	5/29/1989	Thunderstorm Wind	58	0	0	unknown
Ramsey Co.	5/29/1989	Thunderstorm Wind	56	0	0	unknown
Ramsey Co.	8/11/1988	Thunderstorm Wind	52	0	0	unknown
Ramsey Co.	8/7/1988	Thunderstorm Wind	0	0	1	unknown
Ramsey Co.	6/28/1987	Thunderstorm Wind	0	0	0	unknown
Ramsey Co.	7/12/1986	Thunderstorm Wind	0	0	0	unknown
Ramsey Co.	7/12/1986	Thunderstorm Wind	0	0	0	unknown
Ramsey Co.	3/31/1986	Thunderstorm Wind	0	0	0	unknown
Ramsey Co.	6/16/1985	Thunderstorm Wind	56	0	0	unknown
Ramsey Co.	6/22/1984	Thunderstorm Wind	52	0	0	unknown
Ramsey Co.	6/7/1984	Thunderstorm Wind	52	0	0	unknown
Ramsey Co.	4/26/1984	Thunderstorm Wind	0	0	6	unknown
Ramsey Co.	7/19/1983	Thunderstorm Wind	0	0	0	unknown
Ramsey Co.	9/5/1982	Thunderstorm Wind	0	0	0	unknown
Ramsey Co.	4/29/1981	Thunderstorm Wind	66	0	0	unknown
Ramsey Co.	8/7/1980	Thunderstorm Wind	78	0	0	unknown
Ramsey Co.	8/2/1979	Thunderstorm Wind	52	0	0	unknown
Ramsey Co.	6/19/1979	Thunderstorm Wind	0	0	0	unknown
Ramsey Co.	6/19/1979	Thunderstorm Wind	0	0	0	unknown
Ramsey Co.	6/19/1979	Thunderstorm Wind	0	0	0	unknown
Ramsey Co.	7/12/1978	Thunderstorm Wind	61	0	0	unknown
Ramsey Co.	7/9/1975	Thunderstorm Wind	62	0	0	unknown
Ramsey Co.	5/23/1975	Thunderstorm Wind	50	0	0	unknown
Ramsey Co.	5/19/1975	Thunderstorm Wind	0	0	0	unknown
Ramsey Co.	6/20/1974	Thunderstorm Wind	86	0	0	unknown
Ramsey Co.	4/20/1973	Thunderstorm Wind	0	0	0	unknown
Ramsey Co.	6/4/1971	Thunderstorm Wind	0	0	0	unknown
Ramsey Co.	6/10/1970	Thunderstorm Wind	0	0	0	unknown
Ramsey Co.	7/4/1966	Thunderstorm Wind	0	0	0	unknown
Ramsey Co.	7/1/1965	Thunderstorm Wind	0	0	0	unknown
Ramsey Co.	6/8/1963	Thunderstorm Wind	0	0	0	unknown
<b>Highest Value Property Damage</b>						<b>\$25,000,000</b>

Table C - 4. All flood events recorded by the NCEI, 1997-April 2018

Location or County	Date	Type	Deaths	Injuries	Property Damage
St. Paul	9/17/2015	Flash Flood	0	0	unknown
St. Paul	6/18/2014	Flood	0	0	\$1,900,000
Falcon Heights	6/21/2013	Flash Flood	0	0	unknown
St. Paul	6/21/2013	Flash Flood	0	0	unknown
New Brighton	8/16/2011	Flash Flood	0	0	unknown
White Bear Lake	7/16/2011	Flash Flood	0	0	\$500,000
Little Canada	8/10/2010	Flash Flood	0	0	unknown
St. Paul	6/26/2010	Flash Flood	0	0	unknown
St. Paul	3/20/2010	Flood	0	0	\$2,400,000
St. Paul	9/20/2007	Flash Flood	1	0	\$200,000
Countywide	10/4/2005	Flash Flood	0	0	unknown
Ramsey Co.	10/4/2005	Flood	0	0	unknown
North Portion	9/21/2005	Flash Flood	0	0	unknown
Ramsey Co.	6/20/2005	Flash Flood	0	0	\$2,000
St. Paul	6/25/2003	Flash Flood	0	0	unknown
Vadnais Heights	7/28/2002	Flash Flood	0	0	unknown
Ramsey Co.	5/1/2001	Flood	0	0	unknown
Ramsey Co.	4/1/2001	Flood	0	0	unknown
Roseville	9/2/2000	Flash Flood	0	0	unknown
St. Paul	7/1/1997	Flash Flood	0	1	unknown
Ramsey Co.	4/4/1997	Flood	0	0	unknown
<b>Highest Value Property Damage</b>					<b>\$2,400,000</b>

Table C - 5. All severe winter weather events recorded by NCEI, 1996-April 2018

Location or County	Date	Type	Deaths	Injuries	Property Damage
Ramsey County	4/14/2018	Blizzard	0	0	unknown
Ramsey County	4/13/2018	Winter Storm	0	0	unknown
Ramsey County	4/3/2018	Winter Storm	0	0	unknown
Ramsey County	3/5/2018	Winter Storm	0	0	unknown
Ramsey County	2/24/2018	Winter Storm	0	0	unknown
Ramsey County	1/22/2018	Winter Storm	0	0	unknown
Ramsey County	12/16/2016	Winter Storm	0	0	unknown
Ramsey County	2/2/2016	Winter Storm	0	0	unknown
Ramsey County	11/10/2014	Winter Storm	0	0	unknown
Ramsey County	4/3/2014	Winter Storm	0	0	unknown
Ramsey County	2/20/2014	Winter Storm	0	0	unknown

Location or County	Date	Type	Deaths	Injuries	Property Damage
Ramsey County	2/17/2014	Winter Storm	0	0	unknown
Ramsey County	1/30/2014	Winter Storm	0	0	unknown
Ramsey County	12/4/2013	Winter Storm	0	0	unknown
Ramsey County	4/22/2013	Winter Storm	0	0	unknown
Ramsey County	4/18/2013	Winter Storm	0	0	unknown
Ramsey County	4/10/2013	Winter Storm	0	0	unknown
Ramsey County	3/4/2013	Winter Storm	0	0	unknown
Ramsey County	12/9/2012	Winter Storm	0	0	unknown
Ramsey County	12/31/2011	Winter Weather	0	0	unknown
Ramsey County	3/22/2011	Winter Storm	0	0	unknown
Ramsey County	2/20/2011	Winter Storm	0	0	unknown
Ramsey County	12/10/2010	Winter Storm	0	0	unknown
Ramsey County	12/3/2010	Winter Storm	0	0	unknown
Ramsey County	11/13/2010	Winter Storm	0	0	unknown
Ramsey County	2/7/2010	Winter Storm	0	0	unknown
Ramsey County	12/23/2009	Winter Storm	0	0	unknown
Ramsey County	12/8/2009	Winter Storm	0	0	unknown
Ramsey County	10/12/2009	Winter Weather	0	0	unknown
Ramsey County	2/26/2009	Winter Storm	0	0	unknown
Ramsey County	4/1/2008	Heavy Snow	0	0	unknown
Ramsey County	3/31/2008	Heavy Snow	0	0	unknown
Ramsey County	12/1/2007	Winter Storm	0	0	unknown
Ramsey County	3/1/2007	Winter Storm	0	0	unknown
Ramsey County	2/24/2007	Winter Storm	0	0	unknown
Ramsey County	3/15/2006	Winter Storm	0	0	unknown
Ramsey County	3/12/2006	Winter Storm	0	0	unknown
Ramsey County	3/18/2005	Winter Storm	0	0	unknown
Ramsey County	1/21/2005	Winter Storm	0	0	unknown
Ramsey County	1/1/2005	Winter Storm	0	0	unknown
Ramsey County	3/5/2004	Winter Storm	0	0	unknown
Ramsey County	2/1/2004	Winter Storm	0	0	unknown
Ramsey County	1/24/2004	Winter Storm	0	0	unknown
Ramsey County	12/9/2003	Winter Storm	0	0	unknown
Ramsey County	11/22/2003	Winter Storm	0	0	unknown
Ramsey County	2/2/2003	Winter Storm	0	0	unknown
Ramsey County	3/14/2002	Winter Storm	0	0	unknown
Ramsey County	3/8/2002	Winter Storm	0	0	unknown
Ramsey County	11/26/2001	Winter Storm	0	0	unknown
Ramsey County	3/11/2001	Heavy Snow	0	0	unknown
Ramsey County	1/29/2001	Winter Storm	0	0	unknown

Location or County	Date	Type	Deaths	Injuries	Property Damage
Ramsey County	12/28/2000	Winter Storm	0	0	unknown
Ramsey County	1/19/2000	Heavy Snow	0	0	unknown
Ramsey County	1/12/2000	Heavy Snow	0	0	unknown
Ramsey County	3/8/1999	Winter Storm	0	0	unknown
Ramsey County	3/13/1997	Winter Storm	0	0	unknown
Ramsey County	12/23/1996	Winter Storm	0	0	unknown
Ramsey County	12/14/1996	Heavy Snow	0	0	unknown
Ramsey County	11/22/1996	Heavy Snow	0	0	unknown
Ramsey County	11/20/1996	Heavy Snow	0	0	unknown
Ramsey County	3/23/1996	Heavy Snow	0	0	unknown
Ramsey County	1/17/1996	Ice Storm	0	0	unknown
Ramsey County	1/10/1996	Heavy Snow	0	0	unknown
<b>Highest Value Property Damage</b>					<b>unknown</b>

Table C - 6. All severe cold/wind chill events recorded by NCEI, 1996-April 2018

Location or County	Date	Type	Deaths	Injuries	Property Damage
Ramsey County	1/1/2018	Extreme Cold/Wind Chill	1	1	unknown
Ramsey County	12/18/2016	Extreme Cold/Wind Chill	0	0	unknown
Ramsey County	12/12/2016	Extreme Cold/Wind Chill	1	1	unknown
Ramsey County	1/17/2016	Extreme Cold/Wind Chill	0	0	unknown
Ramsey County	1/27/2014	Extreme Cold/Wind Chill	0	0	unknown
Ramsey County	1/23/2014	Extreme Cold/Wind Chill	0	0	unknown
Ramsey County	1/5/2014	Extreme Cold/Wind Chill	0	0	unknown
Ramsey County	1/15/2009	Cold/Wind Chill	2	0	unknown
Ramsey County	2/19/2008	Cold/Wind Chill	0	0	unknown
Ramsey County	2/10/2008	Cold/Wind Chill	0	0	unknown
Ramsey County	1/15/2005	Cold/Wind Chill	1	0	unknown
Ramsey County	1/15/1997	Cold/Wind Chill	0	0	unknown
Ramsey County	12/24/1996	Cold/Wind Chill	0	0	unknown
Ramsey County	2/1/1996	Cold/Wind Chill	0	0	unknown
Ramsey County	1/31/1996	Cold/Wind Chill	0	0	unknown
Ramsey County	1/18/1996	Cold/Wind Chill	0	0	unknown
<b>Highest Value Property Damage</b>					<b>unknown</b>

Table C - 7. All severe heat events recorded by the NCEI, 1996-April 2018

Location or County	Date	Type	Deaths	Injuries	Property Damage
Ramsey County	7/20/2016	Excessive Heat	0	0	unknown
Ramsey County	8/25/2013	Excessive Heat	0	216	unknown
Ramsey County	7/18/2011	Excessive Heat	0	0	unknown
Ramsey County	6/7/2011	Excessive Heat	0	0	unknown
Ramsey County	7/30/2006	Heat	0	0	unknown
Ramsey County	8/4/2001	Heat	0	0	unknown
Ramsey County	8/1/2001	Heat	0	0	unknown
Ramsey County	7/30/2001	Heat	0	0	unknown
Ramsey County	7/29/1999	Heat	0	0	unknown
Ramsey County	7/23/1999	Heat	0	0	unknown
<b>Highest Value Property Damage</b>					<b>unknown</b>

Table C - 8. All lightning events recorded by the NCEI, 1996-April 2018

Location or County	Date	Deaths	Injuries	Property Damage
White Bear Lake	8/8/2005	0	0	unknown
Vadnais Heights	6/7/2005	0	0	unknown
White Bear Lake	8/9/1998	1	0	unknown
<b>Highest Value Property Damage</b>				<b>unknown</b>

# **Appendix D**

## **Adopting Resolutions**

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

# **Appendix E**

## **Steering Committee Meetings**

8/9/2017

# Minnesota 7-County Multi-Hazard Mitigation Update Project Kick-off Orientation Webinar

UNIVERSITY OF MINNESOTA GEOSPATIAL ANALYSIS CENTER



## Webinar Purpose & Goals

**Purpose:**

The purpose of this webinar is provide an orientation kick-off meeting for the Emergency Managers participating in the Minnesota 7-County Multi-Hazard Mitigation Plan Update project.

**Goals:**

- Introduce the UMD Team and County contacts.
- Provide an overview of the project.
- Clarify roles and responsibilities.
- Outline the planning process, discuss key tasks and timelines.
- Discuss next steps and answer your questions.

## Introductions

**Who We Are (UMD Project Team)**

-  Stacey Stark, Director, Geospatial Analysis Center (GAC)
-  Michelle Penning, Research Associate, GIS Specialist, Cartographer, and Editor (GAC)
-  Steve Graham, Research Associate and Flood Modeling Specialist (GAC)
-  Bonnie Hundneser, Emergency Management Planning Consultant (Hundneser Consulting LLC)

**Who You Are (County Emergency Managers):**

- Name, Title, and County
- Past Experience with MHMP?

**Minnesota HSEM:**

Jennifer Nelson, MN HSEM State Hazard Mitigation Officer

## Project Overview

➤ 7 Counties

Jurisdiction	FEMA's Expiration Date
Waseca	3/26/2017
Rice	5/22/2017
Clayton	10/17/2017
Winona	11/8/2017
Ramsey	12/3/2017
Todd	4/16/2018
Nicollet	5/24/2019



## Why UMD-GAC?

- **Proven experience**  
GAC has extensive experience in the comprehensive review and update of county MHMPs, as well as updates of the State MHMP.
- **Advanced Capabilities**  
GAC has expertise in the application of GIS, HAZUS, and research to support MHMP development and meeting all FEMA requirements.
- **Ability to Expedite**  
GAC has the ability to expedite the MHMP update process for multiple counties through a consistent approach and format, which also supports state and FEMA review of draft plans.
- **Planning Team**  
GAC project team includes working with advanced GIS students and experienced consultants to effectively complete tasks.

## Overview of MHMP Update Process *Key Considerations for Discussion*

## EM Roles & Responsibilities

- Act as main Point of Contact.
- Track required local match and submit to ISEM.
- Coordinate communication and outreach to engage local planning team, additional key stakeholders, and the public.
- Review part mitigation actions and provide status updates.
- Provide information for Capabilities Assessment (Plans & Programs in Place / Program Gaps or Deficiencies) for each hazard.
- Avoid in development of new mitigation action start (must be county and jurisdictionally-specific) that include projects for FEMA eligibility.
- Provide information for Critical Facilities forms.
- Provide coordination with GIS and monitor's data managers in order to obtain GIS and parcel information for GIS analyses.
- Assist in timely review of material throughout the plan update process via phone, email, and in-person meetings.

## Planning Team Engagement

Each EM will play a critical role in identification and engagement of a planning team during the plan update process. The MMMP must document who was involved & how, and include representation from the county and each jurisdiction. Neighboring communities, local and regional agencies should also be given the opportunity to participate.

### Key Considerations:

- **Planning Team** – Should include key county departments/staff and representation from all participating cities, as well as other key agency or organizational personnel (i.e., MNDNR, Utility Dept, Schools).
- **In Person Meetings** – Our planning process consists of 2 in person planning team meetings (Kickoff Meeting and Mitigation Action Chart review meeting).
- **Other Communication** – At different parts of the planning process we will seek additional participation & feedback via email.

## Public Engagement

As part of the planning process, the MMMP must document how the public was given the opportunity to be involved in the planning process and how their feedback was incorporated into the plan.

### Key Considerations:

- Our public outreach process consists of 2 outreach periods (early in the process and for public review of draft plan).
  - We provide you with a news release for posting/distribution.
  - We work with you to document your public outreach in the plan.
  - We provide a website for posting the plan and collection of public feedback.
  - If you wish to do additional public outreach, you may do so under your own direction (i.e., posting an online survey, providing an update meetings, or distributing information at public events, such as a booth at the County Fair).

## Hazard Identification and Risk Assessment

All plans will address the **natural hazards** identified to pose risk to the county and its jurisdictions. Non-natural hazards (technological and human-caused) will not be included in the risk and vulnerability assessment and development of mitigation strategies and actions.

### Key Considerations:

- Identify specific impacts and vulnerabilities (at the county/jurisdiction level) due to natural hazards.
- Identify if and how any priorities changed since the last plan (i.e., financial, legal, political realities, and post-disaster conditions).
- Identify existing development or future development that may increase or decrease the community's vulnerability to natural hazard events.

## Mitigation Strategy

Key activities to support the update of the Mitigation Strategy will include a capabilities assessment for mitigating against natural hazards, as well as a comprehensive review of the status of mitigation actions in the previously approved plan.

### Key Considerations:

- Plans and Programs in Place that support mitigation.
- Program Gaps or Deficiencies that hinder mitigation.
- Past Mitigation Action Review (Completed, Deleted, or Ongoing).
- Identification of projects that may be eligible for FEMA funding.
- Local Mitigation Capabilities Assessment (LMCA) for jurisdictional-level mitigation actions.

## Plan Adoption

After FEMA has provided "AFPA" status (Approval Pending Adoption), the county and all participating jurisdictions must formally adopt the plan.

### Key Considerations:

- This step is often a difficult challenge for Emergency Managers after the plan is completed, and can bog down the process of final plan adoption and thus eligibility for FEMA/HMA funding.
- Engaging County and City personnel throughout the planning process will help to ensure understanding of the purpose and process of the MMMP Update, including expectation of follow-through to adopt the plan.

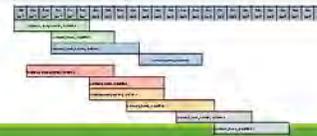
8/9/2017

## Project Timeline

- 30-Month total timeline - 24 months active
- Staggering of Counties will be required to complete UMD's update of risk assessments, research of hazard histories, etc. for each county

## Estimated Time-line

Task	Start	End
Research, develop, and update the risk assessment and hazard history	2017	2019
Develop and update the mitigation plan	2018	2020
Develop and update the mitigation plan	2019	2021
Develop and update the mitigation plan	2020	2022
Develop and update the mitigation plan	2021	2023



## Our Recent Experience

These things *really* help speed up the update process!

- The UMD Team provides you with prepared communications & formats.**
  - Using the update formats we provide to you for particular tasks (i.e. data collection, meeting minutes, survey reports) will speed our process, effectively save your time, and increase consistency among plans.
- EM's complete "assignments" in a thorough and timely fashion.**
  - The quicker you get things back to us with complete information, the faster we can work with them, and we don't have to follow up on it for help in filling in gaps.
- EM's help coordinate getting information that we need.**
  - Most requests to coordinate with your GIS dept. or County assessors will help to ensure we get the information we need to update the plan.
  - There is a liaison to coordinate with county departments and city personnel to get information or feedback to other entities helpful.
- EM's do a great job of convening planning team meetings & outreach.**
  - We'll arrange planning team meetings help to ensure color coordination and project with all those involved, and helps document required participation to HSEM and FEMA in the planning process. It also helps secure your local match!

## EM Tasks

All county Emergency Managers will be provided with resources to complete the following tasks:

- ✓ Plans & Programs in Place Checklist
- ✓ Capabilities Assessment by each Natural Hazard
- ✓ Post Mitigation Action Review (Status Update)
- ✓ Public News Release
- ✓ Compilation of Critical & Essential Facilities in Each Jurisdiction
- ✓ Coordination of Local Mitigation Capabilities Assessment
- ✓ Building Attribute Checklist for Flood Economic Loss Analysis

## Next Steps

- UMD Team members (Bonnie/Micella) will follow up with each EM to provide & discuss the following assignments you can begin to work on:
- Plans & Programs in Place Checklist
  - Capabilities Assessment (CA)
  - Post Mitigation Action Review (PMAR)
  - Listing of Critical Facilities
  - "Section B" test (How the plan will be monitored, evaluated and updated within a 5-year cycle, and how public participation will continue)
  - Scheduling of 1<sup>st</sup> Planning Team Meeting

## Questions?

What questions do you have for UMD or HSEM about the MHMP Update process?

8/9/2017

## Contact Information

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Stacey Stark, MS, GISP  
Geospatial Analysis Center  
[sstark@ed.umn.edu](mailto:sstark@ed.umn.edu)  
218-726-7438

Example Plans:  
<https://ed.umn.edu/hazemitigation>



**Ramsey County  
Multi-Hazard Mitigation Plan Update**

November 3, 2017 MHMP Planning Team Meeting  
Ramsey County Emergency Operations Center – Arden Hills, MN  
10:00 a.m. – 12:00 p.m.

**Meeting Summary:**

On Friday, November 3, 2017, key county and city representatives, as well as other stakeholders were convened to participate in a Planning Team Meeting for the update of Ramsey County Multi-Hazard Mitigation Plan (MHMP). The meeting was facilitated by the University of Minnesota – Duluth Geospatial Analysis Center (GAC) staff and Bonnie Hundrieser who are leading the update of the Ramsey County MHMP. A total of 19 people attended the meeting.

The opening presentation covered:

- The purpose of hazard mitigation planning.
- The role & responsibilities of the Planning Team.
- An overview of content in the MHMP (County physical & social profile, Asset Inventory, Hazard Assessment and Vulnerability Analysis, Capability Assessment and Mitigation Actions).
- Group review and discussion of hazard rankings for Ramsey County.
- A review of mitigation strategies and considerations for developing local mitigation actions.
- An overview of the FEMA Hazard Mitigation Assistance (HMA) Grants program.

Following the presentation a facilitated Mitigation Action Working Session was held. Participants discussed the natural hazards of concern to their communities and filled out Mitigation Action Worksheets to identify new, jurisdictionally-specific mitigation actions to be included in the MHMP plan update. Mitigation actions were required to fall within one of the 5 mitigation action strategies:

1. Local Planning and Regulations
2. Structure and Infrastructure Projects
3. Natural Systems Protection
4. Education and Awareness Programs
5. Mitigation Preparedness and Response Support

Following the Mitigation Action Working Session, the group then discussed the upcoming process and anticipated timeline for engaging the public and other key stakeholders in an open plan review period and public meetings. Meeting attendees were told that they would be contacted for additional information as needed and kept informed on the upcoming steps in the planning process, including opportunities for draft plan review and final selection of mitigation actions for inclusion in the plan.

**Attached to this meeting summary are the following documentation items:**

- 11-3-17 Ramsey County Meeting Email Invite
- 11-3-17 Meeting Agenda
- 11-3-17 Meeting Sign-in Sheets
- 11-3-17 Power Point Presentation Slides
- 11-3-17 Meeting Handouts (Mitigation Strategies, HMA Grants, Mitigation Ideas Worksheet)
- 11-3-17 Mitigation Ideas Working Session (jurisdictional worksheets)

*Meeting Summary Prepared By: Bonnie Hundrieser, UMD Project Team, (Hundrieser Consulting LLC)*

**From:** [Maver, Bryan L.](mailto:Maver.Bryan.L)  
**To:** [bill.short@ci.white-bear-township.mn.us](mailto:bill.short@ci.white-bear-township.mn.us); [Blake.Bennett@ci.stpaul.mn.us](mailto:Blake.Bennett@ci.stpaul.mn.us); [cameron@ci.blaine.mn.us](mailto:cameron@ci.blaine.mn.us); [chearden@cityvadnaisheights.com](mailto:chearden@cityvadnaisheights.com); [City of Gem Lake](mailto:City of Gem Lake); [csmith@sbfmfire.com](mailto:csmith@sbfmfire.com); [dalyjim3@aol.com](mailto:dalyjim3@aol.com); [dan.johnson@powers@falconheights.org](mailto:dan.johnson@powers@falconheights.org); [dampo1@gmail.com](mailto:dampo1@gmail.com); [david.brosnahan@ci.roseville.mn.us](mailto:david.brosnahan@ci.roseville.mn.us); [dcurley@shoreviewmn.gov](mailto:dcurley@shoreviewmn.gov); [debeltoft@ci.spring-lake-park.mn.us](mailto:debeltoft@ci.spring-lake-park.mn.us); [dhager@whitebearlake.org](mailto:dhager@whitebearlake.org); [don.smiley@littlecanafire.org](mailto:don.smiley@littlecanafire.org); [drelkey@ci.blaine.mn.us](mailto:drelkey@ci.blaine.mn.us); [dustin.kalis@cityvadnaisheights.com](mailto:dustin.kalis@cityvadnaisheights.com); [eleier@cityvadnaisheights.com](mailto:eleier@cityvadnaisheights.com); [Rutkowski, Heather](mailto:Rutkowski, Heather); [hundrieserconsulting@gmail.com](mailto:hundrieserconsulting@gmail.com); [jemd.anderson@ci.stpaul.mn.us](mailto:jemd.anderson@ci.stpaul.mn.us); [jfrid@cityofardenhills.org](mailto:jfrid@cityofardenhills.org); [kurt.frison@cityvadnaisheights.com](mailto:kurt.frison@cityvadnaisheights.com); [Robertson, Mike](mailto:Robertson, Mike); [msather@hfd.org](mailto:msather@hfd.org); [msitarz@ci.saint-anthony.mn.us](mailto:msitarz@ci.saint-anthony.mn.us); [nate.harden@ci.mounds-view.mn.us](mailto:nate.harden@ci.mounds-view.mn.us); [Larkin, Rick](mailto:Larkin, Rick); [sack.thongvanh@falconheights.org](mailto:sack.thongvanh@falconheights.org); [sduddeck@ci.north-saint-paul.mn.us](mailto:sduddeck@ci.north-saint-paul.mn.us); [steve.lukin@maplewoodmn.gov](mailto:steve.lukin@maplewoodmn.gov); [steve.menard@ci.mounds-view.mn.us](mailto:steve.menard@ci.mounds-view.mn.us); [tboehke@hfd.org](mailto:tboehke@hfd.org); [terry.sieben@ci.stpaul.mn.us](mailto:terry.sieben@ci.stpaul.mn.us); [tim.oneill@ci.roseville.mn.us](mailto:tim.oneill@ci.roseville.mn.us); [trevor.hamdorf@newbrightonmn.gov](mailto:trevor.hamdorf@newbrightonmn.gov); [WhiteEagle, Ann](mailto:WhiteEagle, Ann); [McIntyre, Arthur](mailto:McIntyre, Arthur); [Fox, Brent](mailto:Fox, Brent); [Maver, Bryan L](mailto:Maver, Bryan L); [Freed, Judd](mailto:Freed, Judd); [Kumlin-Diers, Karma](mailto:Kumlin-Diers, Karma); [Stauffer, Kristy](mailto:Stauffer, Kristy); [Williams, Scott](mailto:Williams, Scott); [Yochim, Steve](mailto:Yochim, Steve); [chris.leach@mnstatefair.org](mailto:chris.leach@mnstatefair.org); [david.dynes@usc.salvationarmy.org](mailto:david.dynes@usc.salvationarmy.org); [dressler@umn.edu](mailto:dressler@umn.edu); [Neuerburg, Bill](mailto:Neuerburg, Bill); [pary.w.peterson@state.mn.us](mailto:pary.w.peterson@state.mn.us); [jenny.kane@state.mn.us](mailto:jenny.kane@state.mn.us); [joe.barten@co.dakota.mn.us](mailto:joe.barten@co.dakota.mn.us); [mark@capitolregionwd.org](mailto:mark@capitolregionwd.org); [pbelfiori@nccreek.org](mailto:pbelfiori@nccreek.org); [tina@rwmwd.org](mailto:tina@rwmwd.org)  
**Subject:** Ramsey County Multi-Hazard Mitigation Plan Meeting  
**Attachments:** [HazMit Plan Meeting Map.xlsx.pdf](#)

Greetings,

Your presence is requested at a Planning Team meeting for the update of the Ramsey County Multi-Hazard Mitigation Plan on:

**Date:** Friday, November 3rd, 2017  
**Time:** 10:00 a.m. – 12:00 p.m. (1000 – 1200 hours)  
**Location:** Ramsey County Emergency Operations Center (Public Works Marsden Conference Room)  
1425 Paul Kirkwood Drive, Arden Hills, MN 55126 (see attachment for parking and building access information)

The update of the County's hazard mitigation plan is a requirement by the State of Minnesota Department of Homeland Security & Emergency Management (HSEM) as well as the Federal Emergency Management Agency (FEMA) every 5 years. Our plan is due for an update and our planning is currently underway. The plan addresses the natural hazards that face Ramsey County and will result in mitigation actions for implementation that will reduce or eliminate loss of life or damage to property as a result of natural hazard events. Your input as needed as being part of a County department or city jurisdiction within the county. Additional key stakeholders have also been invited.

Your participation in this hazard mitigation plan is important for several reasons:

1. You will have input on projects we can implement at the county and local level that will help to eliminate or reduce the impacts of future natural disaster events.
2. Participating cities and the County will be eligible to apply for significant federal mitigation funding from FEMA to implement specific projects that meet eligibility requirements.
3. Mitigation planning is a fundamental element in emergency management and local planning that we all must address to keep our communities safe and resilient.
4. FEMA and the State of Minnesota require that local jurisdictions participate in the planning process. Your participation is important so that the County can ensure that we meet this requirement.

During this brief 2 hour meeting we will discuss & rank the hazards that face our county and discuss mitigation actions to include in the plan. The meeting will be facilitated by the University of Minnesota – Duluth Geospatial Analysis Center and Bonnie Hundrieser, an emergency management planning consultant working closely with us on this project.

Please RSVP to this invitation by October 23rd. If you cannot attend, please seek to send someone in your stead to represent your county department/city jurisdiction/ or other organization.

If you have any questions, please do not hesitate to contact me.

Thank you,

Bryan Mayer | Emergency Management Coordinator  
Ramsey County  
Emergency Management and Homeland Security  
90 W. Plato Blvd, Suite 220  
Saint Paul, MN 55107  
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# Ramsey County Multi-Hazard Mitigation Plan Update

## Planning Team Meeting

Friday, November 3, 2017, 10:00 a.m – 12:00 p.m.  
Ramsey County Emergency Operations Center– Arden Hills, MN

### Presenting:

- Micaella Penning, University of Minnesota –Duluth, Geospatial Analysis Center
- Bonnie Hundrieser, Hundrieser Consulting LLC (UMD MHMP Project Team)

### Agenda:

1. Welcome and Introductions
2. Ramsey County MHMP Plan Update
  - *About the Plan*
  - *Planning Team*
  - *Plan Content*
3. Review of Mitigation Strategies and Developing Mitigation Actions
4. Hazard Mitigation Assistance (HMA) Grants
5. Mitigation Action Working Session

### Contact:

*For more information on the Ramsey County MHMP Update, please contact:*

- Bryan Mayer, Ramsey County Emergency Management Coordinator
- 651-266-1017, [bryan.mayer@co.ramsey.mn.us](mailto:bryan.mayer@co.ramsey.mn.us)
- Bonnie Hundrieser, UMD Project Team Member
- 218-343-3468 / [hundrieserconsulting@gmail.com](mailto:hundrieserconsulting@gmail.com)

Ramsey County 11/3/17 Planning Team Meeting  
Participant Sign-in List (19 attendees)

Ramsey County MHMP Update Thursday, November 3, 2017 Planning Team Meeting Participant Sign-in List			
Name	Jurisdiction/Agency/Organization	Title	Email
Kurt Frison	Vadnais Heights Fire	Fire Tech	<a href="mailto:kurt.frison@cityvadnaisheights.com">kurt.frison@cityvadnaisheights.com</a>
Chris Hearden	Vadnais Heights Fire	Fire Tech	<a href="mailto:chearden@cityvadnaisheights.com">chearden@cityvadnaisheights.com</a>
Lisa Dressler	U of M Dept. of Emergency Management	Director of Emergency Management	<a href="mailto:ldressler@umn.edu">ldressler@umn.edu</a>
Betsy Phillips	Saint Paul Emergency Management	EM Specialist	<a href="mailto:betsy.phillips@cistpaul.mn.us">betsy.phillips@cistpaul.mn.us</a>
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Gary Peterson	Minnesota HSEM	RPC	<a href="mailto:gary.peterson@state.mn.us">gary.peterson@state.mn.us</a>
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Kristy Stauffer	Ramsey County EMHS	Deputy Director	<a href="mailto:kristy.stauffer@co.ramsey.mn.us">kristy.stauffer@co.ramsey.mn.us</a>
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Davita Petty	Saint Paul/Ramsey County Public Health	Program Analyst	<a href="mailto:davita.petty@co.ramsey.mn.us">davita.petty@co.ramsey.mn.us</a>
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Laura Anderson	Saint Paul/Ramsey County Public Health	Health Protection Manager	<a href="mailto:laura.anderson@co.ramsey.mn.us">laura.anderson@co.ramsey.mn.us</a>
Matt Sather	Lake Johanna Fire	Deputy Chief/Emergency Manager	<a href="mailto:msather@lafd.org">msather@lafd.org</a>
Bryan Mayer	Ramsey County EMHS	EM Coordinator	<a href="mailto:bryan.mayer@CO.RAMSEY.MN.US">bryan.mayer@CO.RAMSEY.MN.US</a>



RAMSEY COUNTY  
Emergency Management & Homeland Security



Ramsey County - Multi Hazard Mitigation Plan Update  
Planning Team Meeting - Thursday, November 3, 2017

PARTICIPANT SIGN IN SHEET

Name	Agency/Organization	Title	Email
Kurt Frison	Vadna's Heights Fire	Fire Tech	
Chris Hearden	Vadna's Heights Fire	Fire Tech	
Lisa Dressler	VofM Dept. of EM	Director of EM	dressler@umn.edu
Betsy Phillips	St Paul Em	Specialist	
Dan Krier	North St. Paul Fire	Fire Inspector	daniel.krier@northstpaul.org
Dan Curley	City of Shoreview	Pl. Superintendent EM	dcurley@shoreviewmn.gov
Staffrid	Arden Hills	Pl. Superintendent EM	j.frid@cityofardenhills.org
Scott Williams	ECC	Deputy Co Mgr	scott.williams@co.ramsey.mn.us
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Kanna Kumlin-Dreis	RC EMHS	EM Coordinator	"
Kristen Sailer	RC EMHS	EM Coordinator	kristen.sailer@co.ramsey.mn.us
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Bryan Mayer	Ramsey County EMS	EM Coordinator	Bryan.Mayer@co.ramsey.mn.us
LAURA ANDERSEN	Ramsey County Public Health	Health Protection Manager	laura.andersen@co.ramsey.mn.us
Matt Sather	Lake Emma Fire	Deputy Chief EM	msather@jfd.org

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Saint Paul, MN 55107  
Phone: (651) 266-1020  
www.co.ramsey.mn.us

11/26/2017



## Ramsey County Multi-Hazard Mitigation Plan Update

November 3, 2017  
Planning Meeting

## Agenda

1. Welcome and Introductions
2. MHMP Plan Update Overview
  - About the Plan
  - Planning Team
  - Plan Content
3. Review of Mitigation Strategies and Developing Mitigation Actions
4. Hazard Mitigation Assistance (HMA) Grants
5. Mitigation Action Working Session



## About your UMD Project Team

SWENSON COLLEGE  
OF SCIENCE & ENGINEERING  
UNIVERSITY OF MINNESOTA DULUTH  
Drives to Discover

- The **Geospatial Analysis Center (GAC) at the University of Minnesota Duluth** was contracted by Minnesota HSEM to facilitate the development of this plan and to conduct spatial analysis, mapping and research for the plan.
- The GAC has worked on 13 MHMP's (2011-2016) and currently has been working on 17 county MHMP updates in Minnesota.
- Working with the GAC is **Bonnie Hundrieser**, who specializes in Emergency Management planning.

## About the Plan

The Multi-Hazard Mitigation Plan (MHMP) is a requirement of the Federal Disaster Mitigation Act of 2000 (DMA 2000). **The development of a local government plan is required in order to maintain eligibility for certain federal hazard mitigation grant funding programs.**

### **MHMP's must:**

- Be updated every 5 years
- Identify hazards and conduct a risk assessment
- Include goals, strategies, and mitigation actions
- Address all jurisdictions (county/cities)
- Engage stakeholder and include public participation

## What is Hazard Mitigation?

- HM is **sustained action** to reduce or eliminate long-term risk to people and their property from hazards.
- HM Planning is the process local government use to **identify risks and vulnerabilities** associated with natural disasters, and develop long-term strategies for protecting people and property from future hazard events.
- HM planning allows communities to strategically plan for and work together to implement activities that are cost effective, technically feasible and environmentally sound ... **BEFORE** a disaster strikes.
- A dollar spent on mitigation grants leads to an average of \$3.65 in avoided post-disaster relief costs and increased federal tax revenues.

## The MHMP Planning Team

An MHMP **must** be developed with the participation of jurisdictional (county/city) representatives and other key stakeholders. This group is referred to as the "Planning Team".

### **The role of the Planning Team is to help:**

1. Rank hazards, prioritize mitigation strategies and identify specific projects for implementation.
2. Assist with public outreach and participate in public meetings.
3. Review the draft plan and provide feedback.
4. Facilitate final adoption of the MHMP by local government.

11/26/2017

### Content of the MHMP

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



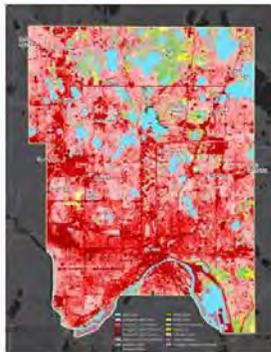
### Ramsey County

This is a multi-jurisdictional plan that covers Ramsey County, including the cities of Arden Hills, Blain (\*Anoka), Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, St. Anthony (\*Hennepin), Spring Lake Park (\*Anoka), Vadnais Heights, and White Bear Lake (\*Washington).

*The County and Cities are required to adopt the final plan. Townships are covered under the umbrella of the County. The City of St. Paul is not included, as it has its own hazard mitigation plan.*



### Land Cover



### Social Vulnerability

- Age
- Low income
- Disability
- Home value



### Tornado History

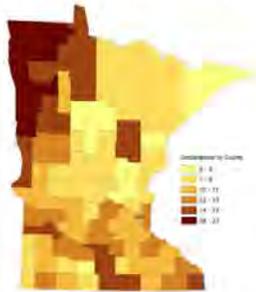


### Wildfire History



11/26/2017

**FEMA-Declared Disasters in Ramsey County**



Ramsey County has been part of 10 Disaster Declarations since 1957. The last Declaration was in 2014 (DR-4182), due to severe storms, straight-line winds, flooding, landslides, and mudslides.

**What Hazards are Addressed?**

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

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

*Hazard Categories from the Minnesota State Plan*

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

**How are Hazards Identified & Ranked for a Community?**

- Previous Hazard Events
- Historical Data (National Climatic Data Center)
- Previous HMP
- Calculated Priority Risk Index (CPRI)

CPRI Risk Factors  
 PROBABILITY  
 MAGNITUDE/SEVERITY  
 WARNING TIME  
 DURATION

*CPRI Assessment for Hazard Risk Ranking*

**Priorities of Risks Faced by Ramsey County (2017)**

The following hazards rankings for Ramsey County are based on the on rankings in the 2012 plan and THIRA ranking.

They are provided for discussion for inclusion in the 2017 MHMP Update.

Ramsey County Prioritization of Hazards	
Type	Risk/Severity
Severe Summer Storms (Thunderstorms, Lightning, Hailstorms, Windstorms, Tornadoes)	High
Severe Winter Storms: Flash Flood & Riverine Flood	High Moderate
Extreme Heat & Extreme Cold	Moderate
Drought	Moderate
Glacial / Land Subsidence (Sinkholes & Karst)	Low (Landslides)
Wildfire	Low
Human Failure	Low

**Review of Mitigation Capabilities**

Multi-Hazard Mitigation Plans require that each jurisdiction **must** document the existing authorities, policies, programs, and resources in place for mitigation.

- What **plans and programs** are in place to support mitigation against that hazard?
- What **program gaps or deficiencies** exist to support mitigation against that hazard?

**Mitigation Strategy #1: Local Planning and Regulations**

**Government, administrative, or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses.**

*Examples include planning and zoning, building codes, capital improvement programs, open space preservation, and stormwater management regulations.*

11/26/2017

### Local Planning & Regulations Examples



### Acquisition of Flood Prone Properties and Conversion to Open Space



### **Mitigation Strategy #2:** **Structure and Infrastructure Projects**

**Actions that involve the construction of structures to reduce the impact of a hazard, such as dams, levees, floodwalls, seawalls, retaining walls, and safe rooms; and actions that involve the modification of existing buildings or structures to protect them from a hazard or remove them from the hazard area.**

*Examples include acquisition, elevation, structural retrofits, storm shutters, and shatter-resistant glass. Climate Resilient Mitigation Actions include flood diversion and storage and green infrastructure. This mitigation strategy includes road/bridge/culvert projects for local flood mitigation.*

### Community Safe Rooms Wadena-Deer Creek School, June 17 2010



### August, 2012 – 1<sup>st</sup> school based tornado safe room (Wadena)



### Green Infrastructure Projects



11/26/2017

Power Line retrofit/burial



**Mitigation Strategy #3:  
Natural Systems Protection**



**Actions that, in addition to minimizing hazard losses, preserve or restore the functions of natural systems.**

*These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, wetland restoration and preservation, aquifer storage and recovery and floodplain and stream restoration.*

Natural Systems Protection examples



**Mitigation Strategy #4:  
Education and Awareness Programs**

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

*Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.*

Education & Awareness Program Examples



**Mitigation Strategy #5:  
Mitigation Preparedness & Response Support**

*(HSEM added strategy for use in the state)*

**Actions that protect people and property prior to, during and immediately after a disaster or hazard event. Services include warning systems and emergency response services.**

*These activities are not typically considered mitigation, but support reduction of the effects of damaging events.*

11/26/2017

### Mitigation Preparedness & Response Support examples



### Mitigation Actions Update

*So far, the following has been completed in the review of mitigation actions in the last MHMP:*

1. What mitigation actions **have been completed** since the last plan was adopted.
2. What mitigation actions **should be deleted**.
3. What mitigation actions **have not been completed or may be an on-going action** to roll-over into the new plan.

### Next Steps in Developing Actions

1. Identify specific mitigation strategies and actions at the jurisdictional level based on the community's risk and vulnerabilities.
2. Consider priority, timeframe, who's responsible, and what is in place to support implementation.
3. Consider potential funding and cost/benefit.
4. Engage key partners and stakeholders in providing local expertise and feedback.
5. Provide opportunities for public involvement and feedback in the planning process.

### FEMA's Hazard Mitigation Assistance (HMA) Grant Program

The Federal Emergency Management Agency (FEMA) provides grant funding to help communities to implement eligible mitigation projects that will help to reduce or eliminate the impact of future hazard or disaster events.



*Not all mitigation actions are eligible for federal HMA funding. Identification of eligible projects for potential HMA funding is a critical part of the MHMP planning process!*

### Mitigation Grant Eligibility

- Local Units of Government
- All jurisdictions in State
  - City, County, Tribal, private non-profit
- Cost Share - 75%/25%
- **Project must be identified in local HM plan**

### Application Process

- Notice of Available Funds
- Application
- Benefit Cost Analysis
- Environmental Historic Preservation
- State and FEMA review
- Award ~ 3 year period of performance
- Closeout

11/26/2017

### Eligible project types

- Acquisition/Elevation/Relocation
  - Substantially or repetitively damaged (flood or erosion)
  - Threat of imminent danger (slope failure)
- Tornado Safe Rooms (severe storms/tornadoes)
- Powerline retrofit/strengthening (severe storms/ice)
- Wildfire sprinklers/defensible space/resistant materials
- Slope stabilization
- Flood risk reduction activities

### New! Climate Resilient Mitigation Actions (CRMA)

FEMA encourages communities to incorporate **climate resilience** in all mitigation actions through use of green infrastructure methods and designing projects to increase ecosystem service benefits

1. Aquifer Storage and Recovery (ASR)
2. Floodwater Diversion, Storage, and Recovery
3. Floodplain and Stream Restoration

# Mitigation Strategies

For every community, there are a range of mitigation actions that can be taken to work to reduce or eliminate the impacts of future natural hazard and disaster events. Following are the four types of mitigation strategies recommended by the Federal Emergency Management Agency (FEMA) for the organization of mitigation actions:

- 1) **Local Planning and Regulations:** Government, administrative, or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning and zoning, building codes, capital improvement programs, open space preservation, and stormwater management regulations.
- 2) **Structure and Infrastructure Projects:** Actions that involve the construction of structures to reduce the impact of a hazard, such as dams, levees, floodwalls, seawalls, retaining walls, and safe rooms; and actions that involve the modification of existing buildings or structures to protect them from a hazard or remove them from the hazard area. Examples include acquisition, elevation, structural retrofits, storm shutters, and shatter-resistant glass. CRMA include flood diversion and storage (FDS) and green infrastructure.
- 3) **Natural Systems Protection:** Actions that, in addition to minimizing hazard losses, preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation. Aquifer storage and recovery (ASR) and floodplain and stream restoration (FSR).
- 4) **Education and Awareness Programs:** Actions to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.

*A fifth strategy was added by Minnesota HSEM for use in the state:*

- 5) **Mitigation Preparedness and Response Support:** Actions that protect people and property prior to, during and immediately after a disaster or hazard event. Services include warning systems and emergency response services.. These activities are typically not considered mitigation, but support reduction of the effects of damaging events.



State of Minnesota  
 Department of Public Safety  
 Division of Homeland Security and Emergency Management  
 445 Minnesota Street, Suite 223  
 St. Paul, MN 55101-6223

## HAZARD MITIGATION ASSISTANCE

Hazard Mitigation Assistance (HMA) grant programs provide funding with the aim to reduce or eliminate risk to property and loss of life from future natural disasters. HMA programs are typically a 75%/25% cost share program. The federal share is 75% of total eligible project reimbursement costs. The local applicant is responsible for 25% of the project costs. The amount of HMGP funds availability is based on a percent of Public Assistance provided by Federal Emergency Management Agency (FEMA).

- Hazard Mitigation Grant Program (HMGP) funds assists in implementing long-term hazard mitigation measures following a Presidential major disaster declaration
- Pre-Disaster Mitigation (PDM) provides funds for hazard mitigation planning and projects on an annual basis
- Flood Mitigation Assistance (FMA) provides funds for projects to reduce or eliminate risk of flood damage to buildings that are insured under the National Flood Insurance Program (NFIP) on an annual basis

### Who is eligible for grant funding?

All applicants must have or be covered under an approved Hazard Mitigation Plan. Eligible applicants include: State and local governments; certain private non-profit organizations or institutions; and Tribal Communities

### What types of projects can be funded?

All projects must be eligible, technically feasible, and cost-effective. All projects are subject to environmental and cultural resource review. Examples of projects include:

- ***NEW! Climate Resilient Mitigation Activities*** are eligible under the Hazard Mitigation Assistance programs to support communities in reducing the risks associated with climate change. These activities are: ***Aquifer Storage and Recovery, Floodplain and Stream Restoration, Flood Diversion and Storage, and Green Infrastructure Methods.*** These activities can mitigate any natural hazard; however, the activities are focused on mitigating the impacts of flood and drought conditions.
- **Property Acquisition and Structure Demolition or Relocation** - The voluntary acquisition of an existing at-risk structure and the underlying land, and conversion of the land to open space through the demolition or relocation of the structure. The property must be deed-restricted in perpetuity to open space uses to restore and/or conserve the natural floodplain functions.
- **Safe Room Construction** - Safe room construction projects are designed to provide immediate life-safety protection for people in public and private structures from tornado and severe wind events. Includes retrofits of existing facilities or new safe room construction projects, and applies to both single and dual-use facilities
- **Minor Localized Flood Reduction Projects** - Projects to lessen the frequency or severity of flooding and decrease predicted flood damages, such as the installation or modification of culverts, and stormwater management activities, such as creating retention and detention basins. These projects must not duplicate the flood prevention activities of other Federal agencies and may not constitute a section of a larger flood control system.

- **Infrastructure Retrofit** - Measures to reduce risk to existing utility systems, roads, and bridges.
- **Soil Stabilization** - Projects to reduce risk to structures or infrastructure from erosion and landslides, including installing geotextiles, stabilizing sod, installing vegetative buffer strips, preserving mature vegetation, decreasing slope angles, and stabilizing with rip rap and other means of slope anchoring. These projects must not duplicate the activities of other Federal agencies.
- **Wildfire Mitigation** - Projects to mitigate at-risk structures and associated loss of life from the threat of future wildfire through: Defensible Space for Wildfire, Application of Ignition-resistant Construction and Hazardous Fuels Reduction
- **Post-Disaster Code Enforcement** - Projects designed to support the post-disaster rebuilding effort by ensuring that sufficient expertise is on hand to ensure appropriate codes and standards, including NFIP local ordinance requirements, are used and enforced.
- **Generators** - Emergency equipment to provide a secondary source of power. Generators and related equipment (e.g., hook-ups) are eligible provided that they are cost-effective, contribute to a long-term solution to the problem they are intended to address, and meet other program eligibility criteria.
- **5 Percent Initiative Projects** - These projects, which are only available pursuant to an HMGP disaster, provide an opportunity to fund mitigation actions that are consistent with the goals and objectives of the State or Indian Tribal (Standard or Enhanced) and local mitigation plans and meet all HMGP program requirements, but for which it may be difficult to conduct a standard Benefit-Cost Analysis (BCA) to prove cost-effectiveness.
- **All-Hazard Mitigation Plans**  
Update or enhance sections of the current FEMA-approved mitigation plan, such as:
  - Risk and vulnerability assessment based on new information, including supporting studies, such as economic analyses;
  - Mitigation strategy, specifically strengthening the linkage to mitigation action implementation, with emphasis on available HMA project grant funding; or
  - Incorporate climate adaptation, green building, or smart growth principles into the risk assessment and/or mitigation strategy.

**How do I apply?**

Start by submitting a Notice of Interest, available on HSEMs website at:

<https://dps.mn.gov/divisions/hsem>

**Where can I obtain further information?**

For additional information about the HMA grant program, you can refer to the FEMA website:

<http://www.fema.gov/hazard-mitigation-assistance>

**For additional information contact:**

- Jennifer Nelson, State Hazard Mitigation Officer at (651) 201-7427 or [Jennifer.E.Nelson@state.mn.us](mailto:Jennifer.E.Nelson@state.mn.us)
- Jim McClosky, Hazard Mitigation Planner at (651) 201-7455 or [James.McClosky@state.mn.us](mailto:James.McClosky@state.mn.us)

## MITIGATION ACTIONS WORKSHEET

HAZARD: \_\_\_\_\_ / JURISDICTION: \_\_\_\_\_

**Mitigation Strategy:**

- |  |   |
|--|---|
| <input type="checkbox"/> Local Planning & Regulations          | <input type="checkbox"/> Education and Awareness                      |
| <input type="checkbox"/> Structure and Infrastructure Projects | <input type="checkbox"/> Mitigation Preparedness and Response Support |
| <input type="checkbox"/> Natural Systems Protection            |   |

**Mitigation Action:**

HAZARD: \_\_\_\_\_ / JURISDICTION: \_\_\_\_\_

**Mitigation Strategy:**

- |  |   |
|--|---|
| <input type="checkbox"/> Local Planning & Regulations          | <input type="checkbox"/> Education and Awareness                      |
| <input type="checkbox"/> Structure and Infrastructure Projects | <input type="checkbox"/> Mitigation Preparedness and Response Support |
| <input type="checkbox"/> Natural Systems Protection            |   |

**Mitigation Action:**

HAZARD: \_\_\_\_\_ / JURISDICTION: \_\_\_\_\_

**Mitigation Strategy:**

- |  |   |
|--|---|
| <input type="checkbox"/> Local Planning & Regulations          | <input type="checkbox"/> Education and Awareness                      |
| <input type="checkbox"/> Structure and Infrastructure Projects | <input type="checkbox"/> Mitigation Preparedness and Response Support |
| <input type="checkbox"/> Natural Systems Protection            |   |

**Mitigation Action:**

HAZARD: \_\_\_\_\_ / JURISDICTION: \_\_\_\_\_

**Mitigation Strategy:**

- |  |   |
|--|---|
| <input type="checkbox"/> Local Planning & Regulations          | <input type="checkbox"/> Education and Awareness                      |
| <input type="checkbox"/> Structure and Infrastructure Projects | <input type="checkbox"/> Mitigation Preparedness and Response Support |
| <input type="checkbox"/> Natural Systems Protection            |   |

**Mitigation Action:**

HAZARD: \_\_\_\_\_ / JURISDICTION: \_\_\_\_\_

**Mitigation Strategy:**

- |  |   |
|--|---|
| <input type="checkbox"/> Local Planning & Regulations          | <input type="checkbox"/> Education and Awareness                      |
| <input type="checkbox"/> Structure and Infrastructure Projects | <input type="checkbox"/> Mitigation Preparedness and Response Support |
| <input type="checkbox"/> Natural Systems Protection            |   |

**Mitigation Action:**

HAZARD: \_\_\_\_\_ / JURISDICTION: \_\_\_\_\_

**Mitigation Strategy:**

- |  |   |
|--|---|
| <input type="checkbox"/> Local Planning & Regulations          | <input type="checkbox"/> Education and Awareness                      |
| <input type="checkbox"/> Structure and Infrastructure Projects | <input type="checkbox"/> Mitigation Preparedness and Response Support |
| <input type="checkbox"/> Natural Systems Protection            |   |

**Mitigation Action:**

**Ramsey County**  
**November 3, 2017 MHMP Planning Meeting**  
**Mitigation Ideas Worksheet Notes**

Following are notes from the Ramsey County 11-3-17 MHMP Planning Team Meeting “Mitigation Action Working Session” part of the meeting. Participants broke into discussion groups and used Mitigation Action Worksheets to brainstorm new mitigation ideas for their jurisdiction.

Participants used the worksheets to develop mitigation action ideas, identifying:

- Hazard – what natural hazard does the action focus on?
- Jurisdiction – what jurisdiction is for? (City/Township/County)
- Strategy – which mitigation strategy does this action relate to?
- Action – what is a description of the mitigation action?

The mitigation actions identified during this session will be used to support development of new mitigation actions to include in the Ramsey County MHMP 2018 Update.

**Ramsey County**

*Contact: Scott Williams, Deputy County Manager*

**Hazard:** Ice Storm Damaging Power Grid  
**Strategy:** Structure and Infrastructure Projects / Mitigation Preparedness & Response Support  
**Action:** Harden power grid. Get generators for critical facilities and fuel stations. Working to mitigate this hazard also helps to mitigate other hazards.

**Ramsey County**

*Contact: Ramsey County EMHS*

**Hazard:** Power Failure due to Severe Weather  
**Strategy:** Mitigation Preparedness and Response Support  
**Action:** Retrofit Plato Building for generator. Back-up power is needed to support Public Health and Emergency Management’s Department Operations Center (DOC’s).

**Hazard:** Extreme Heat  
**Strategy:** Local Planning & Regulations / Education and Awareness  
**Action:** Work with Ramsey County Medical Examiners & ME for heat-related education and outreach. Make sure landlords are aware of regulations to ensure cooling is available.

**Hazard:** Tornado/High Wind Events  
**Strategy:** Structure and Infrastructure Projects  
**Action:** Identify and work with municipalities and schools to build community safe rooms where needed.

**Hazard:** Extreme Temperatures (Heat/Cold)  
**Strategy:** Mitigation Preparedness & Response Support  
**Action:** Identify where generators are needed for Rec Centers and libraries that serve as cooling centers to ensure there is back-up power.

Hazard: Wildfire  
 Strategy: Mitigation Preparedness & Response Support  
 Action: Increase air quality monitoring around Ramsey County when wildfire events are occurring.

Hazard: All-Hazards  
 Strategy: Education and Awareness  
 Action: Translation of education materials regarding hazards to reach non-english speaking residents.

Hazard: Flooding  
 Strategy: Structure and Infrastructure Projects  
 Action: Identify where stormwater run-off capacity improvements are needed. Prioritize projects on frequently flooded intersections.

Hazard: Climate Change  
 Strategy: Structure and Infrastructure Projects  
 Action: Install permeable paving, greenways, white roofs and improvements to cooling centers in SVI areas (generators, etc.)

Hazard: Tornado  
 Strategy: Structure and Infrastructure Projects  
 Action: Roseville Area Schools is looking to pass a \$144 million dollar bond to renovate schools and St. Anthony passed one to renovate their elementary school. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning.

**Ramsey County (Public Health)**

*Contact: Davita Petty, Public Health Educator*

Hazard: Air Quality  
 Strategy: Education and Awareness  
 Action: No drive days. Business emissions regulations.

Hazard: Vector-borne Diseases  
 Strategy: Education and Awareness  
 Action: Mosquito control, tick control. / Raise education & awareness of medical providers and the public.

Hazard: Intentional Release of Bio-Agent  
 Strategy: Education and Awareness / Structure and Infrastructure Projects  
 Action: Training & education for staff. Safe room for Point of Distribution.

**City of Shoreview**

*Contact: Dan Curley, Public Works Supt./Emergency Manager*

Hazard: Flooding  
Strategy: Structure and Infrastructure Projects  
Action: One home is highly susceptible to flash flooding. At some point, the City will need to purchase the property and create an open space.

**City of Arden Hills**

*Contact: Jeff Frid, Public Works Superintendent*

Hazard: Severe Weather  
Strategy: Mitigation Preparedness & Response Support  
Action: Acquire generator for public works critical infrastructure.

**City of New Brighton**

*Contact: Trevor Hamdorf, Public Safety Deputy Director*

Hazard: Flooding  
Strategy: Structure and Infrastructure Projects  
Action: Additional rainwater retention and flood control activities.

**Ramsey County Multi-Hazard Mitigation Plan Update  
Planning Team Meeting #2  
April 24, 2018, 2:00 p.m. – 4:00 p.m.  
Ramsey County EOC, Arden Hills, MN**

**Meeting Summary:**

On Tuesday, April 24, 2018 members of the Ramsey County Multi-Hazard Mitigation (MHMP) Planning Team convened to conduct a review and discussion of the draft mitigation action charts developed for Ramsey County and the city jurisdictions participating in the plan. The meeting was facilitated by Bonnie Hundrieser, a member of the University of Minnesota – Duluth Geospatial Analysis Center (GAC) planning team that is leading the update of the Ramsey County MHMP. A total of 12 people attended the meeting, representing Ramsey County departments, city / township personnel and other key stakeholders.

The opening Power Point presentation covered a re-cap of key points regarding the MHMP plan update (purpose of the plan, who the plan covers, who needs to participate, what hazards are addressed and how they are ranked, mitigation strategies to be used, and what projects may be eligible for FEMA HMA funding). The presentation also provided a detailed breakdown of the Mitigation Action Chart to explain the relevance of each column to be addressed in the chart.

Following the presentation, the planning team participated in a facilitated discussion of the County's draft master Mitigation Action Chart which included mitigation actions for the county as well as for the cities participating in the plan. Mitigation actions included in the chart were identified through the County's review of past mitigation actions (actions to continue), as well as new mitigation actions that were identified during the first planning team meeting "Mitigation Actions Ideas Working Session." County and city representatives discussed each of the mitigation actions, adding comments, corrections, and identifying where cities would be listed to implement particular items in their respective jurisdictions.

Following the Mitigation Action Chart review, the group discussed the upcoming process of public outreach and posting the final draft of the plan for the public to review and comment on, followed by submission of the draft plan to HSEM and FEMA for final review and approval.

**Attached to this meeting summary are the following documentation items:**

- Ramsey County HMP Mtg. #2 Email Invite
- 4-24-18 Meeting Agenda
- 4-24-18 Meeting Sign-in Sheets
- 4-24-18 Power Point Presentation Slides

*Meeting Summary Prepared By:  
Bonnie Hundrieser, UMD Project Team, (Hundrieser Consulting LLC)*

March 29, 2018

Greetings,

Your presence is requested at the **2nd Planning Team meeting** for the update of the **Ramsey County Multi-Hazard Mitigation Plan** on:

**Date:** Tuesday, April 24<sup>th</sup>, 2018

**Time:** 2:00 p.m. – 4:00 p.m.

**Location:** Ramsey County EOC - 1425 Paul Kirkwood Drive, Arden Hills, MN 55112

During this meeting we will be reviewing the draft Ramsey County Mitigation Action Chart to be included in the plan. Your feedback will be needed to identify & discuss the mitigation actions that will be listed for your city/county department/agency/or organization. This is a State and Federal requirement we must cover for the plan to be approved. The meeting will be facilitated by Bonnie Hundrieser, an emergency management planning consultant working closely with us on this project.

**Please RSVP your attendance to me.** If you cannot attend, please seek to send someone else in your stead as your representation.

If you have any questions, please do not hesitate to contact me.

Thank you,

Bryan

**Bryan Mayer** | Emergency Management Coordinator  
Ramsey County  
Emergency Management and Homeland Security

90 West Plato Boulevard, Suite #220  
Saint Paul, Minnesota 55107  
(o) 651-266-1017  
(c) 651-262-3864  
(f) 651-266-1019  
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[www.ramseycounty.us](http://www.ramseycounty.us)



# Ramsey County Multi-Hazard Mitigation Plan (MHMP) Update

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## Planning Team Meeting #2

Tuesday, April 24, 2018, 2:00 p.m. – 4:00 p.m.  
Ramsey County EOC – Arden Hills, MN

**Presenting:**

Bonnie Hundrieser, UMD MHMP Project Team Member

**Agenda:**

1. **Welcome & Introductions**
2. **MHMP - Recap of Key Points**
3. **Mitigation Action Chart (MAC) Presentation**  
Explanation of all columns of the MAC and content to be identified.
4. **MAC Working Session: Group Review & Feedback**  
Group review and feedback of the Ramsey County Master Mitigation Action Chart & Jurisdictional Mitigation Action Charts
5. **Discussion of Next Steps**
  - Finalize Mitigation Action Chart
  - Public Outreach & Engagement (News Release, Online plan review & comment period)

**Contact:**

*For more information on the Ramsey County MHMP Update, please contact:*

- Bryan Mayer, Ramsey County Emergency Management Coordinator
- 651-266-1017, [bryan.mayer@co.ramsey.mn.us](mailto:bryan.mayer@co.ramsey.mn.us)
- Bonnie Hundrieser, UMD Project Team Member  
218-343-3468 / [hundrieserconsulting@gmail.com](mailto:hundrieserconsulting@gmail.com)

Ramsey County 4/24/18 HMP Planning Team Meeting #2  
 Participant Sign-in List (12 attendees)

Ramsey County MHMP Update Tuesday, April 24, 2018 Planning Team Meeting #2 Participant Sign-in List			
Name	Jurisdiction/Agency/Organization	Title	Email
Kristy Stauffer	Ramsey County EMHS	Deputy Director	<a href="mailto:kristy.stauffer@co.ramsey.mn.us">kristy.stauffer@co.ramsey.mn.us</a>
Mike Richter	North Saint Paul Fire Department	Captain/Fire Inspector	<a href="mailto:mike.richter@northstpaul.org">mike.richter@northstpaul.org</a>
David Brosnahan	Roseville Fire Department	Assistant Fire Chief	<a href="mailto:david.brosnahan@cityofroseville.com">david.brosnahan@cityofroseville.com</a>
Justin Townsend	Ramsey Conservation District	Conservation Technician	<a href="mailto:justin.townsend@co.ramsey.mn.us">justin.townsend@co.ramsey.mn.us</a>
Kurt Frison	Vadnais Heights Fire Department	Fire Technician	<a href="mailto:kurt.frison@cityvadnaisheights.com">kurt.frison@cityvadnaisheights.com</a>
Art McIntyre	Saint Paul/Ramsey County Public Health	EM Planner	<a href="mailto:arthur.mcintyre@co.ramsey.mn.us">arthur.mcintyre@co.ramsey.mn.us</a>
Mark McCabe	Ramsey County Public Works	Director of Operations	<a href="mailto:mark.mccabe@co.ramsey.mn.us">mark.mccabe@co.ramsey.mn.us</a>
Jerry Auge	Ramsey County Public Works	Maintenance/Construction Engineer	<a href="mailto:jerry.auge@co.ramsey.mn.us">jerry.auge@co.ramsey.mn.us</a>
Karma Kumlin-Diers	Ramsey County EMHS	EM Coordinator	<a href="mailto:karma.kumlin-diers@co.ramsey.mn.us">karma.kumlin-diers@co.ramsey.mn.us</a>
Michael Reed	Ramsey County Environmental Health	Solid & Hazardous Waste Supervisor	<a href="mailto:michael.reed@co.ramsey.mn.us">michael.reed@co.ramsey.mn.us</a>
Matt Sather	Lake Johanna Fire Department	Deputy Fire Chief	<a href="mailto:msather@ljfd.org">msather@ljfd.org</a>
Heather Butkowski	City of Lauderdale	City Administrator/EM	<a href="mailto:heather.butkowski@lauderdalemn.org">heather.butkowski@lauderdalemn.org</a>

**Ramsey County – Multi Hazard Mitigation Plan Update  
 Planning Team Meeting #2  
 Tuesday, April 24, 2018, 2:00 p.m. – 4:00 p.m.**

**PARTICIPANT SIGN IN SHEET**

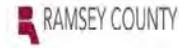
Name	Agency/Organization	Title	Email
1. Kristy Stuffer	RC EMTs	Deputy Director	Kristy.Stuffer@co.ramsey.mn.us
2. Mike Richter	NSP Fire	Captain / Fire Inspector	Mike.Richter@nspfire.org
3. David Brasman	Roseville Fire	Asst. Chief	david.brasman@cityofroseville.com
4. Justin Townsend	Ramsey Conservation District	Conservation Technician	Justin.Townsend@co.ramsey.mn.us
5. Kurt Frison	Vadnais Heights Fire	Fire Technician	Kurt.Frison@cityofvadnaisheights.com
6. Art McIntosh	St Paul Agency Co FH	EP Planner	Art@mcintosh-co.com / art@mcintosh.com
7. Mark McCata	Parkville R.C.	Dir of Operations	Mark.mccata@rd.ramsey.mn.us
8. Jerry Ayres	Ramsey Co Public Works	Public Works Const. Eng	Jerry.Ayres@co.ramsey.mn.us
9. Karina Kuntlin-Bars	RC EMTs	EM Coordinator	Karina.Kuntlin-bars@co.ramsey.mn.us
10. Michael Reed	RC Env. Health	Solid Hazardous Waste Sup.	Michael.Reed@co.ramsey.mn.us
11. Matt Sawyer	Lake Johanna Fire	Deputy Chief	matt@sawyer-efj.com
12. Heather Butkowsky	Lauderdale	City Admin	heather.butkowsky@lauderdalemn.org
13.			
14.			
15.			
16.			
17.			
18.			

4/6/2018



### Agenda

1. Welcome and Introductions
2. MHMP – Recap of Key Points
3. Mitigation Action Chart (MAC) Overview Presentation
4. MAC Working Session: Group Review & Feedback
5. Discussion of Next Steps



**Hazard Mitigation  
Planning Meeting #2  
Mitigation Action  
Chart Review**

### MHMP – Recap of Key Points

- Ramsey County is updating its **Multi-Hazard Mitigation Plan (MHMP)** to fulfill a state & federal requirement. The plan must be updated every 5 years.
- The purpose of the plan is to identify & assess natural hazards that pose risk to the County and it's jurisdictions and **develop long-term strategies and mitigation actions** that will help to reduce or eliminate the impact of future hazard or disaster events.

### Who the Plan Covers

This is a multi-jurisdictional plan that covers Ramsey County, including the cities of Arden Hills, Blain (\*Anoka), Falcon Heights, Gen Lake, Lauderdale, Little Canada, Maplewood, Maunds View, New Brighton, North Oaks, North St. Paul, Rossville, Shoreview, St. Anthony (\*Hennepin), Spring Lake Park (\*Anoka), Vadnais Heights, and White Bear Lake (\*Washington).

*The County and Cities are required to adopt the final plan.  
Townships are covered under the umbrella of the County.*



### Who Needs to Participate

Participation of **key county/city and other stakeholders** is required:

- County departments
- City Governments
- Townships
- Schools
- Electric Coops

Opportunities for **public participation** is also required:

- News Releases
- Facebook, Twitter, Web
- Online Plan Review & Comment Period
- Public Meeting (optional)

### Priorities of Risks Faced by Ramsey County (2018)

The following hazards rankings for Ramsey County are based on the on the past MHMP.

They are provided for discussion for inclusion in the 2018 MHMP Update.

Ramsey County Prioritization of Hazards	
Type	Risk Severity
Severe Summer Storms (Hail, lightning, flooding, hailstorms, windstorms, tornadoes)	High
Severe Winter Storms	High
Fresh Flood & Residue Flood	Moderate
Extreme Heat & Extreme Cold	Moderate
Drought	Moderate
Division / Land Subsidence (Sinkholes & Karst)	Low (Landslides)
Wildfire	Low
Dam Failure	Low

4/6/2018

*What Mitigation Strategies Will Be Used to Develop Mitigation Actions*

1. Local Planning & Regulations
2. Structure and Infrastructure Projects
3. Natural Systems Protection
4. Education and Awareness Programs
5. Mitigation Preparedness and Response Support

*These strategies help communities to identify and implement long-term risk-reduction activities that will protect people and property from future hazard events.*

**Mitigation Strategy #1:  
Local Planning and Regulations**

**Government, administrative, or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses.**

*Examples include planning and zoning, building codes, capital improvement programs, open space preservation, and stormwater management regulations.*

Local Planning & Regulations Examples



**Mitigation Strategy #2:  
Structure and Infrastructure Projects**

**Actions that involve the construction of structures to reduce the impact of a hazard, such as dams, levees, floodwalls, seawalls, retaining walls, and safe rooms; and actions that involve the modification of existing buildings or structures to protect them from a hazard or remove them from the hazard area.**

*Examples include acquisition, elevation, structural retrofits, storm shutters, and shutter-resistant glass. Climate Resilient Mitigation Actions include flood diversion and storage and green infrastructure. This mitigation strategy includes road/bridge/culvert projects for local flood mitigation.*

Acquisition of Flood Prone Properties and Conversion to Open Space



Community Safe Rooms

*Wadena-Deer Creek School, June 17 2010*



4/6/2018

August, 2012 – 1<sup>st</sup> school based tornado safe room (Wadena)



Green Infrastructure Projects



Power Line retrofit/burial



**Mitigation Strategy #3:  
Natural Systems Protection**

**Actions that, in addition to minimizing hazard losses, preserve or restore the functions of natural systems.**

*These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, wetland restoration and preservation, aquifer storage and recovery and floodplain and stream restoration.*

Natural Systems Protection examples



**Mitigation Strategy #4:  
Education and Awareness Programs**

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

*Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.*

4/6/2018

### Education & Awareness Program Examples



### Mitigation Strategy #5: Mitigation Preparedness & Response Support

*(HSEM added strategy for use in the state)*

**Actions that protect people and property prior to, during and immediately after a disaster or hazard event. Services include warning systems and emergency response services.**

*These activities are not typically considered mitigation, but support reduction of the effects of damaging events.*

### Mitigation Preparedness & Response Support examples



### What Projects May be Eligible for FEMA HMA Funding

- Acquisition/Elevation/Relocation
  - Substantially or repeatedly damaged (flood or erosion)
  - Threat of imminent danger (slope failure)
- Safe Room Construction/Retrofit
- Powerline strengthening/burying
- Wildfire Mitigation Activities
- Slope stabilization
- Flood risk reduction activities
- Additional Projects difficult to conduct a standard BCA



The Federal Emergency Management Agency (FEMA) provides grant funding to help communities to implement eligible mitigation projects that will help to reduce or eliminate the impact of future hazard or disaster events.

**Projects must be indicated in the local mitigation plan.**

### Mitigation Action Chart Overview

- The MHMP results in a "Mitigation Action Chart" that outlines the specific mitigation measures that the County and each city will seek to implement over the course of the next 5 years.
- Mitigation actions are drawn from the previous plan, identified capability gaps and feedback from jurisdictions on mitigation measures important to their community.
- **Every city will have it's own mitigation action chart for local implementation & tracking.**

### "Hazard" column



Each mitigation action **must** address a particular natural hazard.

"All-Hazard" mitigation actions relate to more than one type of natural hazard or may relate to other categories of technological and man-made threats/hazards.

4/6/2018

### “Mitigation Strategy” column

Item	Priority Ranking	Mitigation Strategy	Status	Timeline	Jurisdictions	Responsible Agency	Estimated Cost	Notes
------	------------------	---------------------	--------	----------	---------------	--------------------	----------------	-------

Each mitigation action **must** identify which type(s) of mitigation strategies relate to the mitigation measure.

1. Local Planning & Regulations
2. Structure and Infrastructure Projects
3. Natural Systems Protection
4. Education and Awareness Programs
5. Mitigation Preparedness and Response Support

### “Mitigation Action” column

Item	Priority Ranking	Mitigation Strategy	Status	Timeline	Jurisdictions	Responsible Agency	Estimated Cost	Notes
------	------------------	---------------------	--------	----------	---------------	--------------------	----------------	-------

Each mitigation action **must** include a description of what effort is to be implemented. Mitigation actions should be written to be clear, concise, and action-oriented (start with a verb). The action should seek help to reduce or eliminate long-term risk to life safety and property damage from future natural hazard events.

### “Status” column

Item	Priority Ranking	Mitigation Strategy	Status	Timeline	Jurisdictions	Responsible Agency	Estimated Cost	Notes
------	------------------	---------------------	--------	----------	---------------	--------------------	----------------	-------

Each mitigation action **must** include an indication of current status. They are:

- “In-Progress” – a defined mitigation project or effort that is currently underway.
- “On-going” – a mitigation project or effort that continues without end.
- “New” – a new mitigation project or effort identified to include in the new plan.

### “Priority Ranking” column

Item	Priority Ranking	Mitigation Strategy	Status	Timeline	Jurisdictions	Responsible Agency	Estimated Cost	Notes
------	------------------	---------------------	--------	----------	---------------	--------------------	----------------	-------

Each mitigation action **must** be ranked as being of High, Moderate, or Low priority to help provide guidance in implementation. Priority rankings should be based on key considerations, such as:

- Known effectiveness of the mitigation measure.
- Local capability to implement the mitigation measure.
- Cost effectiveness of the mitigation measure. (Benefit vs. Cost)
- Longevity of the mitigation measure.
- Community support for the mitigation measure.
- Eligibility for federal grants (FEMA HMA Grant Program).

### “Timeline” column

Item	Priority Ranking	Mitigation Strategy	Status	Timeline	Jurisdictions	Responsible Agency	Estimated Cost	Notes
------	------------------	---------------------	--------	----------	---------------	--------------------	----------------	-------

Each mitigation action **must** indicate a timeframe for implementation.

- For mitigation actions that are “In-Progress” or “New” a known timeframe may be identified (i.e., 2017-2018).
- Some mitigation actions may be identified to be implemented within the 5 year period of the MHMP (2017-2021).

### “Jurisdictions” column

Item	Priority Ranking	Mitigation Strategy	Status	Timeline	Jurisdictions	Responsible Agency	Estimated Cost	Notes
------	------------------	---------------------	--------	----------	---------------	--------------------	----------------	-------

Each mitigation action **must** identify what jurisdictions will seek to implement that action.

- Some mitigation actions will be specific to only the County for implementation.
- Other mitigation actions are those that all cities (or only some cities) would agree are important to include in their own jurisdictions.
- Schools and townships may be identified as well.

4/6/2018

### “Responsibility” column



Each mitigation action **must** include a brief identification of what agency or department or specific personnel has lead responsibility to implement that project or effort, such as:

- “County/City Emergency Management”
- “Planning and Zoning Department”
- “County Highway Department”
- “SWCD in collaboration with MN DNR”
- “Public Works Department”

### “Comments on Planning Mechanisms for Implementation” column



Each mitigation action **must** include a description of how the mitigation measure will be incorporated into existing or future planning or project efforts by the jurisdiction provided. For example:

- Reference related plans or programs that relate to the mitigation measure (such as comprehensive land use plans, Capital Improvement Programs, public outreach and education programs)
- Reference existing partnerships that relate to the mitigation measure (such as “This is a standing effort of the County/City emergency management program in partnership with Public Health”)

### “Possible Funding” column



Each mitigation action **must** include identification of what possible funding will be used to implement the mitigation action:

- In most cases, “County/City” budget generally implies staff time to work on the mitigation measure or internal funding to purchase equipment, etc.
- When applicable, other funding such as outside grants, state or federal funding that may support the mitigation measure should be identified.
- It is particularly important to identify mitigation measures that may be eligible for FEMA/HMA grant funding.

### MAC Working Session

1. We will go through the Master “MAC” together.
2. We will discuss any changes or additions.
3. Jurisdictions will confirm where they want to be listed for local implementation efforts, and provide any additions or corrections.

### Overview of Next Steps

- Final MACs will be submitted to UMD.
- The draft MHMP will be completed by UMD.
- The draft plan will be submitted to the EM for preliminary review and revisions.
- The full draft plan will be posted online for public review & comment. Public outreach will be conducted for the open review period.
- Any resulting revisions will be made, and the plan will be submitted to HSEM and FEMA for review and approval.

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# **Appendix F**

## **Public Outreach & Engagement Documentation**

[Home](#) / [News & Updates](#)

[← Back to List](#)

## Public feedback needed on 2018 Multi-Hazard Mitigation Plan

Ramsey County's department of [Emergency Management & Homeland Security](#) invites residents, organizations and public safety partners located in Ramsey County to provide feedback on the county's [Multi-Hazard Mitigation Plan](#) (MHMP - PDF). The plan is a requirement of the Federal Disaster Mitigation Act of 2000 and must be updated every five years in order to maintain eligibility for certain federal disaster assistance and hazard mitigation funding programs.

Ramsey County is vulnerable to a variety of potential natural disasters, which threaten the loss of life and property in the county. Hazards such as tornadoes, flooding, wildfires, blizzards, straight-line winds, ice storms and droughts have the potential for inflicting vast economic loss and personal hardship.

Public input is an important component of the plan. The planning team invites the public to consider and provide feedback related to these questions:

- What are the natural hazards you feel pose the greatest risk to your community?
- Have you experienced a previous disaster event?
- What concerns do you have and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for your personal property, your community or Ramsey County?

Please submit feedback or direct additional questions by 4:30 p.m. on Friday, Sept. 15, 2017 to [Bryan Mayer](#), Ramsey County Emergency Management Coordinator, [651-266-1017](tel:651-266-1017).

*Posted on Wednesday, July 19, 2017 - 10:42 a.m.*

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*A county of excellence working with you to enhance our quality of life.*



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## Emergency Management & Homeland Security

In Ramsey County, both emergency management and homeland security are coordinated in a comprehensive program under the Ramsey County Emergency Management and Homeland Security department (RCEMHS). RCEMHS works with our local municipalities, neighboring counties in the metro region, private and non-profit organizations and state and federal partners to better prepare for, respond to and recover from incidents ranging from tornadoes to terrorism.

In addition to coordinating and supporting our partner agencies, Ramsey County Emergency Management is committed to the preparedness of our whole community. This includes working with community groups and leaders, businesses and individuals across the diversity of Ramsey County to enhance our combined disaster resiliency from the ground up.

- + Mission
- + Emergency Operations Plan and Mitigation Plan
- + About emergency management
- + About homeland security

Provide feedback on Multi-Hazard Mitigation Plan

We're currently seeking feedback from residents, organizations and public safety partners on Ramsey County's 2018 Multi-Hazard Mitigation Plan. Feedback is due by 4:30 p.m. on Friday, Sept. 15.

[Learn more and submit feedback](#)

Contact Us

Emergency Management & Homeland Security

[651-266-1020](#)

[Contact form](#)

[Department information](#)

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Related Resources

- [County and city Emergency Management contacts](#)
- [Emergency Management 2017-2021 Program Strategic Plan \(PDF\)](#)
- [Federal Emergency Management Agency](#)
- [Minnesota Homeland Security and Emergency Management](#)

**RAMSEY COUNTY Minnesota**

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@RamseyCountyMinnesot

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**Ramsey County, Minnesota** 17 hrs · 🌐

Our Emergency Management & Homeland Security department invites all residents, organizations and public safety partners to provide feedback on the county's Multi-Hazard Mitigation Plan (MHMP). Ramsey County is vulnerable to a number of potential natural disasters, and hazard mitigation planning is central to taking action to reduce or eliminate the impact of future disasters. Public input is an important component of the plan. Visit our website to learn more about the MHMP and provide feedback.

**Ramsey County seeks public feedback on 2018 Multi-Hazard Mitigation Plan**

Ramsey County's department of Emergency Management & Homeland Security invites residents, organizations and public safety partners located in Ramsey County to provide feedback on the county's Multi-Hazard Mitigation Plan (MHMP - PDF). The plan is a requirement of the Federal Disaster Mitigation Act...

RAMSEYCOUNTY.US

Like Comment Share

Write a comment...

**Ramsey County, Minnesota** 20 hrs · 🌐

Recycling is something the the whole family can be involved with! First, talk about which items in the fridge can be recycled. Then once the bottles are empty, ask your kids to toss the empty container in your Household Recycling.

Community in Saint Paul, Minnesota

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About See All

(651) 266-8500

Typically replies within a few hours  
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www.ramseycounty.us

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**Ramsey County Parks ...** Like

The image is a screenshot of a Twitter profile for Ramsey County, Minnesota. The profile header includes the name "Ramsey County" and handle "@RamseyCounty", along with a "Follow" button. The bio states: "Home to MN's state capital and more than 540,000 residents. Known for vibrant neighborhoods, parks and family activities. Social policy: bit.ly/2e1y4Jm". It also lists "Twin Cities", the website "ramseycounty.us", and "Joined August 2008".

The main content area shows two tweets. The first is from Ramsey County (@RamseyCounty) dated July 19, 2017, at 3:25 PM. The text reads: "Residents & organizations: We're now seeking feedback on our 2018 Multi-Hazard Mitigation Plan. More information: [bit.ly/2uK6PgQ](https://bit.ly/2uK6PgQ)". It has 2 retweets.

The second tweet is a promoted tweet from CircleCI (@circleci) dated July 11. The text says: "The new CircleCI is super fast. Reduced build times from minutes to seconds". Below the text is a screenshot of the CircleCI interface with the headline "CircleCI 2.0 | Power. Flexibility. Control." and the sub-headline "CircleCI is the easiest way to go from commit to deploy". The promoted tweet has 1 reply, 11 retweets, and 65 likes.

At the bottom of the page, there is a footer with copyright information: "© 2017 Twitter About Help Center Terms Privacy policy Cookies Ads info".

**LinkedIn** Sign in Join now



**Ramsey County**  
4,175 followers  
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**Ramsey County**  
4,175 followers  
16h

Do you work for an organization involved with public safety? Emergency Management & Homeland Security is currently seeking feedback on the county's Multi-Hazard Mitigation Plan (MHMP). Ramsey County is vulnerable to a number of potential natural disasters, and hazard mitigation planning is central to taking action to reduce or eliminate the impact of future disasters. Public input is an important component of the plan.



**Ramsey County seeks public feedback on 2018 Multi-Hazard Mitigation Plan**  
ramseycounty.us

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**Ramsey County Website**  
**News Release for Public Review & Comment Period**  
**December 12, 2018**

The screenshot shows the Ramsey County website's news release page. At the top, the Ramsey County logo is on the left, and navigation links for Home, Jobs, Calendar, News & Updates, and Contact Us are on the right. A search bar is also present. Below the navigation is a dark red header with menu items: Residents, Businesses, Your Government, and How do I...?. The main content area has a breadcrumb trail: Home / News & Updates. A link to '< Back to List' is provided. The main headline reads 'Public comment period now open for updated multi-hazard mitigation plan'. The text below explains that residents are invited to review and submit feedback on the updated plan until January 11, 2019. It mentions the Federal Disaster Mitigation Act of 2000 and provides a button to 'Review the plan and submit feedback'. The 'About the plan' section lists covered cities and states the plan's purpose. The 'Benefits of planning' section describes the advantages of community involvement. The 'More information' section provides contact details for Bryan Mayer. At the bottom, there is a dark red footer with the text 'Connect with Ramsey County' and a row of social media icons for Facebook, Twitter, LinkedIn, YouTube, and Instagram.

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## Public comment period now open for updated multi-hazard mitigation plan

Now until Jan. 11, 2019 residents are invited to review and submit feedback on Ramsey County's updated multi-hazard mitigation plan.

The Federal Disaster Mitigation Act of 2000 requires local governments to update their plan every five years to remain eligible for federal disaster preparedness and relief grants.

Following the public comment period, the draft will be submitted to the state of Minnesota and the Federal Emergency Management Agency.

[Review the plan and submit feedback](#)

### About the plan

Ramsey County's multi-hazard mitigation plan covers the cities of Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North Saint Paul, Roseville, Shoreview, Vadnais Heights and White Bear Lake. It also incorporates the needs of townships, school districts and other stakeholders participating in the plan.

The purpose of the plan is to identify cost-effective and sustainable actions to reduce or eliminate the long-term risk to human life and property from natural hazards such as tornadoes, flooding, wildfires, blizzards, straight-line winds, ice storms and droughts.

Updates to the plan were made under the direction of Ramsey County Emergency Management in cooperation with other county departments, the University of Minnesota Duluth's Geospatial Analysis Center, cities and townships, school districts and other key stakeholders such as utility providers.

### Benefits of planning

By working with local communities to identify vulnerabilities and develop strategies to reduce or eliminate the effects of a potential hazard, we can better protect Ramsey County residents. Increasing public awareness of local hazards also helps to create a community that is resilient to disaster.

### More information

Please contact Ramsey County Emergency Management Coordinator [Bryan Mayer](#) at [651-266-1017](tel:651-266-1017) for more information.

Posted on Wednesday, December 12, 2018 - 1:47 p.m.

**Connect with Ramsey County**  
*A county of excellence working with you to enhance our quality of life.*

[f](#) [t](#) [in](#) [v](#) [p](#) [i](#) [m](#)



**Ramsey County Emergency Management and Homeland Security** shared a photo.



January 8 at 8:52 AM · 🌐



**Ramsey County, Minnesota**

👍 Like Page

January 7 at 10:25 AM · 🌐

The public comment period for our updated multi-hazard mitigation plan ends Jan. 11. Please review the plan and share your thoughts before the draft is submitted to the state of Minnesota and FEMA.

The plan helps identify cost-effective and sustainable actions to reduce or eliminate the long-term risk to human life and property from natural hazards.

Review the plan at <http://bit.ly/2PDMqA6>.

👍 Like

💬 Comment

➦ Share



## GEOSPATIAL ANALYSIS CENTER

### Public Feedback for Ramsey County MHMP Update

UMD > Swenson College of Science and Engineering > Public Feedback for Ramsey County MHMP Update

#### Contact us

[umdgis@d.umn.edu](mailto:umdgis@d.umn.edu)

(218) 726-7438

TTY/TDD:

(800) 627-3529

Kirby Plaza 389  
Duluth, MN 55812



GIVE US YOUR  
FEEDBACK!



Ramsey County is currently in the process of updating its Multi-Hazard Mitigation Plan. Before the plan is submitted to the State of Minnesota and FEMA for approval, we need your feedback! Please review the draft plan, in particular the mitigation actions for your jurisdiction, and then fill out this [quick form](#).

- [Ramsey County MHMP 2018 draft](#)
- [Ramsey County Mitigation Actions](#)
- [Arden Hills Mitigation Actions](#)
- [Falcon Heights Mitigation Actions](#)
- [Gem Lake Mitigation Actions](#)
- [Lauderdale Mitigation Actions](#)
- [Little Canada Mitigation Actions](#)
- [Maplewood Mitigation Actions](#)
- [Mounds View Mitigation Actions](#)
- [New Brighton Mitigation Actions](#)
- [North Oaks Mitigation Actions](#)
- [North St. Paul Mitigation Actions](#)
- [Roseville Mitigation Actions](#)
- [Shoreview Mitigation Actions](#)
- [Vadnais Heights Mitigation Actions](#)
- [White Bear Lake Mitigation Actions](#)
- [White Bear Township Mitigation Actions](#)

Help us make Ramsey County safer from natural disasters!

If you have any questions or comments, please contact [umdgis@d.umn.edu](mailto:umdgis@d.umn.edu).

QUESTIONS

RESPONSES

## Ramsey County MHMP Feedback & Comments

Upon reviewing the draft 2018 Multi-Hazard Mitigation Plan for Ramsey County, please answer the following questions to provide feedback and suggestions. Thank you!

Name

Short answer text

Email address

Short answer text

Job Title and Organization

Short answer text

Jurisdiction

1. Ramsey County
2. City of Arden Hills
3. City of Falcon Heights
4. City of Gem Lake
5. City of Lauderdale
6. City of Little Canada
7. City of Maplewood
8. City of Mounds View
9. City of New Brighton
10. City of North Oaks

# Appendix G

## Mitigation Actions by Jurisdiction

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Table G - 1. Mitigation Actions Identified for Implementation by the City of Arden Hills (2019-2023) (From Ramsey County Master Mitigation Action Chart)

#	Hazard	Mitigation Strategy	City of Arden Hills Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
I	All-Hazards	Mitigation Preparedness & Response Support	Continue to ensure that all Ramsey County residents are aware of and sign-up for the County's Everbridge Emergency Notification System.	Ongoing	High	2019-2023	Ramsey County, <b>Arden Hills</b> , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	Ramsey County Emergency Management & Homeland Security (RCEMHS) & Municipal Emergency Management Agencies (EMAs)	<p>This is a new effort of Ramsey County EMHS being rolled out in 2018. A link for the Everbridge for community sign up is provided on the Ramsey County EMHS website, and reminders are also posted using the Ramsey County EMHS Facebook Page. In addition to Everbridge, the County has IPAWS capabilities for targeted and county-wide emergency notifications.</p> <p>All city jurisdictions within the County are encouraged to promote sign up for the Everbridge system using their means of public outreach (websites, social media, local media).</p> <p><i>City Comment: In addition to access to the County's Everbridge system, the City of Arden Hills provides an emergency alert system on our website to notify residents to an emergency or road condition in the City.</i></p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Arden Hills Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
4	All-Hazards	Local Planning & Regulations	Update County/City Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards. Utilize data of past hazard events and future climate projections to help inform updates.	Ongoing	High	2019-2023	Ramsey County, <b>Arden Hills</b> , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS in coordination with Ramsey County Community and Economic Development and local municipal administrators, Planning & Zoning Committees	Ramsey County has a “2030 Comprehensive Plan” prepared to meet the requirements of the Metropolitan Land Planning Act and the Metropolitan Council’s 2030 Regional Development Framework. Ramsey County will encourage municipalities to update their local Comprehensive Plans to include considerations for mitigation in land use planning to reduce future risk to due to natural hazards (i.e., flooding).  <i>City Comment: We need to update our Comprehensive Plan to ensure it addresses all necessary topics.</i>	County funding
6	All-Hazards	Local Planning & Regulations	Continue to update Emergency Operation Plans and COOP/COG plans to ensure that they adequately detail the needed steps to respond to all-hazards and ensure continuity of key government functions in the event of a disaster.	Ongoing	High	2019-2023	Ramsey County, <b>Arden Hills</b> , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS maintains an Emergency Operations Plan (EOP) and the Ramsey County Continuity of Operations (COOP)/Continuity of Government (COG) plans as guides for emergency and/or recovery operations. These plans are intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Arden Hills Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
9	All-Hazards	Education & Awareness Programs	Continue to promote education & awareness on all-hazards and emergency preparedness for schools, individuals, families, and businesses.	Ongoing	High	2019-2023	Ramsey County, <b>Arden Hills</b> , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Information is distributed to the public via RCEMHS Facebook/ Twitter and subscription-based programs (GovDelivery) on a regular basis. Additional information is provided during the NWS severe weather awareness weeks in spring and winter. RCEMHS also has a YouTube Channel where “Get Ready Gopher” educational videos on preparedness and severe weather training are posted. These are promoted to the schools as well as the larger public for viewing. Cities are encouraged to share information through their own existing channels (i.e., websites, social media, and local media).	County, municipal funding
15	Severe Winter & Summer Storms	Education & Awareness Programs	Continue to promote the use of NOAA weather radios by residents, schools, businesses, and facilities that house persons with functional and access needs.	Ongoing	Moderate	2019-2023	Ramsey County, <b>Arden Hills</b> , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS regularly promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. NOAA weather radios are recommended as an important way to receive emergency weather alerts from the NWS. Local city Emergency Managers are encouraged to ensure the placement of NOAA radios in key facilities within their communities.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Arden Hills Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
16	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with municipal electrical cooperative and power companies to reduce overhead exposure of power lines that are vulnerable to damage from severe winter/summer storms (i.e., high winds, ice, and heavy snow). Replace overhead power lines with underground lines in areas with high-risk exposure (i.e. high tree concentration areas).	New	High	2019-2023	Ramsey County, <b>Arden Hills</b> , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works, Municipal Public Works in cooperation the appropriate utility company.	<p>RC EMHS County and all cities will work as needed with their appropriate utility providers as needed to evaluate areas of concern. Service providers for Ramsey County include:</p> <ul style="list-style-type: none"> <li>• Xcel Energy</li> <li>• Connexus Energy</li> <li>• North Saint Paul Utility Department</li> </ul> <p>Areas of concern will be evaluated to see where putting lines underground may be feasible and make sense.</p>	Coop / Electric Company funding, Possible FEMA HMA grant for Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Arden Hills Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
17	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Identify critical facilities or infrastructure that do not have generator backup power in the event of a major power outage resulting from severe winter or summer storms. (Examples of critical facilities include Police/ Fire departments, EOC's, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	<p>The Ramsey County Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner's Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power.</p> <p><b>Ramsey County's current priorities for generator backup power include:</b></p> <ul style="list-style-type: none"> <li>• Plato Building</li> <li>• Public Health and Emergency Management's Department Operations Center (DOC's)</li> <li>• Rec Centers and libraries that serve as cooling centers</li> <li>• Facilities designated for Mass Care Sheltering</li> <li>• Traffic Signal Systems</li> </ul> <p><i>City Comment: The City of Arden Hills has identified a need to acquire generators for public works critical infrastructure in the event of an extended power outage.</i></p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Arden Hills Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
18	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that should have backup power.	New	High	2019-2023	Ramsey County, <b>Arden Hills</b> , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	Ramsey County, local municipal governments, and schools will evaluate feasibility to purchase and install generators for key facilities and will do so as funding allows.	County, municipal funding, Possible FEMA HMA grant for Generators
19	Severe Winter Weather	Mitigation Preparedness & Response Support	Continue to provide for public safety on roads through anti-icing (application of brine solution before an event), snow removal, salting and sanding to minimize the impacts of snow/ice accumulations on roadways.	Ongoing	Moderate	2019-2023	Ramsey County, <b>Arden Hills</b> , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works & Municipal Public Works	Ramsey County and its municipalities complete the snow removal from all county and municipal roads. MNDOT will remove the snow from Interstate and State Highways as well as disperse salt/sand as needed. Municipalities have snow emergency plans and ordinances in place.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Arden Hills Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
22	Severe Summer Storms	Structure and Infrastructure Projects	Identify community areas, parks, and facilities (i.e., schools, government buildings, manufactured home parks) that are vulnerable to tornadoes and evaluate for potential construction or retrofit of safe rooms or storm shelters.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	RCEMHS and RC Parks & Rec will work to identify priority areas for evaluation for safe room construction or retrofit. Municipal EMAs will also work to evaluate areas of need for storm shelters or safe rooms, such as for local parks or manufactured home parks.	County, municipal funding
23	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	Ramsey County EMHS will seek to work with municipalities and schools to build community safe rooms where needed. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning. Any community safe room projects that the County is involved in will be part of the Ramsey County Emergency Management program. FEMA grant funding may be sought to support an eligible safe room project.	County, municipal funding, Possible FEMA HMA grant for Safe Rooms

#	Hazard	Mitigation Strategy	City of Arden Hills Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
24	Severe Summer Storms	Local Planning & Regulations	Work to ensure Minnesota Department of Health (MDH) Evacuation Plan & Storm Shelter Requirements are met in municipalities with manufactured home parks.	On-going	High	2019-2023	Arden Hills, Little Canada, Maplewood, Mounds View, New Brighton, Roseville, Shoreview, Vadnais Heights	Municipal EMAs in coordination with RCEMHS and MHP Operators	<p>Ramsey County has identified 15 manufactured home parks (MHPs) in 8 municipalities that have trailer parks. Of those 15, 12 have identified they have shelters, one may have a shelter and one does not and one is unknown.</p> <p>Minnesota State Statute (327.205 Shelter Construction Standards) outlines the requirements for MHP's with less than 10 units / more than 10 units for evacuation plans and sheltering facilities for the residents of the park in times of high winds or tornadoes, as well as the responsibility of municipalities with MHPs to assist with/approve of evacuation &amp; shelter plans.</p> <p>Ramsey County EMHS will continue to encourage municipalities to work with local MPH operators to ensure they follow the law.</p> <p><i>City Comment: The city will work with our mobile home park to follow the MDH requirements.</i></p>	County, municipal funding, MHP Owner

#	Hazard	Mitigation Strategy	City of Arden Hills Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
30	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Enhance stormwater management plans and ordinances that require improvement of stormwater management systems, including for areas of new development and installation of infrastructure capable of handling a ten to twenty-year rain event. Identify and address where stormwater run-off capacity improvement projects are needed.	New	High	2019-2023	Ramsey County, <b>Arden Hills</b> , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works and municipal Planning/Public Works depts. in coordination with local watershed organizations	Ramsey County and local cities maintain stormwater management plans and work to identify, prioritize, and address highest risk areas. Mitigation examples may include to construct, retrofit, or maintain drainage systems to include sewage and water retention and detention systems.  Outside funding to support stormwater improvement projects may be available through avenues such as the MN DNR Flood Hazard Mitigation Grants, MPCA, and FEMA HMA funding for flood reduction projects.	County/City funding, SWCD, and Possible MPCA/PFA grant funding. Possible FEMA HMA grant for Localized Flood Reduction Projects or Infrastructure Retrofit
32	Flooding	Education & Awareness Programs / Structure & Infrastructure Projects	Provide information & technical assistance to property owners to help mitigate against localized flooding during high-rain events (i.e., landscaping / green infrastructure applications).	New	High	2019-2023	Ramsey County, <b>Arden Hills</b> , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, RC Conservation District, and municipal planning/public works	This is an ongoing effort of Ramsey County in conjunction with local jurisdictions that have experienced flooding due to high rain events.	County/City Funding, Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

#	Hazard	Mitigation Strategy	City of Arden Hills Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
33	Flooding	Local Planning & Regulations	Identify residential, commercial, government facilities, and/or critical infrastructure properties that may experience damage from future flooding and work to implement appropriate mitigation measures (including buy-out for property acquisition & structure demolition or relocation). Areas of focus may include previously unidentified flooding locations.	New	High	2019-2023	Ramsey County, <b>Arden Hills</b> , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Public Works, RC Property Management, RC Conservation District, municipal EMA	In 2015, Ramsey County removed seven buildings, including critical infrastructure, from the Mississippi River floodplain. A permanent retaining wall along the bluff was completed in November 2017. Ramsey County remains owners of these properties and will work with the new developers and Saint Paul Emergency Management to provide technical assistance and support on flood protection systems and measures in the future.  Ramsey County and its municipalities will continue to evaluate properties that may be at risk of flooding and work with property owners to identify mitigation measure to reduce or eliminate future damages.	County, municipal funding, DNR Flood Mitigation Grant, US Army Corps of Engineers (USACE), Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation
37	Flooding	Local Planning & Regulations	Participate in the National Flood Insurance Program (NFIP) and enforce local floodplain ordinances to ensure that new construction is built above regulatory flood protection elevation.	Ongoing	Moderate	2019-2023	Ramsey County, <b>Arden Hills</b> , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, Municipal EMAs local city planning depts.	Ramsey County promotes, and all municipalities participate in the NFIP (except the City of North Oaks). Each city develops and enforces local floodplain ordinances.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Arden Hills Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
38	Flooding	Structure & Infrastructure Projects	Identify, prioritize, and implement localized flood reduction measures to improve drainage systems and reduce over-the-road flooding to County or municipal roads.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, City Public Works, MnDOT, Watershed Districts,	Ramsey County Public Works and local city Public Works work to identify and address localized flood risk reduction projects.  <i>City Comment: We are currently working through elevating a roadway that passes through a low-lying watershed area that floods over.</i>	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit
42	Wildfire	Local Planning & Regulations	Continue to ensure the strong coordination between local fire departments to provide fire protection.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	There are 12 fire departments located in Ramsey County. All the municipal fire departments have mutual aid agreements with each contiguous department that borders their respective fire district, including those in adjoining counties. Written mutual aid agreements are on file with each city.	Local fire department funding

#	Hazard	Mitigation Strategy	City of Arden Hills Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
43	Wildfire	Local Planning & Regulations	Continue to enforce burning permits/restrictions.	Ongoing	Moderate	2019-2023	Ramsey County, <b>Arden Hills</b> , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	Burn permits are regulated by the fire departments in Ramsey County. An actual permit may or may not be required, however, each jurisdiction has rules/regulations available to all residents online.	Municipal or fire district funding
47	Drought	Education & Awareness Programs	Promote water conservation measures to residents during periods of drought and enforce water conservation ordinances when needed.	Ongoing	Moderate	2019-2023	Ramsey County, <b>Arden Hills</b> , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Conservation District & Local City planning depts.	Promoting water conservation during periods of drought is a standing effort of the County and local governments. The State of MN has a stateside drought response plan prepared by the MN DNR that the County may reference for guidance.	County, municipal funding

Table G - 2. Mitigation Actions Identified for Implementation by the City of Falcon Heights (2019-2023) (From Ramsey County Master Mitigation Action Chart)

#	Hazard	Mitigation Strategy	City of Falcon Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
1	All-Hazards	Mitigation Preparedness & Response Support	Continue to ensure that all Ramsey County residents are aware of and sign-up for the County's Everbridge Emergency Notification System.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	Ramsey County Emergency Management & Homeland Security (RCEMHS) & Municipal Emergency Management Agencies (EMAs)	<p>This is a new effort of Ramsey County EMHS being rolled out in 2018. A link for the Everbridge for community sign up is provided on the Ramsey County EMHS website, and reminders are also posted using the Ramsey County EMHS Facebook Page. In addition to Everbridge, the County has IPAWS capabilities for targeted and countywide emergency notifications.</p> <p>All city jurisdictions within the County are encouraged to promote sign up for the Everbridge system using their means of public outreach (websites, social media, local media).</p> <p><i>City Comment: In addition to access to the County's Everbridge system, the City has an email listserve system that residents can sign up for to get notifications on projects or for an emergency.</i></p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Falcon Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
4	All-Hazards	Local Planning & Regulations	Update County/City Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards. Utilize data of past hazard events and future climate projections to help inform updates.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS in coordination with Ramsey County Community and Economic Development and local municipal administrators, Planning & Zoning Committees	Ramsey County has a “2030 Comprehensive Plan” prepared to meet the requirements of the Metropolitan Land Planning Act and the Metropolitan Council’s 2030 Regional Development Framework. Ramsey County will encourage municipalities to update their local Comprehensive Plans to include considerations for mitigation in land use planning to reduce future risk to due to natural hazards (i.e., flooding).  <i>City Comment: The City is currently working on a new Comprehensive Plan to be submitted to the MetCouncil.</i>	County funding
6	All-Hazards	Local Planning & Regulations	Continue to update Emergency Operation Plans and COOP/COG plans to ensure that they adequately detail the needed steps to respond to all-hazards and ensure continuity of key government functions in the event of a disaster.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS maintains an Emergency Operations Plan (EOP) and the Ramsey County Continuity of Operations (COOP)/Continuity of Government (COG) plans as guides for emergency and/or recovery operations. These plans are intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.  <i>City Comment: In the last year due to the killing of Philando Castile, the City has had to create procedures to address order of command and how things are approved. The City is also currently working to develop an Evacuation Plan. The City has a Community Emergency Response Team (CERT).</i>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Falcon Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
9	All-Hazards	Education & Awareness Programs	Continue to promote education & awareness on all-hazards and emergency preparedness for schools, individuals, families, and businesses.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Information is distributed to the public via RCEMHS Facebook/ Twitter and subscription-based programs (GovDelivery) on a regular basis. Additional information is provided during the NWS severe weather awareness weeks in spring and winter. RCEMHS also has a YouTube Channel where “Get Ready Gopher” educational videos on preparedness and severe weather training are posted. These are promoted to the schools as well as the larger public for viewing. Cities are encouraged to share information through their own existing channels (i.e., websites, social media, and local media).	County, municipal funding
15	Severe Winter & Summer Storms	Education & Awareness Programs	Continue to promote the use of NOAA weather radios by residents, schools, businesses, and facilities that house persons with functional and access needs.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS regularly promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. NOAA weather radios are recommended as an important way to receive emergency weather alerts from the NWS. Local city Emergency Managers are encouraged to ensure the placement of NOAA radios in key facilities within their communities.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Falcon Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
16	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with municipal electrical cooperative and power companies to reduce overhead exposure of power lines that are vulnerable to damage from severe winter/summer storms (i.e., high winds, ice, and heavy snow). Replace overhead power lines with underground lines in areas with high-risk exposure (i.e. high tree concentration areas).	New	High	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works, Municipal Public Works in cooperation the appropriate utility company.	<p>RC EMHS County and all cities will work as needed with their appropriate utility providers as needed to evaluate areas of concern. Service providers for Ramsey County include:</p> <ul style="list-style-type: none"> <li>• Xcel Energy</li> <li>• Connexus Energy</li> <li>• North Saint Paul Utility Department</li> </ul> <p>Areas of concern will be evaluated to see where putting lines underground may be feasible and make sense.</p>	Coop / Electric Company funding, Possible FEMA HMA grant for Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Falcon Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
17	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Identify critical facilities or infrastructure that do not have generator backup power in the event of a major power outage resulting from severe winter or summer storms. (Examples of critical facilities include Police/ Fire departments, EOC's, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).	New	High	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	<p>The Ramsey County Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner's Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power.</p> <p><b>Ramsey County's current priorities for generator backup power include:</b></p> <ul style="list-style-type: none"> <li>• Plato Building</li> <li>• Public Health and Emergency Management's Department Operations Center (DOC's)</li> <li>• Rec Centers and libraries that serve as cooling centers</li> <li>• Facilities designated for Mass Care Sheltering</li> <li>• Traffic Signal Systems</li> </ul> <p>Ramsey County and municipalities continue to assess what critical facilities need backup power. Working to mitigate against power outages also helps to mitigate other hazards.</p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Falcon Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
18	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that should have backup power.	New	High	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	Ramsey County, local municipal governments, and schools will evaluate feasibility to purchase and install generators for key facilities and will do so as funding allows.	County, municipal funding, Possible FEMA HMA grant for Generators
19	Severe Winter Weather	Mitigation Preparedness & Response Support	Continue to provide for public safety on roads through anti-icing (application of brine solution before an event), snow removal, salting and sanding to minimize the impacts of snow/ice accumulations on roadways.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works & Municipal Public Works	Ramsey County and its municipalities complete the snow removal from all county and municipal roads. MNDOT will remove the snow from Interstate and State Highways as well as disperse salt/sand as needed. Municipalities have snow emergency plans and ordinances in place.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Falcon Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
22	Severe Summer Storms	Structure and Infrastructure Projects	Identify community areas, parks, and facilities (i.e., schools, government buildings, manufactured home parks) that are vulnerable to tornadoes and evaluate for potential construction or retrofit of safe rooms or storm shelters.	New	High	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	RCEMHS and RC Parks & Rec will work to identify priority areas for evaluation for safe room construction or retrofit. Municipal EMAs will also work to evaluate areas of need for storm shelters or safe rooms, such as for local parks or manufactured home parks.	County, municipal funding
23	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	New	High	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	Ramsey County EMHS will seek to work with municipalities and schools to build community safe rooms where needed. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning. Any community safe room projects that the County is involved in will be part of the Ramsey County Emergency Management program. FEMA grant funding may be sought to support an eligible safe room project.	County, municipal funding, Possible FEMA HMA grant for Safe Rooms

#	Hazard	Mitigation Strategy	City of Falcon Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
30	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Enhance stormwater management plans and ordinances that require improvement of stormwater management systems, including for areas of new development and installation of infrastructure capable of handling a ten to twenty-year rain event. Identify and address where stormwater run-off capacity improvement projects are needed.	New	High	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works and municipal Planning/Public Works depts. in coordination with local watershed organizations	<p>Ramsey County and local cities maintain stormwater management plans and work to identify, prioritize, and address highest risk areas. Mitigation examples may include to construct, retrofit, or maintain drainage systems to include sewage and water retention and detention systems. Outside funding to support stormwater improvement projects may be available through avenues such as the MN DNR Flood Hazard Mitigation Grants, MPCA, and FEMA HMA funding for flood reduction projects.</p> <p><i>City Comment: Storm sewer improvements were completed with Capitol Region Watershed for Curtiss Field to address flooding issues by installing a smart pond with underground storage tanks. The City is also current working with Capitol Region Watershed to install an additional Rain Garden to capture and treat water runoff from impervious surfaces at City Hall. The City is also working to complete our Surface Water Management Plan.</i></p>	County/City funding, SWCD, and Possible MPCA/PFA grant funding. Possible FEMA HMA grant for Localized Flood Reduction Projects or Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Falcon Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
32	Flooding	Education & Awareness Programs / Structure & Infrastructure Projects	Provide information & technical assistance to property owners to help mitigate against localized flooding during high-rain events (i.e., landscaping / green infrastructure applications).	New	High	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, RC Conservation District, and municipal planning/public works	This is an ongoing effort of Ramsey County in conjunction with local jurisdictions that have experienced flooding due to high rain events.	County/City Funding, Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation
33	Flooding	Local Planning & Regulations	Identify residential, commercial, government facilities, and/or critical infrastructure properties that may experience damage from future flooding and work to implement appropriate mitigation measures (including buy-out for property acquisition & structure demolition or relocation). Areas of focus may include previously unidentified flooding locations.	New	High	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Public Works, RC Property Management, RC Conservation District, municipal EMA	In 2015, Ramsey County removed seven buildings, including critical infrastructure, from the Mississippi River floodplain. A permanent retaining wall along the bluff was completed in November 2017. Ramsey County remains owners of these properties and will work with the new developers and Saint Paul Emergency Management to provide technical assistance and support on flood protection systems and measures in the future.  Ramsey County and its municipalities will continue to evaluate properties that may be at risk of flooding and work with property owners to identify mitigation measure to reduce or eliminate future damages.	County, municipal funding, DNR Flood Mitigation Grant, US Army Corps of Engineers (USACE), Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

#	Hazard	Mitigation Strategy	City of Falcon Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
37	Flooding	Local Planning & Regulations	Participate in the National Flood Insurance Program (NFIP) and enforce local floodplain ordinances to ensure that new construction is built above regulatory flood protection elevation.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, Municipal EMAs local city planning depts.	Ramsey County promotes, and all municipalities participate in the NFIP (except the City of North Oaks). Each city develops and enforces local floodplain ordinances.	County, municipal funding
38	Flooding	Structure & Infrastructure Projects	Identify, prioritize, and implement localized flood reduction measures to improve drainage systems and reduce over-the-road flooding to County or municipal roads.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, City Public Works, MnDOT, Watershed Districts,	Ramsey County Public Works and local city Public Works work to identify and address localized flood risk reduction projects.  <i>City Comment: The City has a Pavement Management Plan for road infrastructure improvement projects that include culvert and drainage improvements to reduce over-the-road repetitive flooding in low areas. We have a City Engineer (contracted through the City of Roseville) and a Public Works Director that address road maintenance issues for flooding.</i>	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Falcon Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
42	Wildfire	Local Planning & Regulations	Continue to ensure the strong coordination between local fire departments to provide fire protection.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	There are 12 fire departments located in Ramsey County. All the municipal fire departments have mutual aid agreements with each contiguous department that borders their respective fire district, including those in adjoining counties. Written mutual aid agreements are on file with each city.	Local fire department funding
43	Wildfire	Local Planning & Regulations	Continue to enforce burning permits/restrictions.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	Burn permits are regulated by the fire departments in Ramsey County. An actual permit may or may not be required, however, each jurisdiction has rules/regulations available to all residents online.	Municipal or fire district funding

#	Hazard	Mitigation Strategy	City of Falcon Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
47	Drought	Education & Awareness Programs	Promote water conservation measures to residents during periods of drought and enforce water conservation ordinances when needed.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, <b>Falcon Heights</b> , Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Conservation District & Local City planning depts.	Promoting water conservation during periods of drought is a standing effort of the County and local governments. The State of MN has a stateside drought response plan prepared by the MN DNR that the County may reference for guidance.	County, municipal funding

Table G - 3. Mitigation Actions Identified for Implementation by the City of Gem Lake (2019-2023) (From Ramsey County Master Mitigation Action Chart)

#	Hazard	Mitigation Strategy	City of Gem Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
1	All-Hazards	Mitigation Preparedness & Response Support	Continue to ensure that all Ramsey County residents are aware of and sign-up for the County’s Everbridge Emergency Notification System.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	Ramsey County Emergency Management & Homeland Security (RCEMHS) & Municipal Emergency Management Agencies (EMAs)	<p>This is a new effort of Ramsey County EMHS being rolled out in 2018. A link for the Everbridge for community sign up is provided on the Ramsey County EMHS website, and reminders are also posted using the Ramsey County EMHS Facebook Page. In addition to Everbridge, the County has IPAWS capabilities for targeted and county-wide emergency notifications.</p> <p>All city jurisdictions within the County are encouraged to promote sign up for the Everbridge system using their means of public outreach (websites, social media, local media).</p>	County, municipal funding
4	All-Hazards	Local Planning & Regulations	Update County/City Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards. Utilize data of past hazard events and future climate projections to help inform updates.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS in coordination with Ramsey County Community and Economic Development and local municipal administrators, Planning & Zoning Committees	Ramsey County has a “2030 Comprehensive Plan” prepared to meet the requirements of the Metropolitan Land Planning Act and the Metropolitan Council’s 2030 Regional Development Framework. Ramsey County will encourage municipalities to update their local Comprehensive Plans to include considerations for mitigation in land use planning to reduce future risk to due to natural hazards (i.e., flooding).	County funding

#	Hazard	Mitigation Strategy	City of Gem Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
6	All-Hazards	Local Planning & Regulations	Continue to update Emergency Operation Plans and COOP/COG plans to ensure that they adequately detail the needed steps to respond to all-hazards and ensure continuity of key government functions in the event of a disaster.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS maintains an Emergency Operations Plan (EOP) and the Ramsey County Continuity of Operations (COOP)/Continuity of Government (COG) plans as guides for emergency and/or recovery operations. These plans are intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.	County, municipal funding
9	All-Hazards	Education & Awareness Programs	Continue to promote education & awareness on all-hazards and emergency preparedness for schools, individuals, families, and businesses.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Information is distributed to the public via RCEMHS Facebook/ Twitter and subscription-based programs (GovDelivery) on a regular basis. Additional information is provided during the NWS severe weather awareness weeks in spring and winter. RCEMHS also has a YouTube Channel where "Get Ready Gopher" educational videos on preparedness and severe weather training are posted. These are promoted to the schools as well as the larger public for viewing. Cities are encouraged to share information through their own existing channels (i.e., websites, social media, and local media).	County, municipal funding

#	Hazard	Mitigation Strategy	City of Gem Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
15	Severe Winter & Summer Storms	Education & Awareness Programs	Continue to promote the use of NOAA weather radios by residents, schools, businesses, and facilities that house persons with functional and access needs.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS regularly promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. NOAA weather radios are recommended as an important way to receive emergency weather alerts from the NWS. Local city Emergency Managers are encouraged to ensure the placement of NOAA radios in key facilities within their communities.	County, municipal funding
16	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with municipal electrical cooperative and power companies to reduce overhead exposure of power lines that are vulnerable to damage from severe winter/summer storms (i.e., high winds, ice, and heavy snow). Replace overhead power lines with underground lines in areas with high-risk exposure (i.e. high tree concentration areas).	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works, Municipal Public Works in cooperation the appropriate utility company.	RC EMHS County and all cities will work as needed with their appropriate utility providers as needed to evaluate areas of concern. Service providers for Ramsey County include: <ul style="list-style-type: none"> <li>• Xcel Energy</li> <li>• Connexus Energy</li> <li>• North Saint Paul Utility Department</li> </ul> Areas of concern will be evaluated to see where putting lines underground may be feasible and make sense.	Coop / Electric Company funding, Possible FEMA HMA grant for Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Gem Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
17	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Identify critical facilities or infrastructure that do not have generator backup power in the event of a major power outage resulting from severe winter or summer storms. (Examples of critical facilities include Police/Fire departments, EOC's, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	<p>The Ramsey County Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner's Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power.</p> <p><b>Ramsey County's current priorities for generator backup power include:</b></p> <ul style="list-style-type: none"> <li>• Plato Building</li> <li>• Public Health and Emergency Management's Department Operations Center (DOC's)</li> <li>• Rec Centers and libraries that serve as cooling centers</li> <li>• Facilities designated for Mass Care Sheltering</li> <li>• Traffic Signal Systems</li> </ul> <p>Ramsey County and municipalities continue to assess what critical facilities need backup power. Working to mitigate against power outages also helps to mitigate other hazards.</p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Gem Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
18	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that should have backup power.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	Ramsey County, local municipal governments, and schools will evaluate feasibility to purchase and install generators for key facilities and will do so as funding allows.	County, municipal funding, Possible FEMA HMA grant for Generators
19	Severe Winter Weather	Mitigation Preparedness & Response Support	Continue to provide for public safety on roads through anti-icing (application of brine solution before an event), snow removal, salting and sanding to minimize the impacts of snow/ice accumulations on roadways.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works & Municipal Public Works	Ramsey County and its municipalities complete the snow removal from all county and municipal roads. MNDOT will remove the snow from Interstate and State Highways as well as disperse salt/sand as needed. Municipalities have snow emergency plans and ordinances in place.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Gem Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
22	Severe Summer Storms	Structure and Infrastructure Projects	Identify community areas, parks, and facilities (i.e., schools, government buildings, manufactured home parks) that are vulnerable to tornadoes and evaluate for potential construction or retrofit of safe rooms or storm shelters.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	RCEMHS and RC Parks & Rec will work to identify priority areas for evaluation for safe room construction or retrofit. Municipal EMAs will also work to evaluate areas of need for storm shelters or safe rooms, such as for local parks or manufactured home parks.	County, municipal funding
23	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	Ramsey County EMHS will seek to work with municipalities and schools to build community safe rooms where needed. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning. Any community safe room projects that the County is involved in will be part of the Ramsey County Emergency Management program. FEMA grant funding may be sought to support an eligible safe room project.	County, municipal funding, Possible FEMA HMA grant for Safe Rooms

#	Hazard	Mitigation Strategy	City of Gem Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
30	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Enhance stormwater management plans and ordinances that require improvement of stormwater management systems, including for areas of new development and installation of infrastructure capable of handling a ten to twenty-year rain event. Identify and address where stormwater run-off capacity improvement projects are needed.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works and municipal Planning/Public Works depts. in coordination with local watershed organizations	Ramsey County and local cities maintain stormwater management plans and work to identify, prioritize, and address highest risk areas. Mitigation examples may include to construct, retrofit, or maintain drainage systems to include sewage and water retention and detention systems.  Outside funding to support stormwater improvement projects may be available through avenues such as the MN DNR Flood Hazard Mitigation Grants, MPCA, and FEMA HMA funding for flood reduction projects.	County/City funding, SWCD, and Possible MPCA/PFA grant funding. Possible FEMA HMA grant for Localized Flood Reduction Projects or Infrastructure Retrofit
32	Flooding	Education & Awareness Programs / Structure & Infrastructure Projects	Provide information & technical assistance to property owners to help mitigate against localized flooding during high-rain events (i.e., landscaping / green infrastructure applications).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, RC Conservation District, and municipal planning/public works	This is an ongoing effort of Ramsey County in conjunction with local jurisdictions that have experienced flooding due to high rain events.	County/City Funding, Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

#	Hazard	Mitigation Strategy	City of Gem Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
33	Flooding	Local Planning & Regulations	Identify residential, commercial, government facilities, and/or critical infrastructure properties that may experience damage from future flooding and work to implement appropriate mitigation measures (including buy-out for property acquisition & structure demolition or relocation). Areas of focus may include previously unidentified flooding locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Public Works, RC Property Management, RC Conservation District, municipal EMA	In 2015, Ramsey County removed seven buildings, including critical infrastructure, from the Mississippi River floodplain. A permanent retaining wall along the bluff was completed in November 2017. Ramsey County remains owners of these properties and will work with the new developers and Saint Paul Emergency Management to provide technical assistance and support on flood protection systems and measures in the future.  Ramsey County and its municipalities will continue to evaluate properties that may be at risk of flooding and work with property owners to identify mitigation measure to reduce or eliminate future damages.	County, municipal funding, DNR Flood Mitigation Grant, US Army Corps of Engineers (USACE), Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation
37	Flooding	Local Planning & Regulations	Participate in the National Flood Insurance Program (NFIP) and enforce local floodplain ordinances to ensure that new construction is built above regulatory flood protection elevation.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, Municipal EMAs local city planning depts.	Ramsey County promotes, and all municipalities participate in the NFIP (except the City of North Oaks). Each city develops and enforces local floodplain ordinances.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Gem Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
38	Flooding	Structure & Infrastructure Projects	Identify, prioritize, and implement localized flood reduction measures to improve drainage systems and reduce over-the-road flooding to County or municipal roads.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, City Public Works, MnDOT, Watershed Districts,	<p>Ramsey County Public Works and local city Public Works work to identify and address localized flood risk reduction projects. <b>Following is a list of current priority areas to be addressed where flooding is an issue:</b></p> <ul style="list-style-type: none"> <li>• <b>Roseville</b> - Fairview Ave and Hwy 36</li> <li>• <b>Shoreview</b> - Gramsie Road north of Grass Lake</li> <li>• <b>Vadnais Heights</b> - Rice Street east of Grass Lake</li> <li>• <b>Vadnais Heights</b> - Edgerton and Centerville Rd</li> <li>• <b>Maplewood &amp; Little Canada</b> - Cty Rd B at 35-E</li> <li>• <b>Mounds View</b> - Mounds View Blvd between Silver Lake Rd and Cty Rd I</li> <li>• <b>Roseville</b> - Cleveland Ave and Cty Rd C-2</li> <li>• <b>New Brighton</b> - Silver Lake Rd south of Silver Lane</li> </ul>	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Gem Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
42	Wildfire	Local Planning & Regulations	Continue to ensure the strong coordination between local fire departments to provide fire protection.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	There are 12 fire departments located in Ramsey County. All the municipal fire departments have mutual aid agreements with each contiguous department that borders their respective fire district, including those in adjoining counties. Written mutual aid agreements are on file with each city.	Local fire department funding
43	Wildfire	Local Planning & Regulations	Continue to enforce burning permits /restrictions.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	Burn permits are regulated by the fire departments in Ramsey County. An actual permit may or may not be required, however, each jurisdiction has rules/regulations available to all residents online.	Municipal or fire district funding

#	Hazard	Mitigation Strategy	City of Gem Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
47	Drought	Education & Awareness Programs	Promote water conservation measures to residents during periods of drought and enforce water conservation ordinances when needed.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, <b>Gem Lake</b> , Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Conservation District & Local City planning depts.	Promoting water conservation during periods of drought is a standing effort of the County and local governments. The State of MN has a stateside drought response plan prepared by the MN DNR that the County may reference for guidance.	County, municipal funding

Table G - 4. Mitigation Actions Identified for Implementation by the City of Lauderdale (2019-2023) (From Ramsey County Master Mitigation Action Chart)

#	Hazard	Mitigation Strategy	City of Lauderdale Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
I	All-Hazards	Mitigation Preparedness & Response Support	Continue to ensure that all Ramsey County residents are aware of and sign-up for the County's Everbridge Emergency Notification System.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	Ramsey County Emergency Management & Homeland Security (RCEMHS) & Municipal Emergency Management Agencies (EMAs)	<p>This is a new effort of Ramsey County EMHS being rolled out in 2018. A link for the Everbridge for community sign up is provided on the Ramsey County EMHS website, and reminders are also posted using the Ramsey County EMHS Facebook Page. In addition to Everbridge, the County has IPAWS capabilities for targeted and county-wide emergency notifications.</p> <p>All city jurisdictions within the County are encouraged to promote sign up for the Everbridge system using their means of public outreach (websites, social media, local media).</p> <p><i>City Comment: In addition to access to the County's Everbridge system, the City has an email notification system for residents to receive emergency alerts.</i></p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Lauderdale Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
4	All-Hazards	Local Planning & Regulations	Update County/City Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards. Utilize data of past hazard events and future climate projections to help inform updates.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake. White Bear Township	RCEMHS in coordination with Ramsey County Community and Economic Development and local municipal administrators, Planning & Zoning Committees	Ramsey County has a “2030 Comprehensive Plan” prepared to meet the requirements of the Metropolitan Land Planning Act and the Metropolitan Council’s 2030 Regional Development Framework. Ramsey County will encourage municipalities to update their local Comprehensive Plans to include considerations for mitigation in land use planning to reduce future risk to due to natural hazards (i.e., flooding).  <i>City Comment: We have a 20-year Comprehensive Plan (2008) that is designed to plan physical growth of the City and appropriate land uses. A new plan is being produced and expected to be completed in 2018.</i>	County funding
6	All-Hazards	Local Planning & Regulations	Continue to update Emergency Operation Plans and COOP/COG plans to ensure that they adequately detail the needed steps to respond to all-hazards and ensure continuity of key government functions in the event of a disaster.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS maintains an Emergency Operations Plan (EOP) and the Ramsey County Continuity of Operations (COOP)/Continuity of Government (COG) plans as guides for emergency and/or recovery operations. These plans are intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.  <i>City Comment: The City is working towards contracting with an Emergency Manager to help with response coordination.</i>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Lauderdale Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
9	All-Hazards	Education & Awareness Programs	Continue to promote education & awareness on all-hazards and emergency preparedness for schools, individuals, families, and businesses.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Information is distributed to the public via RCEMHS Facebook/ Twitter and subscription-based programs (GovDelivery) on a regular basis. Additional information is provided during the NWS severe weather awareness weeks in spring and winter. RCEMHS also has a YouTube Channel where "Get Ready Gopher" educational videos on preparedness and severe weather training are posted. These are promoted to the schools as well as the larger public for viewing. Cities are encouraged to share information through their own existing channels (i.e., websites, social media, and local media).	County, municipal funding
15	Severe Winter & Summer Storms	Education & Awareness Programs	Continue to promote the use of NOAA weather radios by residents, schools, businesses, and facilities that house persons with functional and access needs.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS regularly promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. NOAA weather radios are recommended as an important way to receive emergency weather alerts from the NWS. Local city Emergency Managers are encouraged to ensure the placement of NOAA radios in key facilities within their communities.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Lauderdale Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
16	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with municipal electrical cooperative and power companies to reduce overhead exposure of power lines that are vulnerable to damage from severe winter/summer storms (i.e., high winds, ice, and heavy snow). Replace overhead power lines with underground lines in areas with high-risk exposure (i.e. high tree concentration areas).	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works, Municipal Public Works in cooperation the appropriate utility company.	<p>RC EMHS County and all cities will work as needed with their appropriate utility providers as needed to evaluate areas of concern. Service providers for Ramsey County include:</p> <ul style="list-style-type: none"> <li>• Xcel Energy</li> <li>• Connexus Energy</li> <li>• North Saint Paul Utility Department</li> </ul> <p>Areas of concern will be evaluated to see where putting lines underground may be feasible and make sense.</p>	Coop / Electric Company funding, Possible FEMA HMA grant for Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Lauderdale Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
17	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Identify critical facilities or infrastructure that do not have generator backup power in the event of a major power outage resulting from severe winter or summer storms. (Examples of critical facilities include Police/Fire departments, EOC's, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	<p>The Ramsey County Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner's Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power.</p> <p><b>Ramsey County's current priorities for generator backup power include:</b></p> <ul style="list-style-type: none"> <li>• Plato Building</li> <li>• Public Health and Emergency Management's Department Operations Center (DOC's)</li> <li>• Rec Centers and libraries that serve as cooling centers</li> <li>• Facilities designated for Mass Care Sheltering</li> <li>• Traffic Signal Systems</li> </ul> <p>Ramsey County and municipalities continue to assess what critical facilities need backup power. Working to mitigate against power outages also helps to mitigate other hazards.</p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Lauderdale Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
18	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that should have backup power.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	Ramsey County, local municipal governments, and schools will evaluate feasibility to purchase and install generators for key facilities and will do so as funding allows.	County, municipal funding, Possible FEMA HMA grant for Generators
19	Severe Winter Weather	Mitigation Preparedness & Response Support	Continue to provide for public safety on roads through anti-icing (application of brine solution before an event), snow removal, salting and sanding to minimize the impacts of snow/ice accumulations on roadways.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works & Municipal Public Works	Ramsey County and its municipalities complete the snow removal from all county and municipal roads. MNDOT will remove the snow from Interstate and State Highways as well as disperse salt/sand as needed. Municipalities have snow emergency plans and ordinances in place.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Lauderdale Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
22	Severe Summer Storms	Structure and Infrastructure Projects	Identify community areas, parks, and facilities (i.e., schools, government buildings, manufactured home parks) that are vulnerable to tornadoes and evaluate for potential construction or retrofit of safe rooms or storm shelters.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	RCEMHS and RC Parks & Rec will work to identify priority areas for evaluation for safe room construction or retrofit. Municipal EMAs will also work to evaluate areas of need for storm shelters or safe rooms, such as for local parks or manufactured home parks.	County, municipal funding
23	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	Ramsey County EMHS will seek to work with municipalities and schools to build community safe rooms where needed. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning. Any community safe room projects that the County is involved in will be part of the Ramsey County Emergency Management program. FEMA grant funding may be sought to support an eligible safe room project.	County, municipal funding, Possible FEMA HMA grant for Safe Rooms

#	Hazard	Mitigation Strategy	City of Lauderdale Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
30	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Enhance stormwater management plans and ordinances that require improvement of stormwater management systems, including for areas of new development and installation of infrastructure capable of handling a ten to twenty-year rain event. Identify and address where stormwater run-off capacity improvement projects are needed.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works and municipal Planning/Public Works depts. in coordination with local watershed organizations	Ramsey County and local cities maintain stormwater management plans and work to identify, prioritize, and address highest risk areas. Mitigation examples may include to construct, retrofit, or maintain drainage systems to include sewage and water retention and detention systems.  Outside funding to support stormwater improvement projects may be available through avenues such as the MN DNR Flood Hazard Mitigation Grants, MPCA, and FEMA HMA funding for flood reduction projects.	County/City funding, SWCD, and Possible MPCA/PFA grant funding. Possible FEMA HMA grant for Localized Flood Reduction Projects or Infrastructure Retrofit
32	Flooding	Education & Awareness Programs / Structure & Infrastructure Projects	Provide information & technical assistance to property owners to help mitigate against localized flooding during high-rain events (i.e., landscaping / green infrastructure applications).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, RC Conservation District, and municipal planning/public works	This is an ongoing effort of Ramsey County in conjunction with local jurisdictions that have experienced flooding due to high rain events.	County/City Funding, Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

#	Hazard	Mitigation Strategy	City of Lauderdale Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
33	Flooding	Local Planning & Regulations	Identify residential, commercial, government facilities, and/or critical infrastructure properties that may experience damage from future flooding and work to implement appropriate mitigation measures (including buy-out for property acquisition & structure demolition or relocation). Areas of focus may include previously unidentified flooding locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Public Works, RC Property Management, RC Conservation District, municipal EMA	In 2015, Ramsey County removed seven buildings, including critical infrastructure, from the Mississippi River floodplain. A permanent retaining wall along the bluff was completed in November 2017. Ramsey County remains owners of these properties and will work with the new developers and Saint Paul Emergency Management to provide technical assistance and support on flood protection systems and measures in the future.  Ramsey County and its municipalities will continue to evaluate properties that may be at risk of flooding and work with property owners to identify mitigation measure to reduce or eliminate future damages.	County, municipal funding, DNR Flood Mitigation Grant, US Army Corps of Engineers (USACE), Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation
37	Flooding	Local Planning & Regulations	Participate in the National Flood Insurance Program (NFIP) and enforce local floodplain ordinances to ensure that new construction is built above regulatory flood protection elevation.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, Municipal EMAs local city planning depts.	Ramsey County promotes, and all municipalities participate in the NFIP (except the City of North Oaks). Each city develops and enforces local floodplain ordinances.  <i>City Comment: We have a City Planning &amp; Zoning Commission that has established a Floodplain Ordinance. The City participates in the NFIP.</i>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Lauderdale Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
38	Flooding	Structure & Infrastructure Projects	Identify, prioritize, and implement localized flood reduction measures to improve drainage systems and reduce over-the-road flooding to County or municipal roads.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, City Public Works, MnDOT, Watershed Districts,	Ramsey County Public Works and local city Public Works work to identify and address localized flood risk reduction projects.  <i>City Comment: The City has a Public Works Coordinator that addresses road and sewer maintenance issues and would coordinate debris removal.</i>	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit
42	Wildfire	Local Planning & Regulations	Continue to ensure the strong coordination between local fire departments to provide fire protection.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	There are 12 fire departments located in Ramsey County. All the municipal fire departments have mutual aid agreements with each contiguous department that borders their respective fire district, including those in adjoining counties. Written mutual aid agreements are on file with each city.	Local fire department funding

#	Hazard	Mitigation Strategy	City of Lauderdale Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
43	Wildfire	Local Planning & Regulations	Continue to enforce burning permits/restrictions.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	Burn permits are regulated by the fire departments in Ramsey County. An actual permit may or may not be required, however, each jurisdiction has rules/regulations available to all residents online.	Municipal or fire district funding
47	Drought	Education & Awareness Programs	Promote water conservation measures to residents during periods of drought and enforce water conservation ordinances when needed.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, <b>Lauderdale</b> , Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Conservation District & Local City planning depts.	Promoting water conservation during periods of drought is a standing effort of the County and local governments. The State of MN has a stateside drought response plan prepared by the MN DNR that the County may reference for guidance.	County, municipal funding

Table G - 5. Mitigation Actions Identified for Implementation by the City of Little Canada (2019-2023) (From Ramsey County Master Mitigation Action Chart)

#	Hazard	Mitigation Strategy	City of Little Canada Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
1	All-Hazards	Mitigation Preparedness & Response Support	Continue to ensure that all Ramsey County residents are aware of and sign-up for the County's Everbridge Emergency Notification System.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	Ramsey County Emergency Management & Homeland Security (RCEMHS) & Municipal Emergency Management Agencies (EMAs)	<p>This is a new effort of Ramsey County EMHS being rolled out in 2018. A link for the Everbridge for community sign up is provided on the Ramsey County EMHS website, and reminders are also posted using the Ramsey County EMHS Facebook Page. In addition to Everbridge, the County has IPAWS capabilities for targeted and county-wide emergency notifications.</p> <p>All city jurisdictions within the County are encouraged to promote sign up for the Everbridge system using their means of public outreach (websites, social media, local media).</p> <p><i>City Comment: In addition to access to the County's Everbridge system, the City has an email notification system for residents to receive emergency alerts.</i></p>	County, municipal funding
4	All-Hazards	Local Planning & Regulations	Update County/City Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards. Utilize data of past hazard events and future climate projections to help inform updates.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS in coordination with Ramsey County Community and Economic Development and local municipal administrators, Planning & Zoning Committees	<p>Ramsey County has a "2030 Comprehensive Plan" prepared to meet the requirements of the Metropolitan Land Planning Act and the Metropolitan Council's 2030 Regional Development Framework. Ramsey County will encourage municipalities to update their local Comprehensive Plans to include considerations for mitigation in land use planning to reduce future risk to due to natural hazards (i.e., flooding).</p> <p><i>City Comment: We have a 20-year Comprehensive Plan (2008) that is designed to plan physical growth of the City and appropriate land uses.</i></p>	County funding

#	Hazard	Mitigation Strategy	City of Little Canada Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
6	All-Hazards	Local Planning & Regulations	Continue to update Emergency Operation Plans and COOP/COG plans to ensure that they adequately detail the needed steps to respond to all-hazards and ensure continuity of key government functions in the event of a disaster.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS maintains an Emergency Operations Plan (EOP) and the Ramsey County Continuity of Operations (COOP)/Continuity of Government (COG) plans as guides for emergency and/or recovery operations. These plans are intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.	County, municipal funding
9	All-Hazards	Education and Awareness	Continue to promote education & awareness on all-hazards and emergency preparedness for schools, individuals, families, and businesses.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Information is distributed to the public via RCEMHS Facebook/ Twitter and subscription-based programs (GovDelivery) on a regular basis. Additional information is provided during the NWS severe weather awareness weeks in spring and winter. RCEMHS also has a YouTube Channel where "Get Ready Gopher" educational videos on preparedness and severe weather training are posted. These are promoted to the schools as well as the larger public for viewing. Cities are encouraged to share information through their own existing channels (i.e., websites, social media, and local media).  <i>City Comment: The City participates in the National Weather Service's annual Severe Winter/Spring Weather Awareness Week.</i>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Little Canada Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
15	Severe Winter & Summer Storms	Education and Awareness	Continue to promote the use of NOAA weather radios by residents, schools, businesses, and facilities that house persons with functional and access needs.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS regularly promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. NOAA weather radios are recommended as an important way to receive emergency weather alerts from the NWS. Local city Emergency Managers are encouraged to ensure the placement of NOAA radios in key facilities within their communities.	County, municipal funding
16	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with municipal electrical cooperative and power companies to reduce overhead exposure of power lines that are vulnerable to damage from severe winter/summer storms (i.e., high winds, ice, and heavy snow). Replace overhead power lines with underground lines in areas with high-risk exposure (i.e. high tree concentration areas).	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works, Municipal Public Works in cooperation the appropriate utility company.	RC EMHS County and all cities will work as needed with their appropriate utility providers as needed to evaluate areas of concern. Service providers for Ramsey County include: <ul style="list-style-type: none"> <li>• Xcel Energy</li> <li>• Connexus Energy</li> <li>• North Saint Paul Utility Department</li> </ul> Areas of concern will be evaluated to see where putting lines underground may be feasible and make sense.	Coop / Electric Company funding, Possible FEMA HMA grant for Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Little Canada Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
17	Severe Winter & Summer Storms	Mitigation Preparedness and Response Support	Identify critical facilities or infrastructure that do not have generator backup power in the event of a major power outage resulting from severe winter or summer storms. (Examples of critical facilities include Police/ Fire departments, EOC's, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	<p>The Ramsey County Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner's Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power.</p> <p><b>Ramsey County's current priorities for generator backup power include:</b></p> <ul style="list-style-type: none"> <li>• Plato Building</li> <li>• Public Health and Emergency Management's Department Operations Center (DOC's)</li> <li>• Rec Centers and libraries that serve as cooling centers</li> <li>• Facilities designated for Mass Care Sheltering</li> <li>• Traffic Signal Systems</li> </ul> <p>Ramsey County and municipalities continue to assess what critical facilities need backup power. Working to mitigate against power outages also helps to mitigate other hazards.</p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Little Canada Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
18	Severe Winter & Summer Storms	Mitigation Preparedness and Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that should have backup power.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	Ramsey County, local municipal governments, and schools will evaluate feasibility to purchase and install generators for key facilities and will do so as funding allows.	County, municipal funding, Possible FEMA HMA grant for Generators
19	Severe Winter Weather	Mitigation Preparedness & Response Support	Continue to provide for public safety on roads through anti-icing (application of brine solution before an event), snow removal, salting and sanding to minimize the impacts of snow/ice accumulations on roadways.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works & Municipal Public Works	Ramsey County and its municipalities complete the snow removal from all county and municipal roads. MNDOT will remove the snow from Interstate and State Highways as well as disperse salt/sand as needed. Municipalities have snow emergency plans and ordinances in place.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Little Canada Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
22	Severe Summer Storms	Structure and Infrastructure Projects	Identify community areas, parks, and facilities (i.e., schools, government buildings, manufactured home parks) that are vulnerable to tornadoes and evaluate for potential construction or retrofit of safe rooms or storm shelters.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	RCEMHS and RC Parks & Rec will work to identify priority areas for evaluation for safe room construction or retrofit. Municipal EMAs will also work to evaluate areas of need for storm shelters or safe rooms, such as for local parks or manufactured home parks.	County, municipal funding
23	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	Ramsey County EMHS will seek to work with municipalities and schools to build community safe rooms where needed. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning. Any community safe room projects that the County is involved in will be part of the Ramsey County Emergency Management program. FEMA grant funding may be sought to support an eligible safe room project.	County, municipal funding, Possible FEMA HMA grant for Safe Rooms

#	Hazard	Mitigation Strategy	City of Little Canada Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
24	Severe Summer Storms	Local Planning & Regulations	Work to ensure Minnesota Department of Health (MDH) Evacuation Plan & Storm Shelter Requirements are met in municipalities with manufactured home parks.	On-going	High	2019-2023	Arden Hills, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, Roseville, Shoreview, Vadnais Heights	Municipal EMAs in coordination with RCEMHS and MHP Operators	<p>Ramsey County has identified 15 manufactured home parks (MHPs) in 8 municipalities that have trailer parks. Of those 15, 12 have identified they have shelters, one may have a shelter and one does not and one is unknown.</p> <p>Minnesota State Statue (327.205 Shelter Construction Standards) outlines the requirements for MHP's with less than 10 units / more than 10 units for evacuation plans and sheltering facilities for the residents of the park in times of high winds or tornadoes, as well as the responsibility of municipalities with MHPs to assist with/approve of evacuation &amp; shelter plans.</p> <p><i>City Comment: The City works with our 3 mobile home parks to follow MDH requirements.</i></p>	County, municipal funding, MHP Owner
30	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Enhance stormwater management plans and ordinances that require improvement of stormwater management systems, including for areas of new development and installation of infrastructure capable of handling a ten to twenty-year rain event. Identify and address where stormwater run-off capacity improvement projects are needed.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works and municipal Planning/Public Works depts. in coordination with local watershed organizations	<p>Ramsey County and local cities maintain stormwater management plans and work to identify, prioritize, and address highest risk areas. Mitigation examples may include to construct, retrofit, or maintain drainage systems to include sewage and water retention and detention systems.</p> <p>Outside funding to support stormwater improvement projects may be available through avenues such as the MN DNR Flood Hazard Mitigation Grants, MPCA, and FEMA HMA funding for flood reduction projects.</p>	County/City funding, SWCD, and Possible MPCA/PFA grant funding. Possible FEMA HMA grant for Localized Flood Reduction Projects or Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Little Canada Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
32	Flooding	Education & Awareness Programs / Structure & Infrastructure Projects	Provide information & technical assistance to property owners to help mitigate against localized flooding during high-rain events (i.e., landscaping / green infrastructure applications).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, RC Conservation District, and municipal planning/public works	This is an ongoing effort of Ramsey County in conjunction with local jurisdictions that have experienced flooding due to high rain events.	County/City Funding, Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation
33	Flooding	Local Planning & Regulations	Identify residential, commercial, government facilities, and/or critical infrastructure properties that may experience damage from future flooding and work to implement appropriate mitigation measures (including buy-out for property acquisition & structure demolition or relocation). Areas of focus may include previously unidentified flooding locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Public Works, RC Property Management, RC Conservation District, municipal EMA	In 2015, Ramsey County removed seven buildings, including critical infrastructure, from the Mississippi River floodplain. A permanent retaining wall along the bluff was completed in November 2017. Ramsey County remains owners of these properties and will work with the new developers and Saint Paul Emergency Management to provide technical assistance and support on flood protection systems and measures in the future.  Ramsey County and its municipalities will continue to evaluate properties that may be at risk of flooding and work with property owners to identify mitigation measure to reduce or eliminate future damages.	County, municipal funding, DNR Flood Mitigation Grant, US Army Corps of Engineers (USACE), Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

#	Hazard	Mitigation Strategy	City of Little Canada Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
37	Flooding	Local Planning & Regulations	Participate in the National Flood Insurance Program (NFIP) and enforce local floodplain ordinances to ensure that new construction is built above regulatory flood protection elevation.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, Municipal EMAs local city planning depts.	Ramsey County promotes, and all municipalities participate in the NFIP (except the City of North Oaks). Each city develops and enforces local floodplain ordinances.  <i>City Comment: We have a City Planning &amp; Zoning Commission that has established a Floodplain Ordinance. The City participates in the NFIP.</i>	County, municipal funding
38	Flooding	Structure & Infrastructure Projects	Identify, prioritize, and implement localized flood reduction measures to improve drainage systems and reduce over-the-road flooding to County or municipal roads.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, City Public Works, MnDOT, Watershed Districts,	Ramsey County Public Works and local city Public Works work to identify and address localized flood risk reduction projects.  <i>City Comment: The City has a City Engineer and a Public Works Supervisor that address road maintenance issues for flooding. The City also has an annual transportation plan to address road improvement projects that include culvert and drainage improvements to reduce over-the-road repetitive flooding. <b>Following is a priority area to be addressed where flooding is an issue in the City: Cty Rd B at 35-E.</b></i>	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Little Canada Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
42	Wildfire	Local Planning & Regulations	Continue to ensure the strong coordination between local fire departments to provide fire protection.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	There are 12 fire departments located in Ramsey County. All the municipal fire departments have mutual aid agreements with each contiguous department that borders their respective fire district, including those in adjoining counties. Written mutual aid agreements are on file with each city.	Local fire department funding
43	Wildfire	Local Planning & Regulations	Continue to enforce burning permits/restrictions.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	Burn permits are regulated by the fire departments in Ramsey County. An actual permit may or may not be required, however, each jurisdiction has rules/regulations available to all residents online.	Municipal or fire district funding

#	Hazard	Mitigation Strategy	City of Little Canada Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
47	Drought	Education & Awareness Programs	Promote water conservation measures to residents during periods of drought and enforce water conservation ordinances when needed.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, <b>Little Canada</b> , Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Conservation District & Local City planning depts.	Promoting water conservation during periods of drought is a standing effort of the County and local governments. The State of MN has a stateside drought response plan prepared by the MN DNR that the County may reference for guidance.	County, municipal funding

Table G - 6. Mitigation Actions Identified for Implementation by the City of Maplewood (2019-2023) (From Ramsey County Master Mitigation Action Chart)

#	Hazard	Mitigation Strategy	City of Maplewood Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
I	All-Hazards	Mitigation Preparedness & Response Support	Continue to ensure that all Ramsey County residents are aware of and sign-up for the County's Everbridge Emergency Notification System.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	Ramsey County Emergency Management & Homeland Security (RCEMHS) & Municipal Emergency Management Agencies (EMAs)	<p>This is a new effort of Ramsey County EMHS being rolled out in 2018. A link for the Everbridge for community sign up is provided on the Ramsey County EMHS website, and reminders are also posted using the Ramsey County EMHS Facebook Page. In addition to Everbridge, the County has IPAWS capabilities for targeted and county-wide emergency notifications.</p> <p>All city jurisdictions within the County are encouraged to promote sign up for the Everbridge system using their means of public outreach (websites, social media, local media).</p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Maplewood Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
4	All-Hazards	Local Planning & Regulations	Update County/City Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards. Utilize data of past hazard events and future climate projections to help inform updates.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS in coordination with Ramsey County Community and Economic Development and local municipal administrators, Planning & Zoning Committees	Ramsey County has a "2030 Comprehensive Plan" prepared to meet the requirements of the Metropolitan Land Planning Act and the Metropolitan Council's 2030 Regional Development Framework. Ramsey County will encourage municipalities to update their local Comprehensive Plans to include considerations for mitigation in land use planning to reduce future risk to due to natural hazards (i.e., flooding).  <i>City Comment: We have a 20-year Comprehensive Plan that is designed to plan physical growth of the City and appropriate land uses. A new plan is being produced and expected to be completed in 2018.</i>	County funding
6	All-Hazards	Local Planning & Regulations	Continue to update Emergency Operation Plans and COOP/COG plans to ensure that they adequately detail the needed steps to respond to all-hazards and ensure continuity of key government functions in the event of a disaster.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS maintains an Emergency Operations Plan (EOP) and the Ramsey County Continuity of Operations (COOP)/Continuity of Government (COG) plans as guides for emergency and/or recovery operations. These plans are intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Maplewood Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
9	All-Hazards	Education & Awareness Programs	Continue to promote education & awareness on all-hazards and emergency preparedness for schools, individuals, families, and businesses.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Information is distributed to the public via RCEMHS Facebook/ Twitter and subscription-based programs (GovDelivery) on a regular basis. Additional information is provided during the NWS severe weather awareness weeks in spring and winter. RCEMHS also has a YouTube Channel where “Get Ready Gopher” educational videos on preparedness and severe weather training are posted. These are promoted to the schools as well as the larger public for viewing. Cities are encouraged to share information through their own existing channels (i.e., websites, social media, and local media).  <i>City Comment: The City participates in the National Weather Service’s annual Severe Winter/Spring Weather Awareness Week. Our schools also practice tornado drills on annual basis.</i>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Maplewood Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
15	Severe Winter & Summer Storms	Education & Awareness Programs	Continue to promote the use of NOAA weather radios by residents, schools, businesses, and facilities that house persons with functional and access needs.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS regularly promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. NOAA weather radios are recommended as an important way to receive emergency weather alerts from the NWS. Local city Emergency Managers are encouraged to ensure the placement of NOAA radios in key facilities within their communities.	County, municipal funding
16	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with municipal electrical cooperative and power companies to reduce overhead exposure of power lines that are vulnerable to damage from severe winter/summer storms (i.e., high winds, ice, and heavy snow). Replace overhead power lines with underground lines in areas with high-risk exposure (i.e. high tree concentration areas).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works, Municipal Public Works in cooperation the appropriate utility company.	RC EMHS County and all cities will work as needed with their appropriate utility providers as needed to evaluate areas of concern. Service providers for Ramsey County include: <ul style="list-style-type: none"> <li>• Xcel Energy</li> <li>• Connexus Energy</li> <li>• North Saint Paul Utility Department</li> </ul> Areas of concern will be evaluated to see where putting lines underground may be feasible and make sense.	Coop / Electric Company funding, Possible FEMA HMA grant for Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Maplewood Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
17	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Identify critical facilities or infrastructure that do not have generator backup power in the event of a major power outage resulting from severe winter or summer storms. (Examples of critical facilities include Police/Fire departments, EOC's, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	<p>The Ramsey County Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner's Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power.</p> <p><b>Ramsey County's current priorities for generator backup power include:</b></p> <ul style="list-style-type: none"> <li>• Plato Building</li> <li>• Public Health and Emergency Management's Department Operations Center (DOC's)</li> <li>• Rec Centers and libraries that serve as cooling centers</li> <li>• Facilities designated for Mass Care Sheltering</li> <li>• Traffic Signal Systems</li> </ul> <p>Ramsey County and municipalities continue to assess what critical facilities need backup power. Working to mitigate against power outages also helps to mitigate other hazards.</p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Maplewood Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
18	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that should have backup power.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	Ramsey County, local municipal governments, and schools will evaluate feasibility to purchase and install generators for key facilities and will do so as funding allows.	County, municipal funding, Possible FEMA HMA grant for Generators
19	Severe Winter Weather	Mitigation Preparedness & Response Support	Continue to provide for public safety on roads through anti-icing (application of brine solution before an event), snow removal, salting and sanding to minimize the impacts of snow/ice accumulations on roadways.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works & Municipal Public Works	Ramsey County and its municipalities complete the snow removal from all county and municipal roads. MNDOT will remove the snow from Interstate and State Highways as well as disperse salt/sand as needed. Municipalities have snow emergency plans and ordinances in place.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Maplewood Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
22	Severe Summer Storms	Structure and Infrastructure Projects	Identify community areas, parks, and facilities (i.e., schools, government buildings, manufactured home parks) that are vulnerable to tornadoes and evaluate for potential construction or retrofit of safe rooms or storm shelters.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	RCEMHS and RC Parks & Rec will work to identify priority areas for evaluation for safe room construction or retrofit. Municipal EMAs will also work to evaluate areas of need for storm shelters or safe rooms, such as for local parks or manufactured home parks.	County, municipal funding
23	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	Ramsey County EMHS will seek to work with municipalities and schools to build community safe rooms where needed. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning. Any community safe room projects that the County is involved in will be part of the Ramsey County Emergency Management program. FEMA grant funding may be sought to support an eligible safe room project.	County, municipal funding, Possible FEMA HMA grant for Safe Rooms

#	Hazard	Mitigation Strategy	City of Maplewood Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
24	Severe Summer Storms	Local Planning & Regulations	Work to ensure Minnesota Department of Health (MDH) Evacuation Plan & Storm Shelter Requirements are met in municipalities with manufactured home parks.	On-going	High	2019-2023	Arden Hills, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, Roseville, Shoreview, Vadnais Heights	Municipal EMAs in coordination with RCEMHS and MHP Operators	<p>Ramsey County has identified 15 manufactured home parks (MHPs) in 8 municipalities that have trailer parks. Of those 15, 12 have identified they have shelters, one may have a shelter and one does not and one is unknown.</p> <p>Minnesota State Statute (327.205 Shelter Construction Standards) outlines the requirements for MHP's with less than 10 units / more than 10 units for evacuation plans and sheltering facilities for the residents of the park in times of high winds or tornadoes, as well as the responsibility of municipalities with MHPs to assist with/approve of evacuation &amp; shelter plans.</p> <p><i>City Comment: The City is working with our mobile home parks to follow MDH requirements. The MHP operators within our city have not met the storm shelter requirements.</i></p>	County, municipal funding, MHP Owner

#	Hazard	Mitigation Strategy	City of Maplewood Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
30	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Enhance stormwater management plans and ordinances that require improvement of stormwater management systems, including for areas of new development and installation of infrastructure capable of handling a ten to twenty-year rain event. Identify and address where stormwater run-off capacity improvement projects are needed.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works and municipal Planning/Public Works depts. in coordination with local watershed organizations	Ramsey County and local cities maintain stormwater management plans and work to identify, prioritize, and address highest risk areas. Mitigation examples may include to construct, retrofit, or maintain drainage systems to include sewage and water retention and detention systems.  Outside funding to support stormwater improvement projects may be available through avenues such as the MN DNR Flood Hazard Mitigation Grants, MPCA, and FEMA HMA funding for flood reduction projects.	County/City funding, SWCD, and Possible MPCA/PFA grant funding. Possible FEMA HMA grant for Localized Flood Reduction Projects or Infrastructure Retrofit
32	Flooding	Education & Awareness Programs / Structure & Infrastructure Projects	Provide information & technical assistance to property owners to help mitigate against localized flooding during high-rain events (i.e., landscaping / green infrastructure applications).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, RC Conservation District, and municipal planning/public works	This is an ongoing effort of Ramsey County in conjunction with local jurisdictions that have experienced flooding due to high rain events.	County/City Funding, Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

#	Hazard	Mitigation Strategy	City of Maplewood Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
33	Flooding	Local Planning & Regulations	Identify residential, commercial, government facilities, and/or critical infrastructure properties that may experience damage from future flooding and work to implement appropriate mitigation measures (including buy-out for property acquisition & structure demolition or relocation). Areas of focus may include previously unidentified flooding locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Public Works, RC Property Management, RC Conservation District, municipal EMA	<p>In 2015, Ramsey County removed seven buildings, including critical infrastructure, from the Mississippi River floodplain. A permanent retaining wall along the bluff was completed in November 2017. Ramsey County remains owners of these properties and will work with the new developers and Saint Paul Emergency Management to provide technical assistance and support on flood protection systems and measures in the future.</p> <p>Ramsey County and its municipalities will continue to evaluate properties that may be at risk of flooding and work with property owners to identify mitigation measure to reduce or eliminate future damages.</p>	County, municipal funding, DNR Flood Mitigation Grant, US Army Corps of Engineers (USACE), Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation
37	Flooding	Local Planning & Regulations	Participate in the National Flood Insurance Program (NFIP) and enforce local floodplain ordinances to ensure that new construction is built above regulatory flood protection elevation.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, Municipal EMAs local city planning depts.	<p>Ramsey County promotes, and all municipalities participate in the NFIP (except the City of North Oaks). Each city develops and enforces local floodplain ordinances.</p> <p><i>City Comment: We have a City Planning &amp; Zoning Commission that has established a Floodplain Ordinance. The City participates in the NFIP.</i></p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Maplewood Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
38	Flooding	Structure & Infrastructure Projects	Identify, prioritize, and implement localized flood reduction measures to improve drainage systems and reduce over-the-road flooding to County or municipal roads.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, City Public Works, MnDOT, Watershed Districts,	Ramsey County Public Works and local city Public Works work to identify and address localized flood risk reduction projects.  <i>City Comment: The City has a City Engineer and a Public Works Supervisor that address road maintenance issues for flooding. The City also has an annual transportation plan to address road improvement projects that include culvert and drainage improvements to reduce over-the-road repetitive flooding. <b>Following is a priority area to be addressed where flooding is an issue in the City: Cty Rd B at 35-E.</b></i>	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit
42	Wildfire	Local Planning & Regulations	Continue to ensure the strong coordination between local fire departments to provide fire protection.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	There are 12 fire departments located in Ramsey County. All the municipal fire departments have mutual aid agreements with each contiguous department that borders their respective fire district, including those in adjoining counties. Written mutual aid agreements are on file with each city.	Local fire department funding

#	Hazard	Mitigation Strategy	City of Maplewood Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
43	Wildfire	Local Planning & Regulations	Continue to enforce burning permits/restrictions.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	Burn permits are regulated by the fire departments in Ramsey County. An actual permit may or may not be required, however, each jurisdiction has rules/regulations available to all residents online.	Municipal or fire district funding
47	Drought	Education & Awareness Programs	Promote water conservation measures to residents during periods of drought and enforce water conservation ordinances when needed.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, <b>Maplewood</b> , Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Conservation District & Local City planning depts.	Promoting water conservation during periods of drought is a standing effort of the County and local governments. The State of MN has a stateside drought response plan prepared by the MN DNR that the County may reference for guidance.	County, municipal funding

Table G - 7. Mitigation Actions Identified for Implementation by the City of Mounds View (2019-2023) (From Ramsey County Master Mitigation Action Chart)

#	Hazard	Mitigation Strategy	City of Mounds View Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
1	All-Hazards	Mitigation Preparedness & Response Support	Continue to ensure that all Ramsey County residents are aware of and sign-up for the County's Everbridge Emergency Notification System.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	Ramsey County Emergency Management & Homeland Security (RCEMHS) & Municipal Emergency Management Agencies (EMAs)	<p>This is a new effort of Ramsey County EMHS being rolled out in 2018. A link for the Everbridge for community sign up is provided on the Ramsey County EMHS website, and reminders are also posted using the Ramsey County EMHS Facebook Page. In addition to Everbridge, the County has IPAWS capabilities for targeted and county-wide emergency notifications.</p> <p>All city jurisdictions within the County are encouraged to promote sign up for the Everbridge system using their means of public outreach (websites, social media, local media).</p>	County, municipal funding
4	All-Hazards	Local Planning & Regulations	Update County/City Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards. Utilize data of past hazard events and future climate projections to help inform updates.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS in coordination with Ramsey County Community and Economic Development and local municipal administrators, Planning & Zoning Committees	<p>Ramsey County has a "2030 Comprehensive Plan" prepared to meet the requirements of the Metropolitan Land Planning Act and the Metropolitan Council's 2030 Regional Development Framework. Ramsey County will encourage municipalities to update their local Comprehensive Plans to include considerations for mitigation in land use planning to reduce future risk to due to natural hazards (i.e., flooding).</p> <p><i>City Comment: The City Planner is currently working on a Comprehensive Plan that is designed to plan physical growth of the city and appropriate land uses. We need to update our Comp Plan to address greater hazard mitigation (i.e., flooding).</i></p>	County funding

#	Hazard	Mitigation Strategy	City of Mounds View Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
6	All-Hazards	Local Planning & Regulations	Continue to update Emergency Operation Plans and COOP/COG plans to ensure that they adequately detail the needed steps to respond to all-hazards and ensure continuity of key government functions in the event of a disaster.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS maintains an Emergency Operations Plan (EOP) and the Ramsey County Continuity of Operations (COOP)/Continuity of Government (COG) plans as guides for emergency and/or recovery operations. These plans are intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Mounds View Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
9	All-Hazards	Education & Awareness Programs	Continue to promote education & awareness on all-hazards and emergency preparedness for schools, individuals, families, and businesses.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	<p>Information is distributed to the public via RCEMHS Facebook/ Twitter and subscription-based programs (GovDelivery) on a regular basis. Additional information is provided during the NWS severe weather awareness weeks in spring and winter. RCEMHS also has a YouTube Channel where "Get Ready Gopher" educational videos on preparedness and severe weather training are posted. These are promoted to the schools as well as the larger public for viewing. Cities are encouraged to share information through their own existing channels (i.e., websites, social media, and local media).</p> <p><i>City Comment: The City participates in the National Weather Service's annual Severe Winter/Spring Weather Awareness Week. Our schools also practice tornado drills on an annual basis. The City's Fire Dept. also educates homeowners on implementing fuel-reduction measures around homes in areas adjacent to woodland areas for wildland fire safety.</i></p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Mounds View Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
15	Severe Winter & Summer Storms	Education & Awareness Programs	Continue to promote the use of NOAA weather radios by residents, schools, businesses, and facilities that house persons with functional and access needs.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS regularly promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. NOAA weather radios are recommended as an important way to receive emergency weather alerts from the NWS. Local city Emergency Managers are encouraged to ensure the placement of NOAA radios in key facilities within their communities.	County, municipal funding
16	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with municipal electrical cooperative and power companies to reduce overhead exposure of power lines that are vulnerable to damage from severe winter/summer storms (i.e., high winds, ice, and heavy snow). Replace overhead power lines with underground lines in areas with high-risk exposure (i.e. high tree concentration areas).	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works, Municipal Public Works in cooperation the appropriate utility company.	RC EMHS County and all cities will work as needed with their appropriate utility providers as needed to evaluate areas of concern. Service providers for Ramsey County include: <ul style="list-style-type: none"> <li>• Xcel Energy</li> <li>• Connexus Energy</li> <li>• North Saint Paul Utility Department</li> </ul> Areas of concern will be evaluated to see where putting lines underground may be feasible and make sense.	Coop / Electric Company funding, Possible FEMA HMA grant for Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Mounds View Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
17	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Identify critical facilities or infrastructure that do not have generator backup power in the event of a major power outage resulting from severe winter or summer storms. (Examples of critical facilities include Police/Fire departments, EOC's, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	<p>The Ramsey County Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner's Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power.</p> <p><b>Ramsey County's current priorities for generator backup power include:</b></p> <ul style="list-style-type: none"> <li>• Plato Building</li> <li>• Public Health and Emergency Management's Department Operations Center (DOC's)</li> <li>• Rec Centers and libraries that serve as cooling centers</li> <li>• Facilities designated for Mass Care Sheltering</li> <li>• Traffic Signal Systems</li> </ul> <p>Ramsey County and municipalities continue to assess what critical facilities need backup power. Working to mitigate against power outages also helps to mitigate other hazards.</p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Mounds View Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
18	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that should have backup power.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	Ramsey County, local municipal governments, and schools will evaluate feasibility to purchase and install generators for key facilities and will do so as funding allows.	County, municipal funding, Possible FEMA HMA grant for Generators
19	Severe Winter Weather	Mitigation Preparedness & Response Support	Continue to provide for public safety on roads through anti-icing (application of brine solution before an event), snow removal, salting and sanding to minimize the impacts of snow/ice accumulations on roadways.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works & Municipal Public Works	Ramsey County and its municipalities complete the snow removal from all county and municipal roads. MNDOT will remove the snow from Interstate and State Highways as well as disperse salt/sand as needed. Municipalities have snow emergency plans and ordinances in place.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Mounds View Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
22	Severe Summer Storms	Structure and Infrastructure Projects	Identify community areas, parks, and facilities (i.e., schools, government buildings, manufactured home parks) that are vulnerable to tornadoes and evaluate for potential construction or retrofit of safe rooms or storm shelters.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	RCEMHS and RC Parks & Rec will work to identify priority areas for evaluation for safe room construction or retrofit. Municipal EMAs will also work to evaluate areas of need for storm shelters or safe rooms, such as for local parks or manufactured home parks.	County, municipal funding
23	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	Ramsey County EMHS will seek to work with municipalities and schools to build community safe rooms where needed. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning. Any community safe room projects that the County is involved in will be part of the Ramsey County Emergency Management program. FEMA grant funding may be sought to support an eligible safe room project.	County, municipal funding, Possible FEMA HMA grant for Safe Rooms

#	Hazard	Mitigation Strategy	City of Mounds View Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
24	Severe Summer Storms	Local Planning & Regulations	Work to ensure Minnesota Department of Health (MDH) Evacuation Plan & Storm Shelter Requirements are met in municipalities with manufactured home parks.	On-going	High	2019-2023	Arden Hills, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, Roseville, Shoreview, Vadnais Heights	Municipal EMAs in coordination with RCEMHS and MHP Operators	<p>Ramsey County has identified 15 manufactured home parks (MHPs) in 8 municipalities that have trailer parks. Of those 15, 12 have identified they have shelters, one may have a shelter and one does not and one is unknown.</p> <p>Minnesota State Statute (327.205 Shelter Construction Standards) outlines the requirements for MHP's with less than 10 units / more than 10 units for evacuation plans and sheltering facilities for the residents of the park in times of high winds or tornadoes, as well as the responsibility of municipalities with MHPs to assist with/approve of evacuation &amp; shelter plans.</p> <p><i>City Comment: The City works with our 3 mobile home parks to follow MDH requirements. We recently inspected all the storm shelters in 2017.</i></p>	County, municipal funding, MHP Owner
30	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Enhance stormwater management plans and ordinances that require improvement of stormwater management systems, including for areas of new development and installation of infrastructure capable of handling a ten to twenty-year rain event. Identify and address where stormwater run-off capacity improvement projects are needed.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works and municipal Planning/Public Works depts. in coordination with local watershed organizations	<p>Ramsey County and local cities maintain stormwater management plans and work to identify, prioritize, and address highest risk areas. Mitigation examples may include to construct, retrofit, or maintain drainage systems to include sewage and water retention and detention systems.</p> <p>Outside funding to support stormwater improvement projects may be available through avenues such as the MN DNR Flood Hazard Mitigation Grants, MPCA, and FEMA HMA funding for flood reduction projects.</p>	County/City funding, SWCD, and Possible MPCA/PFA grant funding. Possible FEMA HMA grant for Localized Flood Reduction Projects or Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Mounds View Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
32	Flooding	Education & Awareness Programs / Structure & Infrastructure Projects	Provide information & technical assistance to property owners to help mitigate against localized flooding during high-rain events (i.e., landscaping / green infrastructure applications).	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, RC Conservation District, and municipal planning/public works	This is an ongoing effort of Ramsey County in conjunction with local jurisdictions that have experienced flooding due to high rain events.	County/City Funding, Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation
33	Flooding	Local Planning & Regulations	Identify residential, commercial, government facilities, and/or critical infrastructure properties that may experience damage from future flooding and work to implement appropriate mitigation measures (including buy-out for property acquisition & structure demolition or relocation). Areas of focus may include previously unidentified flooding locations.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Public Works, RC Property Management, RC Conservation District, municipal EMA	In 2015, Ramsey County removed seven buildings, including critical infrastructure, from the Mississippi River floodplain. A permanent retaining wall along the bluff was completed in November 2017. Ramsey County remains owners of these properties and will work with the new developers and Saint Paul Emergency Management to provide technical assistance and support on flood protection systems and measures in the future.  Ramsey County and its municipalities will continue to evaluate properties that may be at risk of flooding and work with property owners to identify mitigation measure to reduce or eliminate future damages.	County, municipal funding, DNR Flood Mitigation Grant, US Army Corps of Engineers (USACE), Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

#	Hazard	Mitigation Strategy	City of Mounds View Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
37	Flooding	Local Planning & Regulations	Participate in the National Flood Insurance Program (NFIP) and enforce local floodplain ordinances to ensure that new construction is built above regulatory flood protection elevation.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, Municipal EMAs local city planning depts.	Ramsey County promotes, and all municipalities participate in the NFIP (except the City of North Oaks). Each city develops and enforces local floodplain ordinances.  <i>City Comment: We have a City Planning &amp; Zoning Commission that has established a Floodplain Ordinance. The City participates in the NFIP.</i>	County, municipal funding
38	Flooding	Structure & Infrastructure Projects	Identify, prioritize, and implement localized flood reduction measures to improve drainage systems and reduce over-the-road flooding to County or municipal roads.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, City Public Works, MnDOT, Watershed Districts,	Ramsey County Public Works and local city Public Works work to identify and address localized flood risk reduction projects.  <i>City Comment: The City has a City Engineer and a Public Works Supervisor that address road maintenance issues for flooding. The City also has an annual transportation plan to address road improvement projects that include culvert and drainage improvements to reduce over-the-road repetitive flooding. <b>Following is a priority area to be addressed where flooding is an issue in the City: Mounds View Blvd between Silver Lake Rd and Cty Rd I.</b></i>	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Mounds View Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
39	Flooding	Local Planning & Regulations	Ensure that wellhead protection plans are in place to address flooding that may lead to contaminated drinking water.	New	High	2019-2023	Mounds View, New Brighton, North Saint Paul, Shoreview, White Bear Lake (partially), White Bear Township, Saint Paul Regional Water Services (Have a surface water and wellhead protection plan), St. Anthony Village (partially), Vadnais Heights	RC Public Works, MN Dept. of Health and local city public works depts.	Municipalities that use well water have and maintain a Wellhead Protection Plan. This plan presents the actions that will be taken to manage potential contamination sources that may present a risk to the quality of the community's drinking water. MDH assists public water suppliers with preparing and implementing wellhead protection plans.	MDH Source Water Protection grant funding for wellhead improvement projects
42	Wildfire	Local Planning & Regulations	Continue to ensure the strong coordination between local fire departments to provide fire protection.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	There are 12 fire departments located in Ramsey County. All the municipal fire departments have mutual aid agreements with each contiguous department that borders their respective fire district, including those in adjoining counties. Written mutual aid agreements are on file with each city.	Local fire department funding

#	Hazard	Mitigation Strategy	City of Mounds View Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
43	Wildfire	Local Planning & Regulations	Continue to enforce burning permits/restrictions.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	Burn permits are regulated by the fire departments in Ramsey County. An actual permit may or may not be required, however, each jurisdiction has rules/regulations available to all residents online.	Municipal or fire district funding
47	Drought	Education & Awareness Programs	Promote water conservation measures to residents during periods of drought and enforce water conservation ordinances when needed.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, <b>Mounds View</b> , New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Conservation District & Local City planning depts.	Promoting water conservation during periods of drought is a standing effort of the County and local governments. The State of MN has a stateside drought response plan prepared by the MN DNR that the County may reference for guidance.	County, municipal funding

Table G - 8. Mitigation Actions Identified for Implementation by the City of New Brighton (2019-2023) (From Ramsey County Master Mitigation Action Chart)

#	Hazard	Mitigation Strategy	City of New Brighton Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
I	All-Hazards	Mitigation Preparedness & Response Support	Continue to ensure that all Ramsey County residents are aware of and sign-up for the County's Everbridge Emergency Notification System.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	Ramsey County Emergency Management & Homeland Security (RCEMHS) & Municipal Emergency Management Agencies (EMAs)	<p>This is a new effort of Ramsey County EMHS being rolled out in 2018. A link for the Everbridge for community sign up is provided on the Ramsey County EMHS website, and reminders are also posted using the Ramsey County EMHS Facebook Page. In addition to Everbridge, the County has IPAWS capabilities for targeted and countywide emergency notifications.</p> <p>All city jurisdictions within the County are encouraged to promote sign up for the Everbridge system using their means of public outreach (websites, social media, local media).</p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of New Brighton Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
4	All-Hazards	Local Planning & Regulations	Update County/City Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards. Utilize data of past hazard events and future climate projections to help inform updates.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS in coordination with Ramsey County Community and Economic Development and local municipal administrators, Planning & Zoning Committees	Ramsey County has a “2030 Comprehensive Plan” prepared to meet the requirements of the Metropolitan Land Planning Act and the Metropolitan Council’s 2030 Regional Development Framework. Ramsey County will encourage municipalities to update their local Comprehensive Plans to include considerations for mitigation in land use planning to reduce future risk to due to natural hazards (i.e., flooding).  <i>City Comment: We have a 10-year Comprehensive Plan that will be updated in 2018 that is designed to plan physical growth of the City and appropriate land uses. We need to update our 2018 Comprehensive Plan to address greater mitigation (i.e., flooding). With the Ongoing issues of climate change, we are seeing an increase in the number of high-rain events. Our Comp Plan will take new data into consideration as we plan of our city.</i>	County funding

#	Hazard	Mitigation Strategy	City of New Brighton Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
6	All-Hazards	Local Planning & Regulations	Continue to update Emergency Operation Plans and COOP/COG plans to ensure that they adequately detail the needed steps to respond to all-hazards and ensure continuity of key government functions in the event of a disaster.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS maintains an Emergency Operations Plan (EOP) and the Ramsey County Continuity of Operations (COOP)/Continuity of Government (COG) plans as guides for emergency and/or recovery operations. These plans are intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.	County, municipal funding

#	Hazard	Mitigation Strategy	City of New Brighton Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
9	All-Hazards	Education & Awareness Programs	Continue to promote education & awareness on all-hazards and emergency preparedness for schools, individuals, families, and businesses.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	<p>Information is distributed to the public via RCEMHS Facebook/ Twitter and subscription-based programs (GovDelivery) on a regular basis. Additional information is provided during the NWS severe weather awareness weeks in spring and winter. RCEMHS also has a YouTube Channel where “Get Ready Gopher” educational videos on preparedness and severe weather training are posted. These are promoted to the schools as well as the larger public for viewing. Cities are encouraged to share information through their own existing channels (i.e., websites, social media, and local media).</p> <p><i>City Comment: The City participates in the National Weather Service’s annual Severe Winter/Spring Weather Awareness Week. Our schools also practice tornado drills on an annual basis. The City’s Fire Dept. also educates homeowners on implementing fuel-reduction measures around homes in areas adjacent to woodland areas for wildland fire safety.</i></p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of New Brighton Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
15	Severe Winter & Summer Storms	Education & Awareness Programs	Continue to promote the use of NOAA weather radios by residents, schools, businesses, and facilities that house persons with functional and access needs.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS regularly promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. NOAA weather radios are recommended as an important way to receive emergency weather alerts from the NWS. Local city Emergency Managers are encouraged to ensure the placement of NOAA radios in key facilities within their communities.	County, municipal funding
16	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with municipal electrical cooperative and power companies to reduce overhead exposure of power lines that are vulnerable to damage from severe winter/summer storms (i.e., high winds, ice, and heavy snow). Replace overhead power lines with underground lines in areas with high-risk exposure (i.e. high tree concentration areas).	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works, Municipal Public Works in cooperation the appropriate utility company.	RC EMHS County and all cities will work as needed with their appropriate utility providers as needed to evaluate areas of concern. Service providers for Ramsey County include: Xcel Energy, Connexus Energy & North Saint Paul Utility Department.  Areas of concern will be evaluated to see where putting lines underground may be feasible and make sense.  <i>City Comment: The City has worked with private energy partner to place power lines underground during construction and re-construction projects. The City wishes to continue efforts to place power lines underground where feasible.</i>	Coop / Electric Company funding, Possible FEMA HMA grant for Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of New Brighton Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
17	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Identify critical facilities or infrastructure that do not have generator backup power in the event of a major power outage resulting from severe winter or summer storms. (Examples of critical facilities include Police/Fire departments, EOC's, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	<p>The Ramsey County Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner's Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power.</p> <p><b>Ramsey County's current priorities for generator backup power include:</b>                      Plato Building                      Public Health and Emergency Management's Department Operations Center (DOC's)                      Rec Centers and libraries that serve as cooling centers                      Facilities designated for Mass Care Sheltering                      Traffic Signal Systems</p> <p>Ramsey County and municipalities continue to assess what critical facilities need backup power. Working to mitigate against power outages also helps to mitigate other hazards.</p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of New Brighton Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
18	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that should have backup power.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	Ramsey County, local municipal governments, and schools will evaluate feasibility to purchase and install generators for key facilities and will do so as funding allows.	County, municipal funding, Possible FEMA HMA grant for Generators
19	Severe Winter Weather	Mitigation Preparedness & Response Support	Continue to provide for public safety on roads through anti-icing (application of brine solution before an event), snow removal, salting and sanding to minimize the impacts of snow/ice accumulations on roadways.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works & Municipal Public Works	Ramsey County and its municipalities complete the snow removal from all county and municipal roads. MNDOT will remove the snow from Interstate and State Highways as well as disperse salt/sand as needed. Municipalities have snow emergency plans and ordinances in place.	County, municipal funding

#	Hazard	Mitigation Strategy	City of New Brighton Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
22	Severe Summer Storms	Structure and Infrastructure Projects	Identify community areas, parks, and facilities (i.e., schools, government buildings, manufactured home parks) that are vulnerable to tornadoes and evaluate for potential construction or retrofit of safe rooms or storm shelters.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	RCEMHS and RC Parks & Rec will work to identify priority areas for evaluation for safe room construction or retrofit. Municipal EMAs will also work to evaluate areas of need for storm shelters or safe rooms, such as for local parks or manufactured home parks.	County, municipal funding
23	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	Ramsey County EMHS will seek to work with municipalities and schools to build community safe rooms where needed. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning. Any community safe room projects that the County is involved in will be part of the Ramsey County Emergency Management program. FEMA grant funding may be sought to support an eligible safe room project.	County, municipal funding, Possible FEMA HMA grant for Safe Rooms

#	Hazard	Mitigation Strategy	City of New Brighton Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
24	Severe Summer Storms	Local Planning & Regulations	Work to ensure Minnesota Department of Health (MDH) Evacuation Plan & Storm Shelter Requirements are met in municipalities with manufactured home parks.	On-going	High	2019-2023	Arden Hills, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , Roseville, Shoreview, Vadnais Heights	Municipal EMAs in coordination with RCEMHS and MHP Operators	<p>Ramsey County has identified 15 manufactured home parks (MHPs) in 8 municipalities that have trailer parks. Of those 15, 12 have identified they have shelters, one may have a shelter and one does not and one is unknown.</p> <p>Minnesota State Statue (327.205 Shelter Construction Standards) outlines the requirements for MHP's with less than 10 units / more than 10 units for evacuation plans and sheltering facilities for the residents of the park in times of high winds or tornadoes, as well as the responsibility of municipalities with MHPs to assist with/approve of evacuation &amp; shelter plans.</p> <p><i>City Comment: The City will continue to work with mobile home park operators that have not met MDH requirements.</i></p>	County, municipal funding, MHP Owner

#	Hazard	Mitigation Strategy	City of New Brighton Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
30	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Enhance stormwater management plans and ordinances that require improvement of stormwater management systems, including for areas of new development and installation of infrastructure capable of handling a ten to twenty-year rain event. Identify and address where stormwater run-off capacity improvement projects are needed.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works and municipal Planning/Public Works depts. in coordination with local watershed organizations	Ramsey County and local cities maintain stormwater management plans and work to identify, prioritize, and address highest risk areas.  <i>City Comment: The City has invested in infrastructure improvements to increase the retention ability of our stormwater system and is working to implement additional rainwater retention &amp; flood control activities. <b>Priority Projects for the City include:</b> Replace storm sewer pipes under TH 35W and TH 694; Addition of storm sewer mitigation techniques on private property to aid repetitive flooding at a large apartment complex; Removal of sediment and revision of drainage strategies to reduce/remove flooding potential to a local mobile home park and businesses in Roseville/New Brighton from a basin that receives drainage from over 3,000 acres of densely developed property; and Installation of a new culvert from Rush Lake to avoid impacts of a beaver dam.</i>	County/City funding, SWCD, and Possible MPCA/PFA grant funding. Possible FEMA HMA grant for Localized Flood Reduction Projects or Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of New Brighton Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
32	Flooding	Education & Awareness Programs / Structure & Infrastructure Projects	Provide information & technical assistance to property owners to help mitigate against localized flooding during high-rain events (i.e., landscaping / green infrastructure applications).	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, RC Conservation District, and municipal planning/public works	This is an ongoing effort of Ramsey County in conjunction with local jurisdictions that have experienced flooding due to high rain events.	County/City Funding, Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

#	Hazard	Mitigation Strategy	City of New Brighton Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
33	Flooding	Local Planning & Regulations	Identify residential, commercial, government facilities, and/or critical infrastructure properties that may experience damage from future flooding and work to implement appropriate mitigation measures (including buy-out for property acquisition & structure demolition or relocation). Areas of focus may include previously unidentified flooding locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Public Works, RC Property Management, RC Conservation District, municipal EMA	<p>In 2015, Ramsey County removed seven buildings, including critical infrastructure, from the Mississippi River floodplain. A permanent retaining wall along the bluff was completed in November 2017. Ramsey County remains owners of these properties and will work with the new developers and Saint Paul Emergency Management to provide technical assistance and support on flood protection systems and measures in the future.</p> <p>Ramsey County and its municipalities will continue to evaluate properties that may be at risk of flooding and work with property owners to identify mitigation measure to reduce or eliminate future damages.</p> <p><i>City Comment: The City needs additional funding to buy out properties and roads that experience repetitive flooding.</i></p>	County, municipal funding, DNR Flood Mitigation Grant, US Army Corps of Engineers (USACE), Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

#	Hazard	Mitigation Strategy	City of New Brighton Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
37	Flooding	Local Planning & Regulations	Participate in the National Flood Insurance Program (NFIP) and enforce local floodplain ordinances to ensure that new construction is built above regulatory flood protection elevation.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, Municipal EMAs local city planning depts.	Ramsey County promotes, and all municipalities participate in the NFIP (except the City of North Oaks). Each city develops and enforces local floodplain ordinances.  <i>City Comment: We have a City Planning &amp; Zoning Commission that has established a Floodplain Ordinance. The City participates in the NFIP.</i>	County, municipal funding
38	Flooding	Structure & Infrastructure Projects	Identify, prioritize, and implement localized flood reduction measures to improve drainage systems and reduce over-the-road flooding to County or municipal roads.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, City Public Works, MnDOT, Watershed Districts,	Ramsey County Public Works and local city Public Works work to identify and address localized flood risk reduction projects.  <i>City Comment: The City of New Brighton has a City Engineer and a Public Works Superintendent that address road maintenance issues for flooding. The City also has a Comprehensive Street Plan to address road improvement projects, and a Capital Improvement Plan includes 20-years of drainage improvements to improve over-the-road repetitive flooding. <b>Following is a priority area to be addressed where flooding is an issue in the City: Silver Lake Rd south of Silver Lane.</b></i>	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of New Brighton Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
39	Flooding	Local Planning & Regulations	Ensure that wellhead protection plans are in place to address flooding that may lead to contaminated drinking water.	New	High	2019-2023	Mounds View, <b>New Brighton</b> , North Saint Paul, Shoreview, White Bear Lake (partially), White Bear Township, Saint Paul Regional Water Services (Have a surface water and wellhead protection plan), St. Anthony Village (partially), Vadnais Heights	RC Public Works, MN Dept. of Health and local city public works depts.	Municipalities that use well water have and maintain a Wellhead Protection Plan. This plan presents the actions that will be taken to manage potential contamination sources that may present a risk to the quality of the community's drinking water. MDH assists public water suppliers with preparing and implementing wellhead protection plans.	MDH Source Water Protection grant funding for wellhead improvement projects
42	Wildfire	Local Planning & Regulations	Continue to ensure the strong coordination between local fire departments to provide fire protection.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	There are 12 fire departments located in Ramsey County. All the municipal fire departments have mutual aid agreements with each contiguous department that borders their respective fire district, including those in adjoining counties. Written mutual aid agreements are on file with each city.	Local fire department funding

#	Hazard	Mitigation Strategy	City of New Brighton Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
43	Wildfire	Local Planning & Regulations	Continue to enforce burning permits/restrictions.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	Burn permits are regulated by the fire departments in Ramsey County. An actual permit may or may not be required, however, each jurisdiction has rules/regulations available to all residents online.	Municipal or fire district funding
47	Drought	Education & Awareness Programs	Promote water conservation measures to residents during periods of drought and enforce water conservation ordinances when needed.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, <b>New Brighton</b> , North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Conservation District & Local City planning depts.	Promoting water conservation during periods of drought is a standing effort of the County and local governments. The State of MN has a stateside drought response plan prepared by the MN DNR that the County may reference for guidance.	County, municipal funding

Table G - 9. Mitigation Actions Identified for Implementation by the City of North Oaks (2019-2023) (From Ramsey County Master Mitigation Action Chart)

#	Hazard	Mitigation Strategy	City of North Oaks Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
1	All-Hazards	Mitigation Preparedness & Response Support	Continue to ensure that all Ramsey County residents are aware of and sign-up for the County's Everbridge Emergency Notification System.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North Oaks</b> , North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	Ramsey County Emergency Management & Homeland Security (RCEMHS) & Municipal Emergency Management Agencies (EMAs)	<p>This is a new effort of Ramsey County EMHS being rolled out in 2018. A link for the Everbridge for community sign up is provided on the Ramsey County EMHS website, and reminders are also posted using the Ramsey County EMHS Facebook Page. In addition to Everbridge, the County has IPAWS capabilities for targeted and countywide emergency notifications.</p> <p>All city jurisdictions within the County are encouraged to promote sign up for the Everbridge system using their means of public outreach (websites, social media, local media).</p>	County, municipal funding
4	All-Hazards	Local Planning & Regulations	Update County/City Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards. Utilize data of past hazard events and future climate projections to help inform updates.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North Oaks</b> , North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS in coordination with Ramsey County Community and Economic Development and local municipal administrators, Planning & Zoning Committees	<p>Ramsey County has a "2030 Comprehensive Plan" prepared to meet the requirements of the Metropolitan Land Planning Act and the Metropolitan Council's 2030 Regional Development Framework. Ramsey County will encourage municipalities to update their local Comprehensive Plans to include considerations for mitigation in land use planning to reduce future risk to due to natural hazards (i.e., flooding).</p> <p><i>City Comment: The City has a Comprehensive Plan that is updated every 10 years.</i></p>	County funding

#	Hazard	Mitigation Strategy	City of North Oaks Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
6	All-Hazards	Local Planning & Regulations	Continue to update Emergency Operation Plans and COOP/COG plans to ensure that they adequately detail the needed steps to respond to all-hazards and ensure continuity of key government functions in the event of a disaster.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North Oaks</b> , North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS maintains an Emergency Operations Plan (EOP) and the Ramsey County Continuity of Operations (COOP)/Continuity of Government (COG) plans as guides for emergency and/or recovery operations. These plans are intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.	County, municipal funding
9	All-Hazards	Education & Awareness Programs	Continue to promote education & awareness on all-hazards and emergency preparedness for schools, individuals, families, and businesses.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North Oaks</b> , North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Information is distributed to the public via RCEMHS Facebook/ Twitter and subscription-based programs (GovDelivery) on a regular basis. Additional information is provided during the NWS severe weather awareness weeks in spring and winter. RCEMHS also has a YouTube Channel where “Get Ready Gopher” educational videos on preparedness and severe weather training are posted. These are promoted to the schools as well as the larger public for viewing. Cities are encouraged to share information through their own existing channels (i.e., websites, social media, and local media).	County, municipal funding

#	Hazard	Mitigation Strategy	City of North Oaks Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
15	Severe Winter & Summer Storms	Education & Awareness Programs	Continue to promote the use of NOAA weather radios by residents, schools, businesses, and facilities that house persons with functional and access needs.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North Oaks</b> , North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS regularly promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. NOAA weather radios are recommended as an important way to receive emergency weather alerts from the NWS. Local city Emergency Managers are encouraged to ensure the placement of NOAA radios in key facilities within their communities.  <i>City Comment: The City wishes to encourage more residents to purchase weather radios instead of depending on storm sirens in the event of severe wind or tornado events. Due to the rolling terrain of our City it is not possible to install more warning sirens and would be cost prohibitive.</i>	County, municipal funding
16	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with municipal electrical cooperative and power companies to reduce overhead exposure of power lines that are vulnerable to damage from severe winter/summer storms (i.e., high winds, ice, and heavy snow). Replace overhead power lines with underground lines in areas with high-risk exposure (i.e. high tree concentration areas).	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North Oaks</b> , North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works, Municipal Public Works in cooperation the appropriate utility company.	RC EMHS County and all cities will work as needed with their appropriate utility providers as needed to evaluate areas of concern. Service providers for Ramsey County include: Xcel Energy, Connexus Energy & North Saint Paul Utility Department.  Areas of concern will be evaluated to see where putting lines underground may be feasible and make sense.	Coop / Electric Company funding, Possible FEMA HMA grant for Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of North Oaks Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
17	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Identify critical facilities or infrastructure that do not have generator backup power in the event of a major power outage resulting from severe winter or summer storms. (Examples of critical facilities include Police/Fire departments, EOC's, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North Oaks</b> , North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	<p>The Ramsey County Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner's Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power.</p> <p><b>Ramsey County's current priorities for generator backup power include:</b>                      Plato Building                      Public Health and Emergency Management's Department Operations Center (DOC's)                      Rec Centers and libraries that serve as cooling centers                      Facilities designated for Mass Care Sheltering                      Traffic Signal Systems</p> <p>Ramsey County and municipalities continue to assess what critical facilities need backup power. Working to mitigate against power outages also helps to mitigate other hazards.</p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of North Oaks Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
18	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that should have backup power.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North Oaks</b> , North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	Ramsey County, local municipal governments, and schools will evaluate feasibility to purchase and install generators for key facilities and will do so as funding allows.	County, municipal funding, Possible FEMA HMA grant for Generators
19	Severe Winter Weather	Mitigation Preparedness & Response Support	Continue to provide for public safety on roads through anti-icing (application of brine solution before an event), snow removal, salting and sanding to minimize the impacts of snow/ice accumulations on roadways.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North Oaks</b> , North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works & Municipal Public Works	Ramsey County and its municipalities complete the snow removal from all county and municipal roads. MNDOT will remove the snow from Interstate and State Highways as well as disperse salt/sand as needed. Municipalities have snow emergency plans and ordinances in place.	County, municipal funding

#	Hazard	Mitigation Strategy	City of North Oaks Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
22	Severe Summer Storms	Structure and Infrastructure Projects	Identify community areas, parks, and facilities (i.e., schools, government buildings, manufactured home parks) that are vulnerable to tornadoes and evaluate for potential construction or retrofit of safe rooms or storm shelters.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North Oaks</b> , North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	RCEMHS and RC Parks & Rec will work to identify priority areas for evaluation for safe room construction or retrofit. Municipal EMAs will also work to evaluate areas of need for storm shelters or safe rooms, such as for local parks or manufactured home parks.	County, municipal funding
23	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North Oaks</b> , North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	Ramsey County EMHS will seek to work with municipalities and schools to build community safe rooms where needed. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning. Any community safe room projects that the County is involved in will be part of the Ramsey County Emergency Management program. FEMA grant funding may be sought to support an eligible safe room project.	County, municipal funding, Possible FEMA HMA grant for Safe Rooms

#	Hazard	Mitigation Strategy	City of North Oaks Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
30	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Enhance stormwater management plans and ordinances that require improvement of stormwater management systems, including for areas of new development and installation of infrastructure capable of handling a ten to twenty-year rain event. Identify and address where stormwater run-off capacity improvement projects are needed.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North Oaks</b> , North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works and municipal Planning/Public Works depts. in coordination with local watershed organizations	Ramsey County and local cities maintain stormwater management plans and work to identify, prioritize, and address highest risk areas. Mitigation examples may include to construct, retrofit, or maintain drainage systems to include sewage and water retention and detention systems.  Outside funding to support stormwater improvement projects may be available through avenues such as the MN DNR Flood Hazard Mitigation Grants, MPCA, and FEMA HMA funding for flood reduction projects.	County/City funding, SWCD, and Possible MPCA/PFA grant funding. Possible FEMA HMA grant for Localized Flood Reduction Projects or Infrastructure Retrofit
32	Flooding	Education & Awareness Programs / Structure & Infrastructure Projects	Provide information & technical assistance to property owners to help mitigate against localized flooding during high-rain events (i.e., landscaping / green infrastructure applications).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North Oaks</b> , North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, RC Conservation District, and municipal planning/public works	This is an ongoing effort of Ramsey County in conjunction with local jurisdictions that have experienced flooding due to high rain events.  <i>City Comment: The City of North Oaks is a private community and there is no public City-owned land. Because of this, mitigation efforts are necessarily limited by private property and the willingness of private property owners to spend money.</i>	County/City Funding, Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

#	Hazard	Mitigation Strategy	City of North Oaks Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
33	Flooding	Local Planning & Regulations	Identify residential, commercial, government facilities, and/or critical infrastructure properties that may experience damage from future flooding and work to implement appropriate mitigation measures (including buy-out for property acquisition & structure demolition or relocation). Areas of focus may include previously unidentified flooding locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North Oaks</b> , North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Public Works, RC Property Management, RC Conservation District, municipal EMA	In 2015, Ramsey County removed seven buildings, including critical infrastructure, from the Mississippi River floodplain. A permanent retaining wall along the bluff was completed in November 2017. Ramsey County remains owners of these properties and will work with the new developers and Saint Paul Emergency Management to provide technical assistance and support on flood protection systems and measures in the future.  Ramsey County and its municipalities will continue to evaluate properties that may be at risk of flooding and work with property owners to identify mitigation measure to reduce or eliminate future damages.	County, municipal funding, DNR Flood Mitigation Grant, US Army Corps of Engineers (USACE), Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation
38	Flooding	Structure & Infrastructure Projects	Identify, prioritize, and implement localized flood reduction measures to improve drainage systems and reduce over-the-road flooding to County or municipal roads.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North Oaks</b> , North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, City Public Works, MnDOT, Watershed Districts,	Ramsey County Public Works and local city Public Works work to identify and address localized flood risk reduction projects.  <i>City Comment: The City's vulnerability to flooding has decreased as we have worked to replace old, partially crushed culverts with new culverts. Due to the heavily forested nature of our city, much of our community also functions like a big rain garden.</i>	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of North Oaks Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
42	Wildfire	Local Planning & Regulations	Continue to ensure the strong coordination between local fire departments to provide fire protection.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North Oaks</b> , North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	There are 12 fire departments located in Ramsey County. All the municipal fire departments have mutual aid agreements with each contiguous department that borders their respective fire district, including those in adjoining counties. Written mutual aid agreements are on file with each city.	Local fire department funding
43	Wildfire	Local Planning & Regulations	Continue to enforce burning permits/restrictions.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North Oaks</b> , North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	Burn permits are regulated by the fire departments in Ramsey County. An actual permit may or may not be required, however, each jurisdiction has rules/regulations available to all residents online.	Municipal or fire district funding

#	Hazard	Mitigation Strategy	City of North Oaks Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
47	Drought	Education & Awareness Programs	Promote water conservation measures to residents during periods of drought and enforce water conservation ordinances when needed.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North Oaks</b> , North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Conservation District & Local City planning depts.	Promoting water conservation during periods of drought is a standing effort of the County and local governments. The State of MN has a stateside drought response plan prepared by the MN DNR that the County may reference for guidance.	County, municipal funding

Table G - 10. Mitigation Actions Identified for Implementation by the City of North St. Paul (2019-2023) (From Ramsey County Master Mitigation Action Chart)

#	Hazard	Mitigation Strategy	City of North St. Paul Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
I	All-Hazards	Mitigation Preparedness & Response Support	Continue to ensure that all Ramsey County residents are aware of and sign-up for the County's Everbridge Emergency Notification System.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, <b>North St. Paul</b> , Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	Ramsey County Emergency Management & Homeland Security (RCEMHS) & Municipal Emergency Management Agencies (EMAs)	<p>This is a new effort of Ramsey County EMHS being rolled out in 2018. A link for the Everbridge for community sign up is provided on the Ramsey County EMHS website, and reminders are also posted using the Ramsey County EMHS Facebook Page. In addition to Everbridge, the County has IPAWS capabilities for targeted and countywide emergency notifications.</p> <p>All city jurisdictions within the County are encouraged to promote sign up for the Everbridge system using their means of public outreach (websites, social media, local media).</p> <p><i>City Comment: In addition to promoting the County's Everbridge system, the City utilizes Social Media and the City Website to notify residents of emergencies.</i></p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of North St. Paul Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
4	All-Hazards	Local Planning & Regulations	Update County/City Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards. Utilize data of past hazard events and future climate projections to help inform updates.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, <b>North St. Paul</b> , Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS in coordination with Ramsey County Community and Economic Development and local municipal administrators, Planning & Zoning Committees	Ramsey County has a “2030 Comprehensive Plan” prepared to meet the requirements of the Metropolitan Land Planning Act and the Metropolitan Council’s 2030 Regional Development Framework. Ramsey County will encourage municipalities to update their local Comprehensive Plans to include considerations for mitigation in land use planning to reduce future risk to due to natural hazards (i.e., flooding).  <i>City Comment: We have a 22-year Comprehensive Plan (adopted in 2009) that is designed to plan physical growth of the city and appropriate land uses. We are currently in the planning phase for developing the 2020 Comprehensive Plan Update. We feel that global climate change has affected severe weather in our community and will work to have our Comp Plan update take this into consideration as we plan of our city.</i>	County funding

#	Hazard	Mitigation Strategy	City of North St. Paul Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
6	All-Hazards	Local Planning & Regulations	Continue to update Emergency Operation Plans and COOP/COG plans to ensure that they adequately detail the needed steps to respond to all-hazards and ensure continuity of key government functions in the event of a disaster.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, <b>North St. Paul</b> , Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	<p>Ramsey County EMHS maintains an Emergency Operations Plan (EOP) and the Ramsey County Continuity of Operations (COOP)/Continuity of Government (COG) plans as guides for emergency and/or recovery operations. These plans are intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.</p> <p><i>City Comment: The City works with our apartment buildings (&gt;5 units) for emergency evacuation and shelter planning. The City further works with our 6 elementary schools and 1 high school for emergency evacuation and sheltering in place (severe weather) planning.</i></p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of North St. Paul Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
9	All-Hazards	Education & Awareness Programs	Continue to promote education & awareness on all-hazards and emergency preparedness for schools, individuals, families, and businesses.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, <b>North St. Paul</b> , Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	<p>Information is distributed to the public via RCEMHS Facebook/ Twitter and subscription-based programs (GovDelivery) on a regular basis. Additional information is provided during the NWS severe weather awareness weeks in spring and winter. RCEMHS also has a YouTube Channel where “Get Ready Gopher” educational videos on preparedness and severe weather training are posted. These are promoted to the schools as well as the larger public for viewing. Cities are encouraged to share information through their own existing channels (i.e., websites, social media, and local media).</p> <p><i>City Comment: The City utilizes Social Media and the City Website to notify residents of emergencies. The City’s Fire Dept. also has a Haven program that educates homeowners on fire safety and severe weather safety (i.e., tornadoes, heat waves, winter weather).</i></p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of North St. Paul Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
15	Severe Winter & Summer Storms	Education & Awareness Programs	Continue to promote the use of NOAA weather radios by residents, schools, businesses, and facilities that house persons with functional and access needs.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, <b>North St. Paul</b> , Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS regularly promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. NOAA weather radios are recommended as an important way to receive emergency weather alerts from the NWS. Local city Emergency Managers are encouraged to ensure the placement of NOAA radios in key facilities within their communities.	County, municipal funding
16	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with municipal electrical cooperative and power companies to reduce overhead exposure of power lines that are vulnerable to damage from severe winter/summer storms (i.e., high winds, ice, and heavy snow). Replace overhead power lines with underground lines in areas with high-risk exposure (i.e. high tree concentration areas).	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, <b>North St. Paul</b> , Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works, Municipal Public Works in cooperation the appropriate utility company.	RC EMHS County and all cities will work as needed with their appropriate utility providers as needed to evaluate areas of concern. Service providers for Ramsey County include: Xcel Energy, Connexus Energy & North Saint Paul Utility Department.  Areas of concern will be evaluated to see where putting lines underground may be feasible and make sense.	Coop / Electric Company funding, Possible FEMA HMA grant for Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of North St. Paul Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
17	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Identify critical facilities or infrastructure that do not have generator backup power in the event of a major power outage resulting from severe winter or summer storms. (Examples of critical facilities include Police/Fire departments, EOC's, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, <b>North St. Paul</b> , Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	<p>The Ramsey County Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner's Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power.</p> <p><b>Ramsey County's current priorities for generator backup power include:</b>                      Plato Building                      Public Health and Emergency Management's Department Operations Center (DOC's)                      Rec Centers and libraries that serve as cooling centers                      Facilities designated for Mass Care Sheltering                      Traffic Signal Systems</p> <p>Ramsey County and municipalities continue to assess what critical facilities need backup power. Working to mitigate against power outages also helps to mitigate other hazards.</p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of North St. Paul Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
18	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that should have backup power.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, <b>North St. Paul</b> , Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	Ramsey County, local municipal governments, and schools will evaluate feasibility to purchase and install generators for key facilities and will do so as funding allows.	County, municipal funding, Possible FEMA HMA grant for Generators
19	Severe Winter Weather	Mitigation Preparedness & Response Support	Continue to provide for public safety on roads through anti-icing (application of brine solution before an event), snow removal, salting and sanding to minimize the impacts of snow/ice accumulations on roadways.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, <b>North St. Paul</b> , Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works & Municipal Public Works	Ramsey County and its municipalities complete the snow removal from all county and municipal roads. MNDOT will remove the snow from Interstate and State Highways as well as disperse salt/sand as needed. Municipalities have snow emergency plans and ordinances in place.	County, municipal funding

#	Hazard	Mitigation Strategy	City of North St. Paul Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
22	Severe Summer Storms	Structure and Infrastructure Projects	Identify community areas, parks, and facilities (i.e., schools, government buildings, manufactured home parks) that are vulnerable to tornadoes and evaluate for potential construction or retrofit of safe rooms or storm shelters.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, <b>North St. Paul</b> , Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	RCEMHS and RC Parks & Rec will work to identify priority areas for evaluation for safe room construction or retrofit. Municipal EMAs will also work to evaluate areas of need for storm shelters or safe rooms, such as for local parks or manufactured home parks.	County, municipal funding
23	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, <b>North St. Paul</b> , Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	Ramsey County EMHS will seek to work with municipalities and schools to build community safe rooms where needed. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning. Any community safe room projects that the County is involved in will be part of the Ramsey County Emergency Management program. FEMA grant funding may be sought to support an eligible safe room project.	County, municipal funding, Possible FEMA HMA grant for Safe Rooms

#	Hazard	Mitigation Strategy	City of North St. Paul Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
30	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Enhance stormwater management plans and ordinances that require improvement of stormwater management systems, including for areas of new development and installation of infrastructure capable of handling a ten to twenty-year rain event. Identify and address where stormwater run-off capacity improvement projects are needed.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, <b>North St. Paul</b> , Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works and municipal Planning/Public Works depts. in coordination with local watershed organizations	Ramsey County and local cities maintain stormwater management plans and work to identify, prioritize, and address highest risk areas. Mitigation examples may include to construct, retrofit, or maintain drainage systems to include sewage and water retention and detention systems.  <i>City Comment: The City has worked to improve storm sewer work in various areas of the City, especially those undergoing road reconstruction. Additionally, we have improved our sewer cleaning schedule.</i>	County/City funding, SWCD, and Possible MPCA/PFA grant funding. Possible FEMA HMA grant for Localized Flood Reduction Projects or Infrastructure Retrofit
32	Flooding	Education & Awareness Programs / Structure & Infrastructure Projects	Provide information & technical assistance to property owners to help mitigate against localized flooding during high-rain events (i.e., landscaping / green infrastructure applications).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, <b>North St. Paul</b> , Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, RC Conservation District, and municipal planning/public works	This is an ongoing effort of Ramsey County in conjunction with local jurisdictions that have experienced flooding due to high rain events.  <i>City Comment: The City has encouraged homeowners to make improvements / renovations to their property to reduce damage from flooding (i.e., install drain tile and/or sump pump) while promoting Housing and Redevelopment Authority funding resources.</i>	County/City Funding, Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

#	Hazard	Mitigation Strategy	City of North St. Paul Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
33	Flooding	Local Planning & Regulations	Identify residential, commercial, government facilities, and/or critical infrastructure properties that may experience damage from future flooding and work to implement appropriate mitigation measures (including buy-out for property acquisition & structure demolition or relocation). Areas of focus may include previously unidentified flooding locations.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, <b>North St. Paul</b> , Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Public Works, RC Property Management, RC Conservation District, municipal EMA	<p>In 2015, Ramsey County removed seven buildings, including critical infrastructure, from the Mississippi River floodplain. A permanent retaining wall along the bluff was completed in November 2017. Ramsey County remains owners of these properties and will work with the new developers and Saint Paul Emergency Management to provide technical assistance and support on flood protection systems and measures in the future.</p> <p>Ramsey County and its municipalities will continue to evaluate properties that may be at risk of flooding and work with property owners to identify mitigation measure to reduce or eliminate future damages.</p> <p><i>City Comment: The City needs additional funding to buy out properties to create holding ponds which assist with flood control.</i></p>	County, municipal funding, DNR Flood Mitigation Grant, US Army Corps of Engineers (USACE), Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

#	Hazard	Mitigation Strategy	City of North St. Paul Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
37	Flooding	Local Planning & Regulations	Participate in the National Flood Insurance Program (NFIP) and enforce local floodplain ordinances to ensure that new construction is built above regulatory flood protection elevation.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, <b>North St. Paul</b> , Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, Municipal EMAs local city planning depts.	Ramsey County promotes, and all municipalities participate in the NFIP (except the City of North Oaks). Each city develops and enforces local floodplain ordinances.  <i>City Comment: We have a City Planning Commission that has established a Floodplain Ordinance. The City participates in the NFIP.</i>	County, municipal funding
38	Flooding	Structure & Infrastructure Projects	Identify, prioritize, and implement localized flood reduction measures to improve drainage systems and reduce over-the-road flooding to County or municipal roads.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, <b>North St. Paul</b> , Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, City Public Works, MnDOT, Watershed Districts,	<i>City Comment: The City has a contract City Engineer and a Public Works Director that address road maintenance issues for flooding. The City has an annual transportation plan to address road improvement projects that include culvert and drainage improvements.</i>  <b>Current Areas of Concern for flood mitigation in the City of North St. Paul include:</b> Hwy 36 and McKnight Rd, then North on McKnight from Hwy 36 to 14 <sup>th</sup> Ave E 1 <sup>st</sup> Street, Between 7 <sup>th</sup> Ave and 1 <sup>st</sup> Ave 2 <sup>nd</sup> Ave, Between 1 <sup>st</sup> St and Helen St N North St. Paul Drive, between 2 <sup>nd</sup> St and 7 <sup>th</sup> Ave 7 <sup>th</sup> Ave, between 1 <sup>st</sup> St and Margaret St 4 <sup>th</sup> Ave, Between 1 <sup>st</sup> St and Margaret St	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of North St. Paul Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
39	Flooding	Local Planning & Regulations	Ensure that wellhead protection plans are in place to address flooding that may lead to contaminated drinking water.	New	High	2019-2023	Mounds View, New Brighton, <b>North Saint Paul</b> , Shoreview, White Bear Lake (partially), White Bear Township, Saint Paul Regional Water Services (Have a surface water and wellhead protection plan), St. Anthony Village (partially), Vadnais Heights	RC Public Works, MN Dept. of Health and local city public works depts.	Municipalities that use well water have and maintain a Wellhead Protection Plan. This plan presents the actions that will be taken to manage potential contamination sources that may present a risk to the quality of the community's drinking water. MDH assists public water suppliers with preparing and implementing wellhead protection plans.	MDH Source Water Protection grant funding for wellhead improvement projects
42	Wildfire	Local Planning & Regulations	Continue to ensure the strong coordination between local fire departments to provide fire protection.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, <b>North St. Paul</b> , Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	There are 12 fire departments located in Ramsey County. All the municipal fire departments have mutual aid agreements with each contiguous department that borders their respective fire district, including those in adjoining counties. Written mutual aid agreements are on file with each city.	Local fire department funding

#	Hazard	Mitigation Strategy	City of North St. Paul Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
43	Wildfire	Local Planning & Regulations	Continue to enforce burning permits/restrictions.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, <b>North St. Paul</b> , Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	Burn permits are regulated by the fire departments in Ramsey County. An actual permit may or may not be required, however, each jurisdiction has rules/regulations available to all residents online.	Municipal or fire district funding
47	Drought	Education & Awareness Programs	Promote water conservation measures to residents during periods of drought and enforce water conservation ordinances when needed.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, <b>North St. Paul</b> , Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Conservation District & Local City planning depts.	Promoting water conservation during periods of drought is a standing effort of the County and local governments. The State of MN has a stateside drought response plan prepared by the MN DNR that the County may reference for guidance.	County, municipal funding

Table G - 11. Mitigation Actions Identified for Implementation by the City of Roseville (2019-2023) (From Ramsey County Master Mitigation Action Chart)

#	Hazard	Mitigation Strategy	City of Roseville Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
1	All-Hazards	Mitigation Preparedness & Response Support	Continue to ensure that all Ramsey County residents are aware of and sign-up for the County's Everbridge Emergency Notification System.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, <b>Roseville</b> , St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	Ramsey County Emergency Management & Homeland Security (RCEMHS) & Municipal Emergency Management Agencies (EMAs)	<p>This is a new effort of Ramsey County EMHS being rolled out in 2018. A link for the Everbridge for community sign up is provided on the Ramsey County EMHS website, and reminders are also posted using the Ramsey County EMHS Facebook Page. In addition to Everbridge, the County has IPAWS capabilities for targeted and county-wide emergency notifications.</p> <p><i>City Comment: The City of Roseville is working with our dispatch center to improve citizen notification with the County's new Everbridge system for text/cell phone alerts. The City has also improved our social media presence when it comes to weather warnings. The City has also made significant upgrades to multiple tornado sirens, purchasing 3 new severe weather sirens in the last four years.</i></p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Roseville Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
4	All-Hazards	Local Planning & Regulations	Update County/City Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards. Utilize data of past hazard events and future climate projections to help inform updates.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, <b>Roseville</b> , St. Anthony, Shoreview, Vadnais Heights, White Bear Lake. White Bear Township	RCEMHS in coordination with Ramsey County Community and Economic Development and local municipal administrators, Planning & Zoning Committees	Ramsey County has a “2030 Comprehensive Plan” prepared to meet the requirements of the Metropolitan Land Planning Act and the Metropolitan Council’s 2030 Regional Development Framework. Ramsey County will encourage municipalities to update their local Comprehensive Plans to include considerations for mitigation in land use planning to reduce future risk to due to natural hazards (i.e., flooding).	County funding
6	All-Hazards	Local Planning & Regulations	Continue to update Emergency Operation Plans and COOP/COG plans to ensure that they adequately detail the needed steps to respond to all-hazards and ensure continuity of key government functions in the event of a disaster.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, <b>Roseville</b> , St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS maintains an Emergency Operations Plan (EOP) and the Ramsey County Continuity of Operations (COOP)/Continuity of Government (COG) plans as guides for emergency and/or recovery operations. These plans are intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Roseville Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
9	All-Hazards	Education & Awareness Programs	Continue to promote education & awareness on all-hazards and emergency preparedness for schools, individuals, families, and businesses.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, <b>Roseville</b> , St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Information is distributed to the public via RCEMHS Facebook/ Twitter and subscription-based programs (GovDelivery) on a regular basis. Additional information is provided during the NWS severe weather awareness weeks in spring and winter. RCEMHS also has a YouTube Channel where “Get Ready Gopher” educational videos on preparedness and severe weather training are posted. These are promoted to the schools as well as the larger public for viewing. Cities are encouraged to share information through their own existing channels (i.e., websites, social media, and local media).  <i>City Comment: The City participates in the National Weather Service’s annual Severe Winter/Spring Weather Awareness Week. Our schools also practice tornado drills on an annual basis.</i>	County, municipal funding
15	Severe Winter & Summer Storms	Education & Awareness Programs	Continue to promote the use of NOAA weather radios by residents, schools, businesses, and facilities that house persons with functional and access needs.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, <b>Roseville</b> , St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS regularly promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. NOAA weather radios are recommended as an important way to receive emergency weather alerts from the NWS. Local city Emergency Managers are encouraged to ensure the placement of NOAA radios in key facilities within their communities.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Roseville Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
16	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with municipal electrical cooperative and power companies to reduce overhead exposure of power lines that are vulnerable to damage from severe winter/summer storms (i.e., high winds, ice, and heavy snow). Replace overhead power lines with underground lines in areas with high-risk exposure (i.e. high tree concentration areas).	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, <b>Roseville</b> , St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works, Municipal Public Works in cooperation the appropriate utility company.	RC EMHS County and all cities will work as needed with their appropriate utility providers as needed to evaluate areas of concern. Service providers for Ramsey County include: Xcel Energy, Connexus Energy & North Saint Paul Utility Department.  Areas of concern will be evaluated to see where putting lines underground may be feasible and make sense.	Coop / Electric Company funding, Possible FEMA HMA grant for Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Roseville Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
17	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Identify critical facilities or infrastructure that do not have generator backup power in the event of a major power outage resulting from severe winter or summer storms. (Examples of critical facilities include Police/Fire departments, EOC's, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, <b>Roseville</b> , St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	<p>The Ramsey County Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner's Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power.</p> <p><b>Ramsey County's current priorities for generator backup power include:</b>                      Plato Building                      Public Health and Emergency Management's Department Operations Center (DOC's)                      Rec Centers and libraries that serve as cooling centers                      Facilities designated for Mass Care Sheltering                      Traffic Signal Systems</p> <p>Ramsey County and municipalities continue to assess what critical facilities need backup power. Working to mitigate against power outages also helps to mitigate other hazards.</p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Roseville Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
18	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that should have backup power.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, <b>Roseville</b> , St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	Ramsey County, local municipal governments, and schools will evaluate feasibility to purchase and install generators for key facilities and will do so as funding allows.	County, municipal funding, Possible FEMA HMA grant for Generators
19	Severe Winter Weather	Mitigation Preparedness & Response Support	Continue to provide for public safety on roads through anti-icing (application of brine solution before an event), snow removal, salting and sanding to minimize the impacts of snow/ice accumulations on roadways.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, <b>Roseville</b> , St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works & Municipal Public Works	Ramsey County and its municipalities complete the snow removal from all county and municipal roads. MNDOT will remove the snow from Interstate and State Highways as well as disperse salt/sand as needed. Municipalities have snow emergency plans and ordinances in place.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Roseville Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
22	Severe Summer Storms	Structure and Infrastructure Projects	Identify community areas, parks, and facilities (i.e., schools, government buildings, manufactured home parks) that are vulnerable to tornadoes and evaluate for potential construction or retrofit of safe rooms or storm shelters.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, <b>Roseville</b> , St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	RCEMHS and RC Parks & Rec will work to identify priority areas for evaluation for safe room construction or retrofit. Municipal EMAs will also work to evaluate areas of need for storm shelters or safe rooms, such as for local parks or manufactured home parks.  <i>City Comment: Roseville Area Schools is looking to pass a \$144 million-dollar bond to renovate schools and St. Anthony passed one to renovate their elementary school. The City will recommend that the schools consider inclusion of a safe room as part of their renovation planning.</i>	County, municipal funding
23	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, <b>Roseville</b> , St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	Ramsey County EMHS will seek to work with municipalities and schools to build community safe rooms where needed. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning. Any community safe room projects that the County is involved in will be part of the Ramsey County Emergency Management program. FEMA grant funding may be sought to support an eligible safe room project.	County, municipal funding, Possible FEMA HMA grant for Safe Rooms

#	Hazard	Mitigation Strategy	City of Roseville Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
24	Severe Summer Storms	Local Planning & Regulations	Work to ensure Minnesota Department of Health (MDH) Evacuation Plan & Storm Shelter Requirements are met in municipalities with manufactured home parks.	On-going	High	2019-2023	Arden Hills, Little Canada, Maplewood, Mounds View, New Brighton, <b>Roseville</b> , Shoreview, Vadnais Heights	Municipal EMAs in coordination with RCEMHS and MHP Operators	<p>Ramsey County has identified 15 manufactured home parks (MHPs) in 8 municipalities that have trailer parks. Of those 15, 12 have identified they have shelters, one may have a shelter and one does not and one is unknown.</p> <p>Minnesota State Statue (327.205 Shelter Construction Standards) outlines the requirements for MHP's with less than 10 units / more than 10 units for evacuation plans and sheltering facilities for the residents of the park in times of high winds or tornadoes, as well as the responsibility of municipalities with MHPs to assist with/approve of evacuation &amp; shelter plans.</p> <p>Ramsey County EMHS will continue to encourage municipalities to work with local mobile home park operators to ensure they follow the law.</p>	County, municipal funding, MHP Owner

#	Hazard	Mitigation Strategy	City of Roseville Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
30	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Enhance stormwater management plans and ordinances that require improvement of stormwater management systems, including for areas of new development and installation of infrastructure capable of handling a ten to twenty-year rain event. Identify and address where stormwater run-off capacity improvement projects are needed.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, <b>Roseville</b> , St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works and municipal Planning/Public Works depts. in coordination with local watershed organizations	Ramsey County and local cities maintain stormwater management plans and work to identify, prioritize, and address highest risk areas. Mitigation examples may include to construct, retrofit, or maintain drainage systems to include sewage and water retention and detention systems.  Outside funding to support stormwater improvement projects may be available through avenues such as the MN DNR Flood Hazard Mitigation Grants, MPCA, and FEMA HMA funding for flood reduction projects.	County/City funding, SWCD, and Possible MPCA/PFA grant funding. Possible FEMA HMA grant for Localized Flood Reduction Projects or Infrastructure Retrofit
32	Flooding	Education & Awareness Programs / Structure & Infrastructure Projects	Provide information & technical assistance to property owners to help mitigate against localized flooding during high-rain events (i.e., landscaping / green infrastructure applications).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, <b>Roseville</b> , St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, RC Conservation District, and municipal planning/public works	This is an ongoing effort of Ramsey County in conjunction with local jurisdictions that have experienced flooding due to high rain events.	County/City Funding, Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

#	Hazard	Mitigation Strategy	City of Roseville Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
33	Flooding	Local Planning & Regulations	Identify residential, commercial, government facilities, and/or critical infrastructure properties that may experience damage from future flooding and work to implement appropriate mitigation measures (including buy-out for property acquisition & structure demolition or relocation). Areas of focus may include previously unidentified flooding locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, <b>Roseville</b> , St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Public Works, RC Property Management, RC Conservation District, municipal EMA	In 2015, Ramsey County removed seven buildings, including critical infrastructure, from the Mississippi River floodplain. A permanent retaining wall along the bluff was completed in November 2017. Ramsey County remains owners of these properties and will work with the new developers and Saint Paul Emergency Management to provide technical assistance and support on flood protection systems and measures in the future.  Ramsey County and its municipalities will continue to evaluate properties that may be at risk of flooding and work with property owners to identify mitigation measure to reduce or eliminate future damages.	County, municipal funding, DNR Flood Mitigation Grant, US Army Corps of Engineers (USACE), Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation
37	Flooding	Local Planning & Regulations	Participate in the National Flood Insurance Program (NFIP) and enforce local floodplain ordinances to ensure that new construction is built above regulatory flood protection elevation.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North St. Paul, <b>Roseville</b> , St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, Municipal EMAs local city planning depts.	Ramsey County promotes, and all municipalities participate in the NFIP (except the City of North Oaks). Each city develops and enforces local floodplain ordinances.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Roseville Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
38	Flooding	Structure & Infrastructure Projects	Identify, prioritize, and implement localized flood reduction measures to improve drainage systems and reduce over-the-road flooding to County or municipal roads.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, <b>Roseville</b> , St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, City Public Works, MnDOT, Watershed Districts,	Ramsey County Public Works and local city Public Works work to identify and address localized flood risk reduction projects.  <i>City Comment: The City has made some drainage improvements in areas that experience localized flooding. One of the highest risk areas is Fairview Ave. under Hwy. 36 which is prone to flooding during downpour events, resulting in significant damages to vehicles as well as injuries. <b>Following are some current priority areas to be addressed where flooding is an issue in the City: Fairview Ave &amp; Hwy 36 and Cleveland Ave &amp; Cty Rd C-2.</b></i>	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit
42	Wildfire	Local Planning & Regulations	Continue to ensure the strong coordination between local fire departments to provide fire protection.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, <b>Roseville</b> , Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	There are 12 fire departments located in Ramsey County. All the municipal fire departments have mutual aid agreements with each contiguous department that borders their respective fire district, including those in adjoining counties. Written mutual aid agreements are on file with each city.	Local fire department funding

#	Hazard	Mitigation Strategy	City of Roseville Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
43	Wildfire	Local Planning & Regulations	Continue to enforce burning permits/restrictions.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, <b>Roseville</b> , Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	Burn permits are regulated by the fire departments in Ramsey County. An actual permit may or may not be required, however, each jurisdiction has rules/regulations available to all residents online.	Municipal or fire district funding
47	Drought	Education & Awareness Programs	Promote water conservation measures to residents during periods of drought and enforce water conservation ordinances when needed.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, <b>Roseville</b> , St. Anthony, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Conservation District & Local City planning depts.	Promoting water conservation during periods of drought is a standing effort of the County and local governments. The State of MN has a stateside drought response plan prepared by the MN DNR that the County may reference for guidance.	County, municipal funding

Table G - 12. Mitigation Actions Identified for Implementation by the City of St. Anthony (2019-2023) (From Ramsey County Master Mitigation Action Chart)

#	Hazard	Mitigation Strategy	City of Saint Anthony Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
1	All-Hazards	Mitigation Preparedness & Response Support	Continue to ensure that all Ramsey County residents are aware of and sign-up for the County's Everbridge Emergency Notification System.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, <b>Saint Anthony</b> , Vadnais Heights, White Bear Lake	Ramsey County Emergency Management & Homeland Security (RCEMHS) & Municipal Emergency Management Agencies (EMAs)	This is a new effort of Ramsey County EMHS being rolled out in 2018. A link for the Everbridge for community sign up is provided on the Ramsey County EMHS website, and reminders are also posted using the Ramsey County EMHS Facebook Page. In addition to Everbridge, the County has IPAWS capabilities for targeted and county-wide emergency notifications.  All city jurisdictions within the County are encouraged to promote sign up for the Everbridge system using their means of public outreach (websites, social media, local media).	County, municipal funding
4	All-Hazards	Local Planning & Regulations	Update County/City Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards and increase community resilience. Utilize a local risk assessment based on data of past hazard events and future climate projections to help inform decisions that facilitate actions necessary to adapt to, withstand, and quickly recover from future incidents.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, <b>Saint Anthony</b> , Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS in coordination with Ramsey County Community and Economic Development and local municipal administrators, Planning & Zoning Committees	Ramsey County has a "2030 Comprehensive Plan" prepared to meet the requirements of the Metropolitan Land Planning Act and the Metropolitan Council's 2030 Regional Development Framework. Ramsey County will encourage municipalities to update their local Comprehensive Plans to include considerations for mitigation in land use planning to reduce future risk to due to natural hazards (i.e., flooding).	County funding

#	Hazard	Mitigation Strategy	City of Saint Anthony Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
6	All-Hazards	Local Planning & Regulations	Continue to update Emergency Operation Plans and COOP/COG plans to ensure that they adequately detail the needed steps to respond to all-hazards and ensure continuity of key government functions in the event of a disaster.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, <b>Saint Anthony</b> , Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS maintains an Emergency Operations Plan (EOP) and the Ramsey County Continuity of Operations (COOP)/Continuity of Government (COG) plans as guides for emergency and/or recovery operations. These plans are intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.	County, municipal funding
9	All-Hazards	Education and Awareness	Continue to promote education & awareness on all-hazards and emergency preparedness for schools, individuals, families, and businesses.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, <b>Saint Anthony</b> , Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Information is distributed to the public via RCEMHS Facebook/ Twitter and subscription-based programs (GovDelivery) on a regular basis. Additional information is provided during the NWS severe weather awareness weeks in spring and winter. RCEMHS also has a YouTube Channel where “Get Ready Gopher” educational videos on preparedness and severe weather training are posted. These are promoted to the schools as well as the larger public for viewing. Cities are encouraged to share information through their own existing channels (i.e., websites, social media, and local media).	County, municipal funding

#	Hazard	Mitigation Strategy	City of Saint Anthony Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
15	Severe Winter & Summer Storms	Education and Awareness	Continue to promote the use of NOAA radios by residents, schools, businesses, and facilities that house persons with functional and access needs.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, <b>Saint Anthony</b> , Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS regularly promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. NOAA weather radios are recommended as an important way to receive emergency weather alerts from the NWS. Local city Emergency Managers are encouraged to ensure the placement of NOAA radios in key facilities within their communities.	County, municipal funding
16	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with municipal electrical cooperative and power companies to reduce overhead exposure of power lines that are vulnerable to damage from severe winter/summer storms (i.e., high winds, ice, and heavy snow). Replace overhead power lines with underground lines in areas with high-risk exposure (i.e. high tree concentration areas).	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, <b>Saint Anthony</b> , Vadnais Heights, White Bear Lake	RC Public Works, Municipal Public Works in cooperation the appropriate utility company.	RC EMHS County and all cities will work as needed with their appropriate utility providers as needed to evaluate areas of concern. Service providers for Ramsey County include: <ul style="list-style-type: none"> <li>• Xcel Energy</li> <li>• Connexus Energy</li> <li>• North Saint Paul Utility Department</li> </ul> Areas of concern will be evaluated to see where putting lines underground may be feasible and make sense.	Coop / Electric Company funding, Possible FEMA HMA grant for Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Saint Anthony Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
17	Severe Winter & Summer Storms	Mitigation Preparedness and Response Support	Identify critical facilities or infrastructure that do not have generator back-up power in the event of a major power outage resulting from severe winter or summer storms. (Examples of critical facilities include: Police/Fire departments, EOC's, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, <b>Saint Anthony</b> , Vadnais Heights, White Bear Lake	RCEMHS, RC Property Management & Municipal EMAs	<p>The Ramsey County Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner's Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power.</p> <p><b>Ramsey County's current priorities for generator back-up power include:</b></p> <ul style="list-style-type: none"> <li>• Plato Building</li> <li>• Public Health and Emergency Management's Department Operations Center (DOC's)</li> <li>• Rec Centers and libraries that serve as cooling centers</li> <li>• Facilities designated for Mass Care Sheltering</li> </ul> <p>Ramsey County and municipalities continue to assess what critical facilities need backup power. Working to mitigate against power outages also helps to mitigate other hazards.</p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Saint Anthony Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
18	Severe Winter & Summer Storms	Mitigation Preparedness and Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that should have back-up power.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, <b>Saint Anthony</b> , Vadnais Heights, White Bear Lake	RCEMHS, RC Property Management & Municipal EMAs	Ramsey County, local municipal governments, and schools will evaluate feasibility to purchase and install generators for key facilities and will do so as funding allows.	County, municipal funding, Possible FEMA HMA grant for Generators
19	Severe Winter Weather	Mitigation Preparedness & Response Support	Continue to provide for public safety on roads through anti-icing (application of brine solution before an event), snow removal, salting and sanding to minimize the impacts of snow/ice accumulations on roadways.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, <b>Saint Anthony</b> , Vadnais Heights, White Bear Lake	RC Public Works & Municipal Public Works	Ramsey County and its municipalities complete the snow removal from all county and municipal roads. MNDOT will remove the snow from Interstate and State Highways as well as disperse salt/sand as needed. Municipalities have snow emergency plans and ordinances in place.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Saint Anthony Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
22	Severe Summer Storms	Structure and Infrastructure Projects	Identify community areas, parks, and facilities (i.e., schools, government buildings, manufactured home parks) that are vulnerable to tornadoes and evaluate for potential construction or retrofit of safe rooms or storm shelters.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, <b>Saint Anthony</b> , Vadnais Heights, White Bear Lake	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	RCEMHS and RC Parks & Rec will work to identify priority areas for evaluation for safe room construction or retrofit. Municipal EMAs will also work to evaluate areas of need for storm shelters or safe rooms, such as for local parks or manufactured home parks.	County, municipal funding
23	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, <b>Saint Anthony</b> , Vadnais Heights, White Bear Lake	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	Ramsey County EMHS will seek to work with municipalities and schools to build community safe rooms where needed. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning. Any community safe room projects that the County is involved in will be part of the Ramsey County Emergency Management program. FEMA grant funding may be sought to support an eligible safe room project.	County, municipal funding, Possible FEMA HMA grant for Safe Rooms

#	Hazard	Mitigation Strategy	City of Saint Anthony Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
30	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Enhance stormwater management plans and ordinances that require improvement of stormwater management systems, including for areas of new development and installation of infrastructure capable of handling a ten to twenty-year rain event. Identify and address where stormwater run-off capacity improvement projects are needed.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, <b>Saint Anthony</b> , Vadnais Heights, White Bear Lake	RC Public Works and municipal Planning/Public Works depts. in coordination with local watershed organizations	Ramsey County and local cities maintain stormwater management plans and work to identify, prioritize, and address highest risk areas. Mitigation examples may include to construct, retrofit, or maintain drainage systems to include sewage and water retention and detention systems.  Outside funding to support stormwater improvement projects may be available through avenues such as the MN DNR Flood Hazard Mitigation Grants, MPCA, and FEMA HMA funding for flood reduction projects.	County/City funding, SWCD, and Possible MPCA/PFA grant funding. Possible FEMA HMA grant for Localized Flood Reduction Projects or Infrastructure Retrofit
32	Flooding	Education & Awareness Programs / Structure & Infrastructure Projects	Provide information & technical assistance to property owners to help mitigate against localized flooding during high-rain events (i.e., landscaping / green infrastructure applications).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, <b>Saint Anthony</b> , Vadnais Heights, White Bear Lake	RC Public Works, RC Conservation District, and municipal planning/public works	This is an ongoing effort of Ramsey County in conjunction with local jurisdictions that have experienced flooding due to high rain events.	County/City Funding, Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

#	Hazard	Mitigation Strategy	City of Saint Anthony Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
33	Flooding	Local Planning & Regulations	Identify residential, commercial, government facilities, and/or critical infrastructure properties that may experience damage from future flooding and work to implement appropriate mitigation measures (including buy-out for property acquisition & structure demolition or relocation). Areas of focus may include previously unidentified flooding locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, <b>Saint Anthony</b> , Vadnais Heights, White Bear Lake	RCEMHS, RC Public Works, RC Property Management, RC Conservation District, municipal EMA	In 2015, Ramsey County removed seven buildings, including critical infrastructure, from the Mississippi River floodplain. A permanent retaining wall along the bluff was completed in November 2017. Ramsey County remains owners of these properties and will work with the new developers and Saint Paul Emergency Management to provide technical assistance and support on flood protection systems and measures in the future.  Ramsey County and its municipalities will continue to evaluate properties that may be at risk of flooding and work with property owners to identify mitigation measure to reduce or eliminate future damages.	County, municipal funding, DNR Flood Mitigation Grant, US Army Corps of Engineers (USACE), Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation
37	Flooding	Local Planning & Regulations	Participate in the National Flood Insurance Program (NFIP) and enforce local floodplain ordinances to ensure that new construction is built above regulatory flood protection elevation.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, <b>Saint Anthony</b> , Vadnais Heights, White Bear Lake	RCEMHS, Municipal EMAs local city planning depts.	Ramsey County promotes, and all municipalities participate in the NFIP (except the City of North Oaks). Each city develops and enforces local floodplain ordinances.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Saint Anthony Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
38	Flooding	Structure & Infrastructure Projects	Identify, prioritize, and implement localized flood reduction measures to improve drainage systems and reduce over-the-road flooding to County or municipal roads.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, <b>Saint Anthony</b> , Vadnais Heights, White Bear Lake	RC Public Works, City Public Works, MnDOT, Watershed Districts,	Ramsey County Public Works and local city Public Works work to identify and address localized flood risk reduction projects.	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit
47	Drought	Education & Awareness Programs	Promote water conservation measures to residents during periods of drought and enforce water conservation ordinances when needed.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, <b>Saint Anthony</b> , Vadnais Heights, White Bear Lake	RCEMHS, RC Conservation District & Local City planning depts.	Promoting water conservation during periods of drought is a standing effort of the County and local governments. The State of MN has a stateside drought response plan prepared by the MN DNR that the County may reference for guidance.	County, municipal funding
	All-Hazards	Structure & Infrastructure Projects	Working in Hazardous Environment: Allow our Police Officers functional capabilities in a hazardous or potentially hazardous environment	New	Moderate	2019-2023	Saint Anthony	Saint Anthony Police, Fire Departments	Obtain 20 PAPRS/TYVEK suits; train personnel in donning, doffing and working in suits	County (grants), municipal funding

#	Hazard	Mitigation Strategy	City of Saint Anthony Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
	All-Hazards	Structure & Infrastructure Projects	Connect all city facilities to City Hall along with security system cameras and access key cards: develop the ability to provide a secure environment both from an entry access and visual standpoint of all city facilities from a central location. Facilities include water treatment plant, well houses, city hall, fire station, public works, park shelters/ warming houses and storage garage.	New	Moderate	2019-2023	Saint Anthony	Saint Anthony Public Works	Complete fiber optic connections to all city facilities; purchase card system able to be controlled through one central secure location; purchase camera system able to be controlled through one central secure location.	Municipal funding
	All-Hazards	Structure & Infrastructure Projects	Provide traffic control upon signal failure by obtaining 50 temporary, portable stop signs	New	Moderate	2019-2023	Saint Anthony	Saint Anthony Public Works	Place reflective roll-up temporary stop signs with portable sign bases at all intersections with traffic signals as needed during a power outage; Provide neighboring municipalities with temporary stop signs by request during a power outage	Municipal funding
	Severe Weather: Summer/ Winter Weather	Education & Awareness Programs / Structure & Infrastructure Projects	Develop safe policies, procedures and facilities to reduce injuries and losses resulting from severe weather	New	Moderate	2019-2023	Saint Anthony	Saint Anthony Fire Department	Annually review severe weather protocols and procedures with students, faculty and staff, Publish and publicize procedures and plans for orderly and safe shelter of the community as a distribution center and resource, develop facilities to serve community for emergency access for both summer and winter protection	Municipal funding

#	Hazard	Mitigation Strategy	City of Saint Anthony Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
	All-Hazards	Education & Awareness Programs / Structure & Infrastructure Projects	Develop safe policies, procedures and facilities to protect students, faculty and staff in situations with dangerous intruders have entered the campus	New	Moderate	2019-2023	Saint Anthony	Saint Anthony Police Department	Annually review emergency evacuation and protection protocols with faculty, staff and emergency responders, identify safe gathering and retreat locations protected as against intruders and unwanted campus entry, develop facilities to serve as retreat locations for safety and security of students, faculty and staff.	Municipal funding
	All-Hazards	COOP/COG	Develop contingency plans to ensure secure remote command center for local emergency responders in case of destruction or incapacity of primary facilities or infrastructure	New	Moderate	2019-2023	Saint Anthony	Saint Anthony Fire Department	Annually review protocols and responsibility shifting if critical infrastructure fails with local stakeholders at school, city, county, state and federal levels as necessary, identify and construct contingency facilities capable of serving and supporting critical infrastructure upon failure of primary facilities	Municipal funding
	Floods	Structure & Infrastructure Projects	Prevent inflow and infiltration into sanitary sewer, prevent sanitary sewer system backups	New	Moderate	2019-2023	Saint Anthony	Saint Anthony Public Works	Replace sanitary sewer pipe, manholes, and service pipe. This allows the City to provide proper sanitary sewer capacity and reduce the risk of sewer backups.	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Saint Anthony Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
	Floods	Structure & Infrastructure Projects	Increase fire flow capacity of water main, provide sufficient water to the public	<b>New</b>	Moderate	2019-2023	Saint Anthony	Saint Anthony Public Works	Replacement of water main pipe, hydrants, and service pipe	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit
	Floods	Structure & Infrastructure Projects	Increase the amount of storm water removed from surface grade during rain events	<b>New</b>	Moderate	2019-2023	Saint Anthony	Saint Anthony Public Works	Replacement of undersized storm sewer piping; this action allows the city to increase the amount of rainwater removed that may cause flooding and aids in prevention of structural damage	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Saint Anthony Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
	Floods	Education & Awareness Programs / Structure & Infrastructure Projects	Protect the City's municipal water supply from contamination	<b>New</b>	Moderate	2019-2023	Saint Anthony	Saint Anthony Public Works	Continue implementation of wellhead protection plan document, public education and outreach, and implement projects identified in wellhead protection plan.	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit
	All-Hazards	Education & Awareness Programs / Structure & Infrastructure Projects	Identify ongoing concerns and risks facing facilities and spaces (schools, parks, etc.) and identify critical infrastructure	<b>New</b>	Moderate	2019-2023	Saint Anthony	Saint Anthony Fire Department; School District	Annually review procedures with interested persons including police, fire, medical regarding enhanced risks and concerns; promulgate plans and contingencies to protect and support critical infrastructure and facilities; identify and develop backup and support facilities and infrastructure in case of failure or emergency use	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Saint Anthony Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
	All-Hazards	Education & Awareness Programs / Structure & Infrastructure Projects	Identify risks and issues preserving safety and security to users in parks and associated facilities shared by school district and city (LGUs).	<b>New</b>	Moderate	2019-2023	Saint Anthony	Saint Anthony Fire Department; School District	Annually review emergency protocols with emergency responders and critical school stakeholders; identify and develop safe gathering and retreat locations protected as against hazards including natural disasters or man-made emergencies	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit
	All-Hazards	Structure & Infrastructure Projects	Provide for emergency functions at City Hall and neighboring municipalities	<b>New</b>	Moderate	2019-2023	Saint Anthony	Saint Anthony Public Works	Purchase a portable trailer mounted 300K Generator; configure separate circuit(s) for emergency functions; provide neighboring municipalities the ability to use the portable trailer mounted generator during power outage	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Saint Anthony Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
	All-Hazards	Education & Awareness Programs / Structure & Infrastructure Projects	Locate and create facilities capable of providing protection against likely hazards Identify and construct optimal safe structures to protect against probable hazards	<b>New</b>	Moderate	2019-2023	Saint Anthony	Saint Anthony Fire Department; School District	Identify and prioritize hazards likely to occur with police, fire, medical, and other interested parties for access, safety, and protection; Construct a shared, multi-season, multiple-use shelter to maximize safety from and resulting after severe weather, unwanted intruders, or other emergency situations affecting the community and school facilities, that will serve multiple-jurisdictional needs and be available and accessible for use by local cities and the general public community in case of emergency situations occurring either inside or outside Central Park including as a remote operations center for emergency services in case of failure of primary critical infrastructure	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Saint Anthony Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
	All-Hazards	Structure & Infrastructure Projects	Prevent failure of control systems for water treatment facilities and municipal wells 3, 4, & 5	<b>New</b>	Moderate	2019-2023	Saint Anthony	Saint Anthony Public Works	Upgrade SCADA system	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit

Table G - 13. Mitigation Actions Identified for Implementation by the City of Shoreview (2019-2023) (From Ramsey County Master Mitigation Action Chart)

#	Hazard	Mitigation Strategy	City of Shoreview Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
I	All-Hazards	Mitigation Preparedness & Response Support	Continue to ensure that all Ramsey County residents are aware of and sign-up for the County's Everbridge Emergency Notification System.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, <b>Shoreview</b> , Vadnais Heights, White Bear Lake, White Bear Township	Ramsey County Emergency Management & Homeland Security (RCEMHS) & Municipal Emergency Management Agencies (EMAs)	<p>This is a new effort of Ramsey County EMHS being rolled out in 2018. A link for the Everbridge for community sign up is provided on the Ramsey County EMHS website, and reminders are also posted using the Ramsey County EMHS Facebook Page. In addition to Everbridge, the County has IPAWS capabilities for targeted and countywide emergency notifications.</p> <p>All city jurisdictions within the County are encouraged to promote sign up for the Everbridge system using their means of public outreach (websites, social media, local media).</p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Shoreview Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
4	All-Hazards	Local Planning & Regulations	Update County/City Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards. Utilize data of past hazard events and future climate projections to help inform updates.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, <b>Shoreview</b> , Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS in coordination with Ramsey County Community and Economic Development and local municipal administrators, Planning & Zoning Committees	Ramsey County has a "2030 Comprehensive Plan" prepared to meet the requirements of the Metropolitan Land Planning Act and the Metropolitan Council's 2030 Regional Development Framework. Ramsey County will encourage municipalities to update their local Comprehensive Plans to include considerations for mitigation in land use planning to reduce future risk to due to natural hazards (i.e., flooding).  <i>City Comment: We have a 20-year Comprehensive Plan (2018) that is designed to plan for future physical growth of the city and appropriate land uses. We have noticed weather / climate changes in the last 5 years, with an increase in moisture, pond levels, and lake levels rising, and it has created higher ground water / water table elevations. Our Comprehensive Plan update will take climate change impacts into consideration as we plan of our city.</i>	County funding

#	Hazard	Mitigation Strategy	City of Shoreview Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
6	All-Hazards	Local Planning & Regulations	Continue to update Emergency Operation Plans and COOP/COG plans to ensure that they adequately detail the needed steps to respond to all-hazards and ensure continuity of key government functions in the event of a disaster.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, <b>Shoreview</b> , Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS maintains an Emergency Operations Plan (EOP) and the Ramsey County Continuity of Operations (COOP)/Continuity of Government (COG) plans as guides for emergency and/or recovery operations. These plans are intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.	County, municipal funding
9	All-Hazards	Education & Awareness Programs	Continue to promote education & awareness on all-hazards and emergency preparedness for schools, individuals, families, and businesses.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, <b>Shoreview</b> , Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Information is distributed to the public via RCEMHS Facebook/ Twitter and subscription-based programs (GovDelivery) on a regular basis. Additional information is provided during the NWS severe weather awareness weeks in spring and winter. RCEMHS also has a YouTube Channel where “Get Ready Gopher” educational videos on preparedness and severe weather training are posted. These are promoted to the schools as well as the larger public for viewing. Cities are encouraged to share information through their own existing channels (i.e., websites, social media, and local media).  <i>City Comment: The City participates in the National Weather Service’s annual Severe Winter/Spring Weather Awareness Week. Our schools also practice tornado drills on an annual basis.</i>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Shoreview Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
15	Severe Winter & Summer Storms	Education & Awareness Programs	Continue to promote the use of NOAA weather radios by residents, schools, businesses, and facilities that house persons with functional and access needs.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, <b>Shoreview</b> , Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS regularly promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. NOAA weather radios are recommended as an important way to receive emergency weather alerts from the NWS. Local city Emergency Managers are encouraged to ensure the placement of NOAA radios in key facilities within their communities.	County, municipal funding
16	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with municipal electrical cooperative and power companies to reduce overhead exposure of power lines that are vulnerable to damage from severe winter/summer storms (i.e., high winds, ice, and heavy snow). Replace overhead power lines with underground lines in areas with high-risk exposure (i.e. high tree concentration areas).	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, <b>Shoreview</b> , Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works, Municipal Public Works in cooperation the appropriate utility company.	RC EMHS County and all cities will work as needed with their appropriate utility providers as needed to evaluate areas of concern. Service providers for Ramsey County include: Xcel Energy, Connexus Energy & North Saint Paul Utility Department.  Areas of concern will be evaluated to see where putting lines underground may be feasible and make sense.	Coop / Electric Company funding, Possible FEMA HMA grant for Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Shoreview Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
17	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Identify critical facilities or infrastructure that do not have generator backup power in the event of a major power outage resulting from severe winter or summer storms. (Examples of critical facilities include Police/Fire departments, EOC's, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, <b>Shoreview</b> , Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	<p>The Ramsey County Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner's Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power.</p> <p><b>Ramsey County's current priorities for generator backup power include:</b>                      Plato Building                      Public Health and Emergency Management's Department Operations Center (DOC's)                      Rec Centers and libraries that serve as cooling centers                      Facilities designated for Mass Care Sheltering                      Traffic Signal Systems</p> <p>Ramsey County and municipalities continue to assess what critical facilities need backup power. Working to mitigate against power outages also helps to mitigate other hazards.</p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Shoreview Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
18	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that should have backup power.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, <b>Shoreview</b> , Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	Ramsey County, local municipal governments, and schools will evaluate feasibility to purchase and install generators for key facilities and will do so as funding allows.	County, municipal funding, Possible FEMA HMA grant for Generators
19	Severe Winter Weather	Mitigation Preparedness & Response Support	Continue to provide for public safety on roads through anti-icing (application of brine solution before an event), snow removal, salting and sanding to minimize the impacts of snow/ice accumulations on roadways.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, <b>Shoreview</b> , Vadnais Heights, White Bear Lake	RC Public Works & Municipal Public Works	Ramsey County and its municipalities complete the snow removal from all county and municipal roads. MNDOT will remove the snow from Interstate and State Highways as well as disperse salt/sand as needed. Municipalities have snow emergency plans and ordinances in place.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Shoreview Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
22	Severe Summer Storms	Structure and Infrastructure Projects	Identify community areas, parks, and facilities (i.e., schools, government buildings, manufactured home parks) that are vulnerable to tornadoes and evaluate for potential construction or retrofit of safe rooms or storm shelters.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, <b>Shoreview</b> , Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	RCEMHS and RC Parks & Rec will work to identify priority areas for evaluation for safe room construction or retrofit. Municipal EMAs will also work to evaluate areas of need for storm shelters or safe rooms, such as for local parks or manufactured home parks.	County, municipal funding
23	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, <b>Shoreview</b> , Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	Ramsey County EMHS will seek to work with municipalities and schools to build community safe rooms where needed. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning. Any community safe room projects that the County is involved in will be part of the Ramsey County Emergency Management program. FEMA grant funding may be sought to support an eligible safe room project.	County, municipal funding, Possible FEMA HMA grant for Safe Rooms

#	Hazard	Mitigation Strategy	City of Shoreview Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
24	Severe Summer Storms	Local Planning & Regulations	Work to ensure Minnesota Department of Health (MDH) Evacuation Plan & Storm Shelter Requirements are met in municipalities with manufactured home parks.	On-going	High	2019-2023	Arden Hills, Little Canada, Maplewood, Mounds View, New Brighton, Roseville, <b>Shoreview</b> , Vadnais Heights	Municipal EMAs in coordination with RCEMHS and MHP Operators	<p>Ramsey County has identified 15 manufactured home parks (MHPs) in 8 municipalities that have trailer parks. Of those 15, 12 have identified they have shelters, one may have a shelter and one does not and one is unknown.</p> <p>Minnesota State Statue (327.205 Shelter Construction Standards) outlines the requirements for MHP's with less than 10 units / more than 10 units for evacuation plans and sheltering facilities for the residents of the park in times of high winds or tornadoes, as well as the responsibility of municipalities with MHPs to assist with/approve of evacuation &amp; shelter plans.</p> <p>Ramsey County EMHS will continue to encourage municipalities to work with local MPH operators to ensure they follow the law.</p>	County, municipal funding, MHP Owner

#	Hazard	Mitigation Strategy	City of Shoreview Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
30	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Enhance stormwater management plans and ordinances that require improvement of stormwater management systems, including for areas of new development and installation of infrastructure capable of handling a ten to twenty-year rain event. Identify and address where stormwater run-off capacity improvement projects are needed.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, <b>Shoreview</b> , Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works and municipal Planning/Public Works depts. in coordination with local watershed organizations	<p>Ramsey County and local cities maintain stormwater management plans and work to identify, prioritize, and address highest risk areas. Mitigation examples may include to construct, retrofit, or maintain drainage systems to include sewage and water retention and detention systems.</p> <p>Outside funding to support stormwater improvement projects may be available through avenues such as the MN DNR Flood Hazard Mitigation Grants, MPCA, and FEMA HMA funding for flood reduction projects.</p> <p><i>City Comment: The City maintains a 5-year Capital Improvements and Operating Budget, as well as a 30-year Comprehensive Infrastructure Replacement Plan.</i></p>	County/City funding, SWCD, and Possible MPCA/PFA grant funding. Possible FEMA HMA grant for Localized Flood Reduction Projects or Infrastructure Retrofit
32	Flooding	Education & Awareness Programs / Structure & Infrastructure Projects	Provide information & technical assistance to property owners to help mitigate against localized flooding during high-rain events (i.e., landscaping / green infrastructure applications).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, <b>Shoreview</b> , Vadnais Heights, White Bear Lake	RC Public Works, RC Conservation District, and municipal planning/public works	This is an ongoing effort of Ramsey County in conjunction with local jurisdictions that have experienced flooding due to high rain events.	County/City Funding, Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

#	Hazard	Mitigation Strategy	City of Shoreview Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
33	Flooding	Local Planning & Regulations	Identify residential, commercial, government facilities, and/or critical infrastructure properties that may experience damage from future flooding and work to implement appropriate mitigation measures (including buy-out for property acquisition & structure demolition or relocation). Areas of focus may include previously unidentified flooding locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, <b>Shoreview</b> , Vadnais Heights, White Bear Lake	RCEMHS, RC Public Works, RC Property Management, RC Conservation District, municipal EMA	<p>In 2015, Ramsey County removed seven buildings, including critical infrastructure, from the Mississippi River floodplain. A permanent retaining wall along the bluff was completed in November 2017. Ramsey County remains owners of these properties and will work with the new developers and Saint Paul Emergency Management to provide technical assistance and support on flood protection systems and measures in the future.</p> <p>Ramsey County and its municipalities will continue to evaluate properties that may be at risk of flooding and work with property owners to identify mitigation measure to reduce or eliminate future damages.</p> <p><i>City Comment: One home within the City is highly susceptible to flash flooding. When heavy rains are predicted, we assist the homeowner with sandbagging in front of the garage. At some point, the City will need to purchase the property (when the owner is ready and willing) and create an open space / ponding area for water storage.</i></p>	County, municipal funding, DNR Flood Mitigation Grant, US Army Corps of Engineers (USACE), Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

#	Hazard	Mitigation Strategy	City of Shoreview Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
37	Flooding	Local Planning & Regulations	Participate in the National Flood Insurance Program (NFIP) and enforce local floodplain ordinances to ensure that new construction is built above regulatory flood protection elevation.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North St. Paul, Roseville, St. Anthony, <b>Shoreview</b> , Vadnais Heights, White Bear Lake	RCEMHS, Municipal EMAs local city planning depts.	Ramsey County promotes, and all municipalities participate in the NFIP (except the City of North Oaks). Each city develops and enforces local floodplain ordinances.  <i>City Comment: The City of Shoreview participates in the NFIP.</i>	County, municipal funding
38	Flooding	Structure & Infrastructure Projects	Identify, prioritize, and implement localized flood reduction measures to improve drainage systems and reduce over-the-road flooding to County or municipal roads.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, <b>Shoreview</b> , Vadnais Heights, White Bear Lake	RC Public Works, City Public Works, MnDOT, Watershed Districts,	Ramsey County Public Works and local city Public Works work to identify and address localized flood risk reduction projects.  <i>City Comment: There is one major collector road that is heavily relied on as a throughway that has flooded 3 of the past 5 years. An emergency 6" trash pump was purchased to relieve some flooding issues in this area. <b>Following is a current priority area to be addressed where flooding is an issue in the City: Gramsie Road north of Grass Lake. The City has approved plans and a project is scheduled to raise a portion of the road that is prone to flooding. In those plans a "by-pass" trail will allow travel throughout the trail system that connects into Ramsey County's trail system through Grass Lake and surrounding space.</b></i>	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Shoreview Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
39	Flooding	Local Planning & Regulations	Ensure that wellhead protection plans are in place to address flooding that may lead to contaminated drinking water.	New	High	2019-2023	Mounds View New Brighton North Saint Paul <b>Shoreview</b> White Bear Lake (partially) White Bear Township Saint Paul Regional Water Services (Have a surface water and wellhead protection plan) St. Anthony Village (partially) Vadnais Heights	RC Public Works, MN Dept. of Health and local city public works depts.	Municipalities that use well water have and maintain a Wellhead Protection Plan. This plan presents the actions that will be taken to manage potential contamination sources that may present a risk to the quality of the community's drinking water. MDH assists public water suppliers with preparing and implementing wellhead protection plans.	MDH Source Water Protection grant funding for wellhead improvement projects
42	Wildfire	Local Planning & Regulations	Continue to ensure the strong coordination between local fire departments to provide fire protection.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, <b>Shoreview</b> , Vadnais Heights, White Bear Lake	Municipal fire districts	There are 12 fire departments located in Ramsey County. All the municipal fire departments have mutual aid agreements with each contiguous department that borders their respective fire district, including those in adjoining counties. Written mutual aid agreements are on file with each city.	Local fire department funding

#	Hazard	Mitigation Strategy	City of Shoreview Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
43	Wildfire	Local Planning & Regulations	Continue to enforce burning permits/restrictions.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, <b>Shoreview</b> , Vadnais Heights, White Bear Lake	Municipal fire districts	Burn permits are regulated by the fire departments in Ramsey County. An actual permit may or may not be required, however, each jurisdiction has rules/regulations available to all residents online.	Municipal or fire district funding
47	Drought	Education & Awareness Programs	Promote water conservation measures to residents during periods of drought and enforce water conservation ordinances when needed.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, <b>Shoreview</b> , Vadnais Heights, White Bear Lake	RCEMHS, RC Conservation District & Local City planning depts.	Promoting water conservation during periods of drought is a standing effort of the County and local governments. The State of MN has a stateside drought response plan prepared by the MN DNR that the County may reference for guidance.	County, municipal funding

Table G - 14. Mitigation Actions Identified for Implementation by the City of Vadnais Heights (2019-2023) (From Ramsey County Master Mitigation Action Chart)

#	Hazard	Mitigation Strategy	City of Vadnais Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
I	All-Hazards	Mitigation Preparedness & Response Support	Continue to ensure that all Ramsey County residents are aware of and sign-up for the County's Everbridge Emergency Notification System.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, <b>Vadnais Heights</b> , White Bear Lake, White Bear Township	Ramsey County Emergency Management & Homeland Security (RCEMHS) & Municipal Emergency Management Agencies (EMAs)	<p>This is a new effort of Ramsey County EMHS being rolled out in 2018. A link for the Everbridge for community sign up is provided on the Ramsey County EMHS website, and reminders are also posted using the Ramsey County EMHS Facebook Page. In addition to Everbridge, the County has IPAWS capabilities for targeted and countywide emergency notifications.</p> <p>All city jurisdictions within the County are encouraged to promote sign up for the Everbridge system using their means of public outreach (websites, social media, local media).</p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Vadnais Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
4	All-Hazards	Local Planning & Regulations	Update County/City Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards. Utilize data of past hazard events and future climate projections to help inform updates.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, <b>Vadnais Heights</b> , White Bear Lake. White Bear Township	RCEMHS in coordination with Ramsey County Community and Economic Development and local municipal administrators, Planning & Zoning Committees	Ramsey County has a “2030 Comprehensive Plan” prepared to meet the requirements of the Metropolitan Land Planning Act and the Metropolitan Council’s 2030 Regional Development Framework. Ramsey County will encourage municipalities to update their local Comprehensive Plans to include considerations for mitigation in land use planning to reduce future risk to due to natural hazards (i.e., flooding).  <i>City Comment: The City will be undertaking a process to update the Comprehensive Plan in 2017 and 2018. State law requires all municipalities in the 7-county metropolitan area update their Comprehensive Plans at least every 10 years. Local plans must align with the Metropolitan Council’s regional system plans related to highways, transit, airports, wastewater services, parks, and open spaces. An updated plan must be submitted for Metropolitan Council review by December 31, 2018.</i>	County funding

#	Hazard	Mitigation Strategy	City of Vadnais Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
6	All-Hazards	Local Planning & Regulations	Continue to update Emergency Operation Plans and COOP/COG plans to ensure that they adequately detail the needed steps to respond to all-hazards and ensure continuity of key government functions in the event of a disaster.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, <b>Vadnais Heights</b> , White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS maintains an Emergency Operations Plan (EOP) and the Ramsey County Continuity of Operations (COOP)/Continuity of Government (COG) plans as guides for emergency and/or recovery operations. These plans are intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Vadnais Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
9	All-Hazards	Education & Awareness Programs	Continue to promote education & awareness on all-hazards and emergency preparedness for schools, individuals, families, and businesses.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, <b>Vadnais Heights</b> , White Bear Lake	RCEMHS & Municipal EMAs	<p>Information is distributed to the public via RCEMHS Facebook/ Twitter and subscription-based programs (GovDelivery) on a regular basis. Additional information is provided during the NWS severe weather awareness weeks in spring and winter. RCEMHS also has a YouTube Channel where “Get Ready Gopher” educational videos on preparedness and severe weather training are posted. These are promoted to the schools as well as the larger public for viewing.</p> <p><i>City Comment: The City is a NWS “Weather Ready Ambassador”. We have an active Health &amp; Public Safety Commission that participates in community events by distributing community kits, plans, and public information messages. The City uses its website and news releases to share information with the public Our Fire Dept. also educates homeowners on implementing fuel-reduction measures around homes in the City’s Rental Program to comply with City Ordinances. Our schools practice tornado drills on an annual basis.</i></p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Vadnais Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
15	Severe Winter & Summer Storms	Education & Awareness Programs	Continue to promote the use of NOAA weather radios by residents, schools, businesses, and facilities that house persons with functional and access needs.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, <b>Vadnais Heights</b> , White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS regularly promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. NOAA weather radios are recommended as an important way to receive emergency weather alerts from the NWS. Local city Emergency Managers are encouraged to ensure the placement of NOAA radios in key facilities within their communities.	County, municipal funding
16	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with municipal electrical cooperative and power companies to reduce overhead exposure of power lines that are vulnerable to damage from severe winter/summer storms (i.e., high winds, ice, and heavy snow). Replace overhead power lines with underground lines in areas with high-risk exposure (i.e. high tree concentration areas).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, <b>Vadnais Heights</b> , White Bear Lake, White Bear Township	RC Public Works, Municipal Public Works in cooperation the appropriate utility company.	RC EMHS County and all cities will work as needed with their appropriate utility providers as needed to evaluate areas of concern. Service providers for Ramsey County include: Xcel Energy, Connexus Energy & North Saint Paul Utility Department.  Areas of concern will be evaluated to see where putting lines underground may be feasible and make sense.	Coop / Electric Company funding, Possible FEMA HMA grant for Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Vadnais Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
17	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Identify critical facilities or infrastructure that do not have generator backup power in the event of a major power outage resulting from severe winter or summer storms. (Examples of critical facilities include Police/Fire departments, EOC's, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, <b>Vadnais Heights</b> , White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	<p>The Ramsey County Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner's Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power.</p> <p><b>Ramsey County's current priorities for generator backup power include:</b>                      Plato Building                      Public Health and Emergency Management's Department Operations Center (DOC's)                      Rec Centers and libraries that serve as cooling centers                      Facilities designated for Mass Care Sheltering                      Traffic Signal Systems</p> <p>Ramsey County and municipalities continue to assess what critical facilities need backup power. Working to mitigate against power outages also helps to mitigate other hazards.</p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of Vadnais Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
18	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that should have backup power.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, <b>Vadnais Heights</b> , White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	Ramsey County, local municipal governments, and schools will evaluate feasibility to purchase and install generators for key facilities and will do so as funding allows.	County, municipal funding, Possible FEMA HMA grant for Generators
19	Severe Winter Weather	Mitigation Preparedness & Response Support	Continue to provide for public safety on roads through anti-icing (application of brine solution before an event), snow removal, salting and sanding to minimize the impacts of snow/ice accumulations on roadways.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, <b>Vadnais Heights</b> , White Bear Lake	RC Public Works & Municipal Public Works	Ramsey County and its municipalities complete the snow removal from all county and municipal roads. MNDOT will remove the snow from Interstate and State Highways as well as disperse salt/sand as needed. Municipalities have snow emergency plans and ordinances in place.	County, municipal funding

#	Hazard	Mitigation Strategy	City of Vadnais Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
22	Severe Summer Storms	Structure and Infrastructure Projects	Identify community areas, parks, and facilities (i.e., schools, government buildings, manufactured home parks) that are vulnerable to tornadoes and evaluate for potential construction or retrofit of safe rooms or storm shelters.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, <b>Vadnais Heights</b> , White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	RCEMHS and RC Parks & Rec will work to identify priority areas for evaluation for safe room construction or retrofit. Municipal EMAs will also work to evaluate areas of need for storm shelters or safe rooms, such as for local parks or manufactured home parks.	County, municipal funding
23	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, <b>Vadnais Heights</b> , White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	Ramsey County EMHS will seek to work with municipalities and schools to build community safe rooms where needed. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning. Any community safe room projects that the County is involved in will be part of the Ramsey County Emergency Management program. FEMA grant funding may be sought to support an eligible safe room project.	County, municipal funding, Possible FEMA HMA grant for Safe Rooms

#	Hazard	Mitigation Strategy	City of Vadnais Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
24	Severe Summer Storms	Local Planning & Regulations	Work to ensure Minnesota Department of Health (MDH) Evacuation Plan & Storm Shelter Requirements are met in municipalities with manufactured home parks.	On-going	High	2019-2023	Arden Hills, Little Canada, Maplewood, Mounds View, New Brighton, Roseville, Shoreview, <b>Vadnais Heights</b>	Municipal EMAs in coordination with RCEMHS and MHP Operators	<p>Ramsey County has identified 15 manufactured home parks (MHPs) in 8 municipalities that have trailer parks. Of those 15, 12 have identified they have shelters, one may have a shelter and one does not and one is unknown.</p> <p>Minnesota State Statute (327.205 Shelter Construction Standards) outlines the requirements for MHP's with less than 10 units / more than 10 units for evacuation plans and sheltering facilities for the residents of the park in times of high winds or tornadoes, as well as the responsibility of municipalities with MHPs to assist with/approve of evacuation &amp; shelter plans.</p> <p><i>City Comment: The City works with our 1 mobile home park to see that they follow MDH requirements.</i></p>	County, municipal funding, MHP Owner

#	Hazard	Mitigation Strategy	City of Vadnais Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
30	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Enhance stormwater management plans and ordinances that require improvement of stormwater management systems, including for areas of new development and installation of infrastructure capable of handling a ten to twenty-year rain event. Identify and address where stormwater run-off capacity improvement projects are needed.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, <b>Vadnais Heights</b> , White Bear Lake, White Bear Township	RC Public Works and municipal Planning/Public Works depts. in coordination with local watershed organizations	Ramsey County and local cities maintain stormwater management plans and work to identify, prioritize, and address highest risk areas. Mitigation examples may include to construct, retrofit, or maintain drainage systems to include sewage and water retention and detention systems.  <i>City Comment: The City works with the VLAWMO (Vadnais Lake Area Water Management Organization) on water quality, drainage ditch maintenance, run off, and storm water treatment.</i>	County/City funding, SWCD, and Possible MPCA/PFA grant funding. Possible FEMA HMA grant for Localized Flood Reduction Projects or Infrastructure Retrofit
32	Flooding	Education & Awareness Programs / Structure & Infrastructure Projects	Provide information & technical assistance to property owners to help mitigate against localized flooding during high-rain events (i.e., landscaping / green infrastructure applications).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, <b>Vadnais Heights</b> , White Bear Lake	RC Public Works, RC Conservation District, and municipal planning/public works	This is an ongoing effort of Ramsey County in conjunction with local jurisdictions that have experienced flooding due to high rain events.	County/City Funding, Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

#	Hazard	Mitigation Strategy	City of Vadnais Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
33	Flooding	Local Planning & Regulations	Identify residential, commercial, government facilities, and/or critical infrastructure properties that may experience damage from future flooding and work to implement appropriate mitigation measures (including buy-out for property acquisition & structure demolition or relocation). Areas of focus may include previously unidentified flooding locations.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, <b>Vadnais Heights</b> , White Bear Lake	RCEMHS, RC Public Works, RC Property Management, RC Conservation District, municipal EMA	<p>In 2015, Ramsey County removed seven buildings, including critical infrastructure, from the Mississippi River floodplain. A permanent retaining wall along the bluff was completed in November 2017. Ramsey County remains owners of these properties and will work with the new developers and Saint Paul Emergency Management to provide technical assistance and support on flood protection systems and measures in the future.</p> <p>Ramsey County and its municipalities will continue to evaluate properties that may be at risk of flooding and work with property owners to identify mitigation measure to reduce or eliminate future damages.</p>	County, municipal funding, DNR Flood Mitigation Grant, US Army Corps of Engineers (USACE), Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation
34	Flooding	Structure & Infrastructure Projects	Continue to work with the Crestview Neighborhood/Grass Lake Area in the City of Shoreview to address De-Watering.	<b>New</b>	High	2019-2023	Ramsey County, <b>City of Vadnais Heights</b>	Ramsey-Washington Metro Watershed District in cooperation with the City of Shoreview and RC Parks & Rec	In February 2017, Ramsey County EMHS was approached by a local resident to discuss flooding issues in the Crestview Neighborhood of Shoreview area due to heavy rainfalls in summer and fall of 2016. After conversations with the resident and follow-up with Ramsey-Washington Metro Watershed District (RWMWD), a plan for optimizing drainage in the area was developed.	Ramsey-Washington Watershed District

#	Hazard	Mitigation Strategy	City of Vadnais Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
37	Flooding	Local Planning & Regulations	Participate in the National Flood Insurance Program (NFIP) and enforce local floodplain ordinances to ensure that new construction is built above regulatory flood protection elevation.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North St. Paul, Roseville, St. Anthony, Shoreview, <b>Vadnais Heights</b> , White Bear Lake	RCEMHS, Municipal EMAs local city planning depts.	Ramsey County promotes, and all municipalities participate in the NFIP (except the City of North Oaks). Each city develops and enforces local floodplain ordinances.  <i>City Comment: The City participates in the NFIP.</i>	County, municipal funding
38	Flooding	Structure & Infrastructure Projects	Identify, prioritize, and implement localized flood reduction measures to improve drainage systems and reduce over-the-road flooding to County or municipal roads.	<b>New</b>	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, <b>Vadnais Heights</b> , White Bear Lake	RC Public Works, City Public Works, MnDOT, Watershed Districts,	Ramsey County Public Works and local city Public Works work to identify and address localized flood risk reduction projects.  <i>City Comment: The City has a City Engineer / Public Works Supervisor that addresses road maintenance issues for flooding (culverts, repetitive flooding). This position also works closely with the VLAWMO and Contract Engineers. <b>Following are current priority areas to be addressed where flooding is an issue in the City:</b> Rice Street east of Grass Lake <b>and</b> Edgerton &amp; Centerville Rd.</i>	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of Vadnais Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
39	Flooding	Local Planning & Regulations	Ensure that wellhead protection plans are in place to address flooding that may lead to contaminated drinking water.	New	High	2019-2023	Mounds View, New Brighton, North Saint Paul, Shoreview, White Bear Lake (partially), White Bear Township, Saint Paul Regional Water Services (Have a surface water and wellhead protection plan), St. Anthony Village (partially), <b>Vadnais Heights</b>	RC Public Works, MN Dept. of Health and local city public works depts.	Municipalities that use well water have and maintain a Wellhead Protection Plan. This plan presents the actions that will be taken to manage potential contamination sources that may present a risk to the quality of the community's drinking water. MDH assists public water suppliers with preparing and implementing wellhead protection plans.	MDH Source Water Protection grant funding for wellhead improvement projects
42	Wildfire	Local Planning & Regulations	Continue to ensure the strong coordination between local fire departments to provide fire protection.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, <b>Vadnais Heights</b> , White Bear Lake	Municipal fire districts	There are 12 fire departments located in Ramsey County. All the municipal fire departments have mutual aid agreements with each contiguous department that borders their respective fire district, including those in adjoining counties. Written mutual aid agreements are on file with each city.	Local fire department funding

#	Hazard	Mitigation Strategy	City of Vadnais Heights Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
43	Wildfire	Local Planning & Regulations	Continue to enforce burning permits/restrictions.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, <b>Vadnais Heights</b> , White Bear Lake	Municipal fire districts	Burn permits are regulated by the fire departments in Ramsey County. An actual permit may or may not be required, however, each jurisdiction has rules/regulations available to all residents online.	Municipal or fire district funding
47	Drought	Education & Awareness Programs	Promote water conservation measures to residents during periods of drought and enforce water conservation ordinances when needed.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, <b>Vadnais Heights</b> , White Bear Lake	RCEMHS, RC Conservation District & Local City planning depts.	Promoting water conservation during periods of drought is a standing effort of the County and local governments. The State of MN has a stateside drought response plan prepared by the MN DNR that the County may reference for guidance.	County, municipal funding

Table G - 15. Mitigation Actions Identified for Implementation by the City of White Bear Lake (2019-2023) (From Ramsey County Master Mitigation Action Chart)

#	Hazard	Mitigation Strategy	City of White Bear Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
1	All-Hazards	Mitigation Preparedness & Response Support	Continue to ensure that all Ramsey County residents are aware of and sign-up for the County's Everbridge Emergency Notification System.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, <b>White Bear Lake</b> , White Bear Township	Ramsey County Emergency Management & Homeland Security (RCEMHS) & Municipal Emergency Management Agencies (EMAs)	This is a new effort of Ramsey County EMHS being rolled out in 2018. A link for the Everbridge for community sign up is provided on the Ramsey County EMHS website, and reminders are also posted using the Ramsey County EMHS Facebook Page. In addition to Everbridge, the County has IPAWS capabilities for targeted and county-wide emergency notifications.  <i>City Comment: In addition to promoting the County's Everbridge system, we have invested in an upgrade to our mass notification audible alarm system (warning sirens) to match the County's systems.</i>	County, municipal funding
4	All-Hazards	Local Planning & Regulations	Update County/City Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards. Utilize data of past hazard events and future climate projections to help inform updates.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, <b>White Bear Lake</b> , White Bear Township	RCEMHS in coordination with Ramsey County Community and Economic Development and local municipal administrators, Planning & Zoning Committees	Ramsey County has a "2030 Comprehensive Plan" prepared to meet the requirements of the Metropolitan Land Planning Act and the Metropolitan Council's 2030 Regional Development Framework. Ramsey County will encourage municipalities to update their local Comprehensive Plans to include considerations for mitigation in land use planning to reduce future risk to due to natural hazards (i.e., flooding).	County funding

#	Hazard	Mitigation Strategy	City of White Bear Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
6	All-Hazards	Local Planning & Regulations	Continue to update Emergency Operation Plans and COOP/COG plans to ensure that they adequately detail the needed steps to respond to all-hazards and ensure continuity of key government functions in the event of a disaster.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, <b>White Bear Lake</b>	RCEMHS & Municipal EMAs	Ramsey County EMHS maintains an Emergency Operations Plan (EOP) and the Ramsey County Continuity of Operations (COOP)/Continuity of Government (COG) plans as guides for emergency and/or recovery operations. These plans are intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.	County, municipal funding
9	All-Hazards	Education & Awareness Programs	Continue to promote education & awareness on all-hazards and emergency preparedness for schools, individuals, families, and businesses.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, <b>White Bear Lake</b>	RCEMHS & Municipal EMAs	Information is distributed to the public via RCEMHS Facebook/Twitter and subscription-based programs (GovDelivery) on a regular basis. Additional information is provided during the NWS severe weather awareness weeks in spring and winter. RCEMHS also has a YouTube Channel where "Get Ready Gopher" educational videos on preparedness and severe weather training are posted. These are promoted to the schools as well as the larger public for viewing. Cities are encouraged to share information through their own existing channels (i.e., websites, social media, and local media).	County, municipal funding

#	Hazard	Mitigation Strategy	City of White Bear Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
15	Severe Winter & Summer Storms	Education & Awareness Programs	Continue to promote the use of NOAA weather radios by residents, schools, businesses, and facilities that house persons with functional and access needs.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, <b>White Bear Lake</b>	RCEMHS & Municipal EMAs	Ramsey County EMHS regularly promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. NOAA weather radios are recommended as an important way to receive emergency weather alerts from the NWS. Local city Emergency Managers are encouraged to ensure the placement of NOAA radios in key facilities within their communities.	County, municipal funding
16	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with municipal electrical cooperative and power companies to reduce overhead exposure of power lines that are vulnerable to damage from severe winter/summer storms (i.e., high winds, ice, and heavy snow). Replace overhead power lines with underground lines in areas with high-risk exposure (i.e. high tree concentration areas).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, <b>White Bear Lake</b> , White Bear Township	RC Public Works, Municipal Public Works in cooperation the appropriate utility company.	RC EMHS County and all cities will work as needed with their appropriate utility providers as needed to evaluate areas of concern. Service providers for Ramsey County include: Xcel Energy, Connexus Energy & North Saint Paul Utility Department.  Areas of concern will be evaluated to see where putting lines underground may be feasible and make sense.	Coop / Electric Company funding, Possible FEMA HMA grant for Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of White Bear Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
17	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Identify critical facilities or infrastructure that do not have generator backup power in the event of a major power outage resulting from severe winter or summer storms. (Examples of critical facilities include Police/Fire departments, EOC's, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, <b>White Bear Lake</b> , White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	<p>The Ramsey County Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner's Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power.</p> <p><b>Ramsey County's current priorities for generator backup power include:</b>                      Plato Building                      Public Health and Emergency Management's Department Operations Center (DOC's)                      Rec Centers and libraries that serve as cooling centers                      Facilities designated for Mass Care Sheltering                      Traffic Signal Systems</p> <p>Ramsey County and municipalities continue to assess what critical facilities need backup power. Working to mitigate against power outages also helps to mitigate other hazards.</p>	County, municipal funding

#	Hazard	Mitigation Strategy	City of White Bear Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
18	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that should have backup power.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, <b>White Bear Lake</b> , White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	Ramsey County, local municipal governments, and schools will evaluate feasibility to purchase and install generators for key facilities and will do so as funding allows.	County, municipal funding, Possible FEMA HMA grant for Generators
19	Severe Winter Weather	Mitigation Preparedness & Response Support	Continue to provide for public safety on roads through anti-icing (application of brine solution before an event), snow removal, salting and sanding to minimize the impacts of snow/ice accumulations on roadways.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, <b>White Bear Lake</b>	RC Public Works & Municipal Public Works	Ramsey County and its municipalities complete the snow removal from all county and municipal roads. MNDOT will remove the snow from Interstate and State Highways as well as disperse salt/sand as needed. Municipalities have snow emergency plans and ordinances in place.	County, municipal funding

#	Hazard	Mitigation Strategy	City of White Bear Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
22	Severe Summer Storms	Structure and Infrastructure Projects	Identify community areas, parks, and facilities (i.e., schools, government buildings, manufactured home parks) that are vulnerable to tornadoes and evaluate for potential construction or retrofit of safe rooms or storm shelters.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, <b>White Bear Lake</b> , White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	RCEMHS and RC Parks & Rec will work to identify priority areas for evaluation for safe room construction or retrofit. Municipal EMAs will also work to evaluate areas of need for storm shelters or safe rooms, such as for local parks or manufactured home parks.	County, municipal funding
23	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, <b>White Bear Lake</b> , White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	Ramsey County EMHS will seek to work with municipalities and schools to build community safe rooms where needed. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning. Any community safe room projects that the County is involved in will be part of the Ramsey County Emergency Management program. FEMA grant funding may be sought to support an eligible safe room project.	County, municipal funding, Possible FEMA HMA grant for Safe Rooms

#	Hazard	Mitigation Strategy	City of White Bear Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
30	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Enhance stormwater management plans and ordinances that require improvement of stormwater management systems, including for areas of new development and installation of infrastructure capable of handling a ten to twenty-year rain event. Identify and address where stormwater run-off capacity improvement projects are needed.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, <b>White Bear Lake</b> , White Bear Township	RC Public Works and municipal Planning/Public Works depts. in coordination with local watershed organizations	Ramsey County and local cities maintain stormwater management plans and work to identify, prioritize, and address highest risk areas. Mitigation examples may include to construct, retrofit, or maintain drainage systems to include sewage and water retention and detention systems.  Outside funding to support stormwater improvement projects may be available through avenues such as the MN DNR Flood Hazard Mitigation Grants, MPCA, and FEMA HMA funding for flood reduction projects.	County/City funding, SWCD, and Possible MPCA/PFA grant funding. Possible FEMA HMA grant for Localized Flood Reduction Projects or Infrastructure Retrofit
32	Flooding	Education & Awareness Programs / Structure & Infrastructure Projects	Provide information & technical assistance to property owners to help mitigate against localized flooding during high-rain events (i.e., landscaping / green infrastructure applications).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, <b>White Bear Lake</b>	RC Public Works, RC Conservation District, and municipal planning/public works	This is an ongoing effort of Ramsey County in conjunction with local jurisdictions that have experienced flooding due to high rain events.	County/City Funding, Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

#	Hazard	Mitigation Strategy	City of White Bear Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
33	Flooding	Local Planning & Regulations	Identify residential, commercial, government facilities, and/or critical infrastructure properties that may experience damage from future flooding and work to implement appropriate mitigation measures (including buy-out for property acquisition & structure demolition or relocation). Areas of focus may include previously unidentified flooding locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, <b>White Bear Lake</b>	RCEMHS, RC Public Works, RC Property Management, RC Conservation District, municipal EMA	<p>In 2015, Ramsey County removed seven buildings, including critical infrastructure, from the Mississippi River floodplain. A permanent retaining wall along the bluff was completed in November 2017. Ramsey County remains owners of these properties and will work with the new developers and Saint Paul Emergency Management to provide technical assistance and support on flood protection systems and measures in the future.</p> <p>Ramsey County and its municipalities will continue to evaluate properties that may be at risk of flooding and work with property owners to identify mitigation measure to reduce or eliminate future damages.</p>	County, municipal funding, DNR Flood Mitigation Grant, US Army Corps of Engineers (USACE), Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation
37	Flooding	Local Planning & Regulations	Participate in the National Flood Insurance Program (NFIP) and enforce local floodplain ordinances to ensure that new construction is built above regulatory flood protection elevation.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, <b>White Bear Lake</b>	RCEMHS, Municipal EMAs local city planning depts.	Ramsey County promotes, and all municipalities participate in the NFIP (except the City of North Oaks). Each city develops and enforces local floodplain ordinances.	County, municipal funding

#	Hazard	Mitigation Strategy	City of White Bear Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
38	Flooding	Structure & Infrastructure Projects	Identify, prioritize, and implement localized flood reduction measures to improve drainage systems and reduce over-the-road flooding to County or municipal roads.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, <b>White Bear Lake</b>	RC Public Works, City Public Works, MnDOT, Watershed Districts,	Ramsey County Public Works and local city Public Works work to identify and address localized flood risk reduction projects.  <i>City Comment: The City has a City Engineer and Public Works Supervisor that address road maintenance issues for flooding (culverts, repetitive flooding).</i>	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit
39	Flooding	Local Planning & Regulations	Ensure that wellhead protection plans are in place to address flooding that may lead to contaminated drinking water.	New	High	2019-2023	Mounds View, New Brighton, North Saint Paul, Shoreview, <b>White Bear Lake (partially)</b> , White Bear Township, Saint Paul Regional Water Services (Have a surface water and wellhead protection plan), St. Anthony Village (partially), Vadnais Heights	RC Public Works, MN Dept. of Health and local city public works depts.	Municipalities that use well water have and maintain a Wellhead Protection Plan. This plan presents the actions that will be taken to manage potential contamination sources that may present a risk to the quality of the community's drinking water. MDH assists public water suppliers with preparing and implementing wellhead protection plans.	MDH Source Water Protection grant funding for wellhead improvement projects

#	Hazard	Mitigation Strategy	City of White Bear Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
42	Wildfire	Local Planning & Regulations	Continue to ensure the strong coordination between local fire departments to provide fire protection.	Ongoing	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, <b>White Bear Lake</b>	Municipal fire districts	There are 12 fire departments located in Ramsey County. All the municipal fire departments have mutual aid agreements with each contiguous department that borders their respective fire district, including those in adjoining counties. Written mutual aid agreements are on file with each city.	Local fire department funding
43	Wildfire	Local Planning & Regulations	Continue to enforce burning permits/restrictions.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, <b>White Bear Lake</b>	Municipal fire districts	Burn permits are regulated by the fire departments in Ramsey County. An actual permit may or may not be required, however, each jurisdiction has rules/regulations available to all residents online.	Municipal or fire district funding

#	Hazard	Mitigation Strategy	City of White Bear Lake Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
47	Drought	Education & Awareness Programs	Promote water conservation measures to residents during periods of drought and enforce water conservation ordinances when needed.	Ongoing	Moderate	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, <b>White Bear Lake</b>	RCEMHS, RC Conservation District & Local City planning depts.	Promoting water conservation during periods of drought is a standing effort of the County and local governments. The State of MN has a stateside drought response plan prepared by the MN DNR that the County may reference for guidance.	County, municipal funding

Table G - 16. Mitigation Actions Identified for Implementation by White Bear Township (2019-2023) (From Ramsey County Master Mitigation Action Chart)

#	Hazard	Mitigation Strategy	City of White Bear Township Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/Township Comments on Planning Mechanisms for Implementation	Possible Funding
1	All-Hazards	Mitigation Preparedness & Response Support	Continue to ensure that all Ramsey County residents are aware of and sign-up for the County's Everbridge Emergency Notification System.	On-Going	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, <b>White Bear Township</b>	Ramsey County Emergency Management & Homeland Security (RCEMHS) & Municipal Emergency Management Agencies (EMAs)	This is a new effort of Ramsey County EMHS being rolled out in 2018. A link for the Everbridge for community sign up is provided on the Ramsey County EMHS website, and reminders are also posted using the Ramsey County EMHS Facebook Page. In addition to Everbridge, the County has IPAWS capabilities for targeted and countywide emergency notifications.	County, municipal funding
4	All-Hazards	Local Planning & Regulations	Update County/City Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards. Utilize data of past hazard events and future climate projections to help inform updates.	On-going	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake, <b>White Bear Township</b>	RCEMHS in coordination with Ramsey County Community and Economic Development and local municipal administrators, Planning & Zoning Committees	Ramsey County has a "2030 Comprehensive Plan" prepared to meet the requirements of the Metropolitan Land Planning Act and the Metropolitan Council's 2030 Regional Development Framework. Ramsey County will encourage municipalities to update their local Comprehensive Plans to include considerations for mitigation in land use planning to reduce future risk to due to natural hazards (i.e., flooding).	County funding

#	Hazard	Mitigation Strategy	City of White Bear Township Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/Township Comments on Planning Mechanisms for Implementation	Possible Funding
16	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with municipal electrical cooperative and power companies to reduce overhead exposure of power lines that are vulnerable to damage from severe winter/summer storms (i.e., high winds, ice, and heavy snow). Replace overhead power lines with underground lines in areas with high-risk exposure (i.e. high tree concentration areas).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake <b>White Bear Township</b>	RC Public Works, Municipal Public Works in cooperation the appropriate utility company.	RC EMHS County and all cities will work as needed with their appropriate utility providers as needed to evaluate areas of concern. Service providers for Ramsey County include: <ul style="list-style-type: none"> <li>• Xcel Energy</li> <li>• Connexus Energy</li> <li>• North Saint Paul Utility Department</li> </ul> Areas of concern will be evaluated to see where putting lines underground may be feasible and make sense.  <i>Township Comment: The Township wishes to work with Xcel Energy and Connexus Energy (Electric Co-op) to convert overhead power lines to underground, where feasible, to reduce vulnerability of power outages in the Township due to downed lines.</i>	Coop / Electric Company funding, Possible FEMA HMA grant for Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of White Bear Township Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/Township Comments on Planning Mechanisms for Implementation	Possible Funding
17	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Identify critical facilities or infrastructure that do not have generator back-up power in the event of a major power outage resulting from severe winter or summer storms. (Examples of critical facilities include Police/Fire departments, EOC's, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake <b>White Bear Township</b>	RCEMHS, RC Property Management & Municipal EMAs	The Ramsey County Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner's Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power.  <i>Township Comment: White Bear Township manages 25 lift stations and 4 wells. Public Works would like to obtain at least 1 generator for the in-house well station for the northern wells of the township, and at least 2 more portable generators for the lift stations. The township current has 2 separate power generators at the public works station and the WB Township Administration Office. Public Works has an estimate to wire the buildings.</i>	County, municipal funding

#	Hazard	Mitigation Strategy	City of White Bear Township Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/Township Comments on Planning Mechanisms for Implementation	Possible Funding
18	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that should have back-up power.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake <b>White Bear Township</b>	RCEMHS, RC Property Management & Municipal EMAs	Ramsey County, local municipal governments, and schools will evaluate feasibility to purchase and install generators for key facilities and will do so as funding allows.	County, municipal funding, Possible FEMA HMA grant for Generators
22	Severe Summer Storms	Structure and Infrastructure Projects	Identify community areas, parks, and facilities (i.e., schools, government buildings, manufactured home parks) that are vulnerable to tornadoes and evaluate for potential construction or retrofit of safe rooms or storm shelters.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake <b>White Bear Township</b>	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	RCEMHS and RC Parks & Rec will work to identify priority areas for evaluation for safe room construction or retrofit. Municipal EMAs will also work to evaluate areas of need for storm shelters or safe rooms, such as for local parks or manufactured home parks.  <i>Township Comment: We would like to install a weather shelter in Polar Lakes Park.</i>	County, municipal funding

#	Hazard	Mitigation Strategy	City of White Bear Township Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/Township Comments on Planning Mechanisms for Implementation	Possible Funding
23	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake <b>White Bear Township</b>	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	Ramsey County EMHS will seek to work with municipalities and schools to build community safe rooms where needed. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning. Any community safe room projects that the county is involved in will be part of the Ramsey County Emergency Management program. FEMA grant funding may be sought to support an eligible safe room project.	County, municipal funding, Possible FEMA HMA grant for Safe Rooms
30	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Enhance stormwater management plans and ordinances that require improvement of stormwater management systems, including for areas of new development and installation of infrastructure capable of handling a ten to twenty-year rain event. Identify and address where stormwater run-off capacity improvement projects are needed.	New	High	2019-2023	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, St. Anthony, Shoreview, Vadnais Heights, White Bear Lake <b>White Bear Township</b>	RC Public Works and municipal Planning/Public Works depts. in coordination with local watershed organizations	Ramsey County and local cities maintain stormwater management plans and work to identify, prioritize, and address highest risk areas. Mitigation examples may include to construct, retrofit, or maintain drainage systems to include sewage and water retention and detention systems.  Outside funding to support stormwater improvement projects may be available through avenues such as the MN DNR Flood Hazard Mitigation Grants, MPCA, and FEMA HMA funding for flood reduction projects.	County/City funding, SWCD, and Possible MPCA/PFA grant funding. Possible FEMA HMA grant for Localized Flood Reduction Projects or Infrastructure Retrofit

#	Hazard	Mitigation Strategy	City of White Bear Township Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/Township Comments on Planning Mechanisms for Implementation	Possible Funding
39	Flooding	Local Planning & Regulations	Ensure that wellhead protection plans are in place to address flooding that may lead to contaminated drinking water.	New	High	2019-2023	Mounds View, New Brighton, North Saint Paul, Shoreview, White Bear Lake (partially), <b>White Bear Township</b> , Saint Paul Regional Water Services (Have a surface water and wellhead protection plan), St. Anthony Village (partially), Vadnais Heights	RC Public Works, MN Dept. of Health and local city public works depts.	Municipalities that use well water have and maintain a Wellhead Protection Plan. This plan presents the actions that will be taken to manage potential contamination sources that may present a risk to the quality of the community's drinking water. MDH assists public water suppliers with preparing and implementing wellhead protection plans.	MDH Source Water Protection grant funding for wellhead improvement projects

# **Appendix H**

## **Past Mitigation Action Review Status Report (2012-2017)**

Following is a report on the status of each of the mitigation actions that were included in the 2012 Ramsey County multi-hazard mitigation plan. This report meets the following FEMA crosswalk requirement:

**D2. Was the plan revised to reflect progress in local mitigation efforts? (44 CFR 201.6 (d)(3))**

*The plan **must** describe the status of hazard mitigation actions in the previous plan by identifying those that have been completed or not completed. For actions that have not been completed, the plan **must** either describe whether the action is no longer relevant or be included as part of the updated action plan.*

**COMPLETED**

**The following mitigation actions from the 2012 MHMP have been completed and will be removed from the plan update.**

(Flooding) Have sand bags available and manpower ready when a flood occurrence occurs in the cities and townships located within Ramsey County. *(Ramsey County has identified all county properties located in or near the floodplain and has plans in place to protect those properties as needed. Ramsey County continues to maintain plans to have inmates from the Ramsey County Correctional Center fill sandbags and have public works deliver, place and/or provide just-in-time training to residents who need assistance.)*

(All-Hazards) Continue to adopt updates from the International Building Code. Any code revisions should be consistent with the efforts undertaken by multi-community organizations of building department staff. *(Building codes are developed, maintained and enforced at the municipal level.)*

(All-Hazards) Train building department staff on natural hazards aspects of the International Building Code, regulation of mobile home installation, and the County water management ordinance and its flood protection, wetland protection, erosion and sediment control and best management practices provisions. *(Building codes are developed, maintained and enforced at the municipal level.)*

(All-Hazards) Integrate GIS throughout all cities and townships and Ramsey County governments.

**NOT COMPLETED (DELETE)**

**The following mitigation actions from the 2012 MHMP have been deemed as not relevant and will be removed from the plan update.**

(Wildfire) Protect people and property from the effects of wildfires by ensuring an adequate response capability in Ramsey County and educating communities in becoming members of the MN Firewise Program and National Firewise Program. *(Ramsey County is considered an urban environment. EMHS has reached out to local fire departments and they feel the Firewise program is primarily based on rural fire prevention efforts and would not be applicable to an urban setting. Ramsey County fire departments all have plans for permitting or regulating recreational fires based on Minnesota DNR recommendations.)*

(Wildfire) Improve the process for distributing and tracking burn permits. *(Ramsey County does not issue burn permits.)*

(Wildfire) Work with the Minnesota Department of Natural Resources (DNR) to develop state-level and county-level burning regulations. *(Ramsey County does not issue burn permits.)*

(Wildfire) Stricter enforcement of countywide outdoor burning regulations from May through October to prevent wildland fires. *(Ramsey County does not issue burn permits.)*

### **NOT COMPLETED (ONGOING/KEEP FOR PLAN UPDATE)**

**The following mitigation actions from the 2012 MHMP have not been completed, have been deemed as still relevant and will be carried over into the plan update. Actions will be revised as necessary.**

(Flooding) Review and update the FEMA flood maps for Ramsey County and its cities and townships to accurately map the actual flood plain and identify structures, both residential and commercial, not already on the FEMA maps. *(FEMA updated their mapping in June 2010. Ramsey County EMHS will review these maps and work with Ramsey County GIS to identify appropriate structures within the floodplain boundaries.)*

(Flooding) Conduct a comprehensive public education campaign on flooding. *(Ramsey County EMHS provides regular postings to Facebook on prevention and preparedness to all hazards.)*

(Flooding) Work with Ramsey County communities to ensure their enrollment in the National Flood Insurance Program. *(All municipalities except North Oaks are enrolled in NFIP.)*

(Tornadoes) Encourage retrofitting of existing and future public schools with special high wind resistant films for doors and windows. *(This is the responsibility of the individual school districts within Ramsey County. Ramsey County EMHS will continue to promote wind resistant building measures where feasible.)*

(Tornadoes) Provide advanced severe weather warning and to protect the residents and their property from the effects of tornadoes in Ramsey County. *(Ramsey County will begin the use of a mass notification system available to all residents in Spring, 2018). NWS watches and warnings may be able to be rebroadcast to subscribed users following a subscription campaign once rolled out to municipalities. Ramsey County will also have the ability to provide polygon-based warning information soon as well.)*

(Tornadoes) Identify facilities throughout Ramsey County that need backup generators to provide emergency power in case of power outages due to tornadoes/storms. *(This is the responsibility of the individual school districts within Ramsey County. Ramsey County EMHS will continue to promote wind resistant building measures where feasible.)*

(Tornadoes) Identify community areas (parks, recreation areas) and facilities (schools, government buildings) that are vulnerable to tornadoes and promote tornado safe rooms for each area or facility.

*(This is the responsibility of the individual school districts within Ramsey County. Ramsey County EMHS will continue to promote wind resistant building measures where feasible.)*

(Tornadoes) Identify safe rooms at all schools, including new and retrofit installations.

*(This is the responsibility of the individual school districts within Ramsey County. Ramsey County EMHS will continue to promote safe room design into any new construction where feasible.)*

(Tornadoes) Identify safe rooms or community shelters needed for mobile home parks, recreation / open areas. *(This is the responsibility of the mobile home park owners within Ramsey County. Ramsey County has identified 14 trailer parks in 7 municipalities that have trailer parks. Of those 14, 12 have identified they have shelters, one may have a shelter and one does not. Ramsey County EMHS will continue to promote safe room development where feasible.)*

(Tornadoes) Educate individual communities and county on tornado safety with open houses at local police, sheriff, and fire departments. This would include the cities of Arden Hills, Blaine, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, St. Anthony, St. Paul, Spring Lake Park, Vadnais Heights, and White Bear Lake. *(Ramsey County EMHS provides regular postings to Facebook on prevention and preparedness to all hazards. In addition, members of Ramsey County EMHS provide education information, instruction or outreach to employees and residents of Ramsey County through open houses, training sessions or classes as requested.)*

(Tornadoes) Promote information and benefits of tie-down straps for mobile homes. *(This appears to be the responsibility of the municipalities and the mobile home owners as this looks to fall under local building codes. Ramsey County EMHS will continue to promote safe room development where feasible.*

*<https://www.revisor.mn.gov/rules/?id=1350.2500>*

(Severe Summer Storms) Adequately warn and protect the people and property of Ramsey County from the effects of thunderstorm winds and lightning. *(Ramsey County will begin the use of a mass notification system to all residents in Spring, 2018. NWS watches and warnings may be able to be rebroadcast to subscribed users following a subscription campaign once rolled out to municipalities. Ramsey County can provide polygon-based warning information in spring 2018 as well.)*

(Severe Summer Storms) Equip all county and city recreation parks, fair grounds, as well as outdoor venue areas with adequate early severe weather warning devices and lightning detection devices.

*(This will be based on the availability of funding and resources to purchase.)*

(Severe Summer Storms) Update Get Ready Gopher public service announcement videos and provide them to local schools for severe weather training. *(Ramsey County Emergency Management and Homeland Security provides regular postings to Facebook on prevention and preparedness to all hazards.)*

(Severe Summer Storms) Develop and distribute flyers by mail to citizens to promote and educate citizens on severe summer storms issues to include the cities of Arden Hills, Blaine, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, St. Anthony, St. Paul, Spring Lake Park, Vadnais Heights, and White Bear Lake. *(Ramsey County EMHS will use Facebook instead of doing mass mailing of literature.)*

(Extreme Winter Storms) Conduct a public education outreach program on winter storms. *(Ramsey County Emergency Management and Homeland Security provides regular postings to Facebook on prevention and preparedness to all hazards.)*

(Extreme Winter Storms) Update Get Ready Gopher public service announcement videos and provide them to local schools for severe weather training. *(Ramsey County Emergency Management and Homeland Security provides regular postings to Facebook on prevention and preparedness to all hazards.)*

(Wildfire) Provide public education on the appropriate distance for tree and shrub clearance around buildings to prevent them from catching fire as a wildfire approaches. *(Ramsey County EMHS has done an episode of Get Ready Gopher on wildfire hazards and will continue to promote education outreach on wildfire preparedness.*

[https://www.youtube.com/watch?v=MBNpzLeP\\_Rw&list=UU1bAU8tHgsoGml2I2WNG4Jw&index=9](https://www.youtube.com/watch?v=MBNpzLeP_Rw&list=UU1bAU8tHgsoGml2I2WNG4Jw&index=9)

(Wildfire) Provide public education on proper fuel storage techniques. *(Ramsey County EMHS has done an episode of Get Ready Gopher on wildfire hazards and will continue to promote education outreach on wildfire preparedness.*

[https://www.youtube.com/watch?v=MBNpzLeP\\_Rw&list=UU1bAU8tHgsoGml2I2WNG4Jw&index=9](https://www.youtube.com/watch?v=MBNpzLeP_Rw&list=UU1bAU8tHgsoGml2I2WNG4Jw&index=9)

(All-Hazards) Provide NIMS/ICS training to all incoming emergency response personnel throughout Ramsey County. *(Ramsey County EMHS continually provides opportunities for ICS training.)*

(All-Hazards) Update notification and warning siren system in Ramsey County. *(As of 2016, Ramsey County is now IPAWS capable. Ramsey County will begin the use of a mass notification system to all residents of Ramsey County in the Spring of 2018. NWS watches and warnings may be able to be rebroadcast to subscribed users following a subscription campaign once it is rolled out to the public. Ramsey County ECC has currently upgraded to match Saint Paul's use of the Commander One siren system for suburban Ramsey County. Ramsey County ECC funded and Federal Signal has completed a sound propagation study and a complete inventory of siren systems in municipal Ramsey County. This information has been shared with all the municipalities and those that own outdoor warning sirens are currently in the process of upgrading those sirens that have been determined to need it. All upgrades are required to be completed prior to spring of 2018.)*

(All-Hazards) Provide education and training to all City Mayors and Councils on emergency preparedness (Public Safety) within Ramsey County. Ensure all city and county officials understand their roles and responsibilities in the County in the incident of an emergency. *(Ramsey County EMHS made available to all municipalities MGT-312: Senior Officials Workshop for All-Hazards Preparedness on 3/31/2016. Ramsey County EMHS will continue to offer additional training as requested.)*

(All-Hazards) Ensure computer operations for city and county infrastructure. *(Ramsey County Information Services protects County information and technology resources through its information security program that implements enterprise policies, processes, procedures and industry standards and practices. These controls are intended to minimize information system vulnerabilities and threats and meet legal and regulatory requirements for protecting data and systems. Ramsey County also employs a Chief Information Officer and a Chief Information Security Officer. Ramsey County IS also participates in Secure360, which promotes comprehensive security and risk management education in Information Security. Ramsey County EMHS led an effort to develop county-wide COOP/COG plan that includes IS/IT services. Ramsey County IS participated in BOLDplanning web-based program is used by all Ramsey County departments and BOLDplanning has been made available to all the municipalities in Ramsey County.)*

(All-Hazards) Identify access alternatives for neighborhoods with single access points. *(Ramsey County EMHS will work with local fire department on identifying areas of single access points and identifying access alternatives.)*

(All-Hazards) Work with local cable and radio providers to develop and broadcast public education on emergency preparedness. *(Ramsey County EMHS participates on the Integrated Warning Team that partners with Twin Cities Public Television (TPT) to provide emergency messaging over cable, broadcast television and social media – sometimes in alternative languages. Ramsey County EMHS also coordinates with Comcast to display tornado warning information on electronic billboards in Ramsey County as needed.)*

(All-Hazards) Evaluate critical facilities for exposure to damage from all hazards, especially high impact hazards affecting Ramsey County. *(This is an ongoing All-Hazards mitigation effort by Ramsey County EMHS.)*

(All-Hazards) Identify volunteers that should engage in disaster training and develop an all-hazards disaster training curriculum. *(Emergency Services Unit (ESU), Medical Reserve Corps (MRC), Community Emergency Response Team (CERT), have all received training. Just-in-Time training has also been developed.)*

(All-Hazards) Evaluate current needs and Review Siren placement to ensure adequate coverage of outdoor recreation areas. Acquire a new integrated activation system for sirens county-wide. *(Evaluation of siren propagation and inventory of needed equipment was completed in 2015. Replacement of outdated sirens and upgrades to siren control system are currently underway and are expected to be completed in the spring of 2018. Ramsey County EMHS, Ramsey County ECC and local municipalities will work together to evaluate additions to the siren system with regards to future development.)*

(All-Hazards) Evaluate and update activation system and install new sirens throughout Ramsey County and the cities and townships to include fair grounds and outdoor venue areas. *(Replacement of outdated sirens and upgrades to siren control system are currently underway. Siren study conducted by Federal Signal at the outset of the project shows that Maplewood siren 11, located at 1965 Manton Street, covers most the Ramsey County Fairgrounds to a level equal to 70 decibels (db). Maplewood siren 12, located at 1530 East County Road C, covers the Ramsey County Fairgrounds from the northwest to a level at or below 50db. Maplewood siren #14, located at 1600 Myrtle Street, covers the Ramsey County Fairgrounds from the east-southeast at a level equal to 60db. Any new sirens at any of these locations should meet or exceed these existing decibel levels. Falcon Heights siren #3, located at 1845 Larpenteur Avenue, covers ~50% of the*

*Minnesota State Fairgrounds to a level between 70db-80db and the other 50% between 60db-70db. In addition, Saint Paul Emergency Management has one siren situated on state fair property with at least three additional sirens situated near the fairgrounds that should provide at least 50db-60db into the fairgrounds. No siren study was done or is available to RCEMHS for the Saint Paul sirens.)*

(All-Hazards) Effectively communicate emergency preparedness information to all Ramsey County residents (including, non-English speaking, special needs populations, day cares, etc.). *(Ramsey County EMHS participates on the Integrated Warning Team that partners with Twin Cities Public Television (TPT) to provide emergency messaging over cable, broadcast television and social media – sometimes in alternative languages. Ramsey County EMHS also coordinates with Comcast to display tornado warning information on electronic billboards in Ramsey County as needed.)*

(All-Hazards) Conduct public meetings to educate all citizens of Ramsey County on safety and emergency preparedness including those with special needs, non-English speaking, day cares, etc. *(Ramsey County EMHS participates on the Integrated Warning Team that partners with Twin Cities Public Television (TPT) to provide emergency messaging over cable, broadcast television and social media – sometimes in alternative languages. Ramsey County EMHS also coordinates with Comcast to display tornado warning information on electronic billboards in Ramsey County as needed.)*

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# **Appendix I**

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# **Appendix J**

## **Ramsey County Plans & Programs in Place**

Planning & Regulatory

Plans/Programs	Yes/No
Comprehensive/Master Plan	Yes
Capital Improvements Plan	Yes
Economic Development Plan	Rice Creek Commons Riverfront Properties
Emergency Operations Plan	Yes
Continuity of Operations Plan	Yes
Transportation Plan	Covered in Master Plan
Stormwater Management Plan	Covered in Master Plan
Wildfire Protection Plan	Covered under EOP
Firewise Program	No
Water Conservation/Emergency Preparedness Plan	Yes
Wellhead Protection Plan	???
Source Water Protection Plan	???
Database of dry hydrants/well access	
Burning permits/restrictions	No (based on FD refer to DNR)
Water Management Plan	Covered in Master Plan
Zoning ordinance	
Subdivision ordinance	
Floodplain ordinance	
Natural hazard specific ordinance (stormwater, steep slope, wildfire)	
Flood insurance rate maps	Yes
Acquisition of land for open space and public recreation uses	Covered in Master Plan
School closing policy/communications plan	
Storm shelters (list all locations)	14 (trailer parks only – see attached)
Warning sirens (list all locations)	61 sirens (see attached)
SKYWARN Program	Yes
Mass Notification System	Yes – EverBridge
Severe Weather Awareness Week	Yes
Winter Weather Awareness Week	Yes
NOAA Weather Radios	Yes
THIRA	Yes
Other <i>*please describe</i>	<p>Appendices to the EOP</p> <ul style="list-style-type: none"> <li>• Volunteer &amp; Donations Management Plan</li> <li>• Ramsey County Medical Examiner Emergency/Disaster Plan</li> <li>• Evacuation, Shelter in Place, and Re-Entry Plan</li> <li>• Debris Management Plan</li> <li>• Radiological Emergency Ingestion Pathway Supplement</li> <li>• High-Hazard Flammable Train (HHFT) Plan</li> </ul> <p>The following are Annexes to the EOP Testing, Training and Exercises Plan</p>

*Administrative & Technical*

<b>Administration</b>	<b>Yes/No</b>
Planning Commission	Yes (various commissions)
Mitigation Planning Committee	yes
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	Yes (utilities, municipalities)
Mutual aid agreements	Yes (utilities, municipalities)
<b>Staff</b>	<b>Yes/No</b>
Chief Building Official	Yes
Floodplain Administrator	Yes
Emergency Manager	Yes
Municipal Planner	No
Civil Engineer	Yes
GIS Coordinator	Yes
<b>Technical</b>	<b>Yes/No</b>
Warning systems/services (Reverse 911, outdoor warning signals)	Yes
Hazard data and information	Yes
Hazus analysis	no

*Education & Outreach*

<b>Program/Organization</b>	<b>Yes/No</b>
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes
Natural disaster or safety related school programs	Yes
StormReady certification	Yes
Firewise certification	No
Public-private partnership initiatives addressing disaster-related issues	Emergency Management Council

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# **Appendix K**

## **Local Mitigation Capabilities**

### **Assessment Report**

As part of the 2018 Ramsey County Multi-Hazard Mitigation Plan update, city and township jurisdictions as well as county departments were invited to respond to a “Local Mitigation Capabilities Assessment” (LMCA) questionnaire to provide information about the current capabilities they have in place to support hazard mitigation, as well as any identified gaps or deficiencies. Information from the LMCAs was used to assist in developing new mitigation actions for the 2018 plan update. Following are the responses from those departments or jurisdictions that participated.

## RAMSEY COUNTY – OFFICE OF EMERGENCY MANAGEMENT

*Submitted By: Bryan Mayer, Emergency Management Coordinator*

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

- Ramsey County has the following plans in place to assist with hazard mitigation and future planning:
  - Ramsey County Groundwater Protection Plan (Ramsey County Conservation District)
  - Comprehensive Plan (Ramsey County Conservation District)
  - Stormwater Pollution Prevention Program (Ramsey County Public Works)
  - Comprehensive Plan (Ramsey County)
- In addition, each of the municipalities and all the watershed districts each have some of the same or similar types of plans.
- All the municipalities (exception: North Oaks) participate in the National Flood Insurance Program (NFIP).

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

- Ramsey County works with the Emergency Management Directors of each of the municipalities as well as discusses mitigation efforts with an Emergency Management Council that incorporates several Ramsey County departments and several non-profit agencies.
- Ramsey County Emergency Management consists of a Director, Deputy Director, three additional full-time staff, one part-time staff and a volunteer group that consists of 15 members.
- Ramsey County has a GIS department, one of which assists Emergency Management.
- Ramsey County Public Works has an Engineer and a Public Works department that addresses road maintenance issues for flooding (culverts, repetitive flooding)

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

- Ramsey County utilizes Everbridge for our emergency mass notification warning system, shared with each of the municipalities, that residents can sign up for on our website.

- Ramsey County participates in both the annual Severe Winter/Spring Weather Awareness Weeks

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

- Ramsey County Emergency Management and Homeland Security leads a Hazard Mitigation Planning Committee that meets regularly to discuss hazard mitigation and planning efforts to support such measures.

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

- Ramsey County Emergency Management and Homeland Security would like to be able to fully engage each of the participating municipalities as well as the watershed districts in future planning efforts.

**CITY OF ARDEN HILLS, MN**

*Submitted By: Matt Sather, Deputy Fire Chief/Emergency Manager*

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

- The Emergency Manager will be working with the manufactured home park to follow the Minnesota Department of Health to prepare for evacuation and sheltering of residents.

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

- The Deputy Fire Chief is the city's designated Emergency Manager. The City also has an Engineer and Public Works Supervisor to address road maintenance issues.

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

- The city has an Emergency Alert System. Our schools practice tornado drills annually.

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

- The City has worked with partners to address mitigation efforts following past disaster events such as the 1998 tornado.

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

- We need to update the Comprehensive Plan to ensure it addresses all necessary topics.

**CITY OF FALCON HEIGHTS, MN**

*Submitted By: Sack Thongvanh, City Administrator*

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

- The City is currently working on a new Comprehensive Plan to be submitted to the MetCouncil.
- Storm sewer improvements were completed with Capitol Region Watershed for Curtiss Field to address flooding issues by installing a smart pond with underground storage tanks.
- The City is currently working with Capitol Region Watershed to install an additional Rain Garden to capture and treat water runoff from impervious surfaces at City Hall.
- The City is working to complete our Surface Water Management Plan.
- We have a Pavement Management Plan for road infrastructure improvements project that include culvert and drainage improvements to reduce over-the road repetitive flooding in low areas.

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

- The City has its own GIS Specialist.
- The City is part of Ramsey County' GIS User Group.
- We have a City Engineer (contracted through the City of Roseville) and a Public Works Director to that addresses road maintenance issues for flooding
- The City Administrator is the Emergency Manager and a designated Fire Fighter is the Assistant Emergency Manager.
- The City has a Community Emergency Response Team (CERT).

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

- Working to develop an Evacuation Plan.
- The City use Facebook and Twitter.

- The City has an e-mail notification list for ongoing projects and/or for emergency.
- In 2018, the City will replace and update the emergency warning siren and increase the range with a 50-foot pole. The siren will also be DC/AC.

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

- The City works very closely with Capital Region Watershed to collaborate mitigation projects relating to surface water improvements.

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

- Staffing level and capacity.
- Completing an Evacuation Plan in a reasonable timeframe.

**CITY OF LAUDERDALE, MN**

*Submitted By: Heather Butkowski, City Administrator*

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

- We have a 20-year Comprehensive Plan (2008) that is designed to plan physical growth of the city and appropriate land uses. A new plan is being produced and expected to be completed in 2018.
- We have a City Planning and Zoning Commission that has established a Floodplain Ordinance. The City participates in the National Flood Insurance Program (NFIP).
- Purchasing Policy allows for emergency clean up without prior council approval.

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

- Public Works Coordinator that addresses road and sewer maintenance issues and would coordinate debris removal.

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

- The City has an e-mail system through which alerts can be sent. Residents can sign up on our website.

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

- Unsure.

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

- Working towards contracting for an emergency manager to help with response coordination.

**CITY OF LITTLE CANADA, MN**

*Submitted By: Don Smiley Fire Chief/Emergency Management Director*

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

- We have a 20-year Comprehensive Plan (2008) that is designed to plan for the future physical growth of the city and appropriate land uses.
- We have a City Planning and Zoning Commission that has established a Floodplain Ordinance. The City participates in the National Flood Insurance Program (NFIP).
- We have an annual transportation plan to address road improvement projects that include culvert and drainage improvements to reduce over-the-road repetitive flooding.
- The City works with our 3 mobile home parks to follow the Minnesota Department of Health requirements to plan for the evacuation and sheltering of the residents of the park in times of severe weather such as tornadoes, high winds, or floods.

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

- We have a designated Emergency Manager.
- We have a City Engineer and a Public Works Supervisor that addresses road maintenance issues for flooding (culverts, repetitive flooding).

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

- The City has an Emergency Alert System that residents can sign up for on our website.
- The City participates in the annual Severe Winter/Spring Weather Awareness Week.
- Our schools practice tornado drills on an annual basis.

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

- None listed.

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

- None listed.

**CITY OF MAPLEWOOD, MN**

*Submitted By: Steve Lukin, Fire Chief/EM*

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

- We have a 20-year Comprehensive Plan that is designed to plan physical growth of the city and appropriate land uses.
- We have a City Planning and Zoning Commission that has established a Floodplain Ordinance. The City participates in the National Flood Insurance Program (NFIP).
- We have an annual transportation plan to address road improvement projects that include culvert and drainage improvements to reduce over-the-road repetitive flooding.
- The City works with our mobile home parks to follow the Minnesota Department of Health requirements to plan for the evacuation and sheltering of the residents of the park in times of severe weather such as tornadoes, high winds, or floods.

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

- Our Fire Chief is the City's designated Emergency Manager.
- We have a City Engineer and a Public Works Supervisor that addresses road maintenance issues for flooding (culverts, repetitive flooding).

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

- The City participates in the annual Severe Winter/Spring Weather Awareness Week
- Our schools practice tornado drills on an annual basis.

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

- The City has worked with state and federal partners to address mitigation efforts following past disaster events such as the July 2016 severe wind event.

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

- The mobile home park operators within our city have not met the storm shelter requirements set by MDH.

**CITY OF MOUNDS VIEW, MN**

*Submitted By: Nate Harder, Chief of Police*

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

- The City Planner is currently working on a Comprehensive Plan that is designed to plan physical growth of the city and appropriate land uses.
- We have a City Planning and Commission that has established a Floodplain Ordinance. The City participates in the National Flood Insurance Program (NFIP).
- We have an annual transportation plan to address road improvement projects that include culvert and drainage improvements to reduce over-the-road repetitive flooding.
- The City works with our 3 mobile home parks to follow the Minnesota Department of Health requirements to plan for the evacuation and sheltering of the residents of the park in times of severe weather such as tornadoes, high winds, or floods. We recently inspected all the storm shelters in 2017.

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

- Our Police Chief is the City's designated Emergency Manager.
- We have a Public Works Director and a Public Works Supervisor that addresses road maintenance issues for flooding (culverts, repetitive flooding).

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

- The City participates in the annual Severe Winter/Spring Weather Awareness Week.
- The City's fire department educates homeowners on implementing fuel-reduction measures around homes in areas adjacent to woodland areas for wildland fire safety.
- Our school practices tornado drills on an annual basis.

- We recently inspected our storm shelters at our mobile home communities and updated one of our tornado alarms.

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

- The City has worked with state and federal partners to address mitigation efforts following past disaster events such as the July 2016 severe wind event.
- Our City forester is part of the County's community wildfire protection plan (CWPP).
- We have utilized LESO and GSA for disaster preparedness (mobile command center and communications equipment).

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

- We need to update our Comprehensive Plan to address greater hazard mitigation, i.e., Flooding.
- The City of Mounds View needs better equipment in place for emergency preparedness.
- The City of Mounds View needs to have more training for staff.

**CITY OF NEW BRIGHTON, MN**

*Submitted By: Craig G. Schlichting, P.E. Director of Community Assets and Development*

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

- We have a 10-year Comprehensive Plan (that will be updated in 2018) that is designed to plan physical growth of the city and appropriate land uses.
- We have a City Planning and Zoning Commission that has established a Floodplain Ordinance. The City participates in the National Flood Insurance Program (NFIP).
- We have a Comprehensive Street Plan to address road improvement projects, and a Capital Improvement Plan that includes 20 years of drainage improvements to reduce over-the-road repetitive flooding.
- The City of New Brighton has submitted a petition to Rice Creek Watershed District which includes the matter of Watershed Basic Water Management Project 2013-01 (upon the petition of the Cities of New Brighton, Saint Anthony, and Roseville)

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

- The City Council includes a Public Safety Committee.
- Our Deputy Director of Public Safety is the designated Emergency Manager.

- The City has its own GIS Specialist
- We have a City Engineer and a Public Works Superintendent that addresses road maintenance issues for flooding (culverts, repetitive flooding)

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

- The City has an Emergency Alert System that residents can sign up for on our website.
- The City participates in the annual Severe Winter/Spring Weather Awareness Week.
- The City's fire department educates homeowners on implementing fuel-reduction measures around homes in areas adjacent to woodland areas for wildland fire safety.
- Our school practices tornado drills on an annual basis.

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

- The City has worked with Rice Creek Watershed District for a \$3,000,000 BWSR Clean Water Fund grant from the Clean Water, Land & Legacy Amendment, RCWD is implementing its largest multi-purpose project to-date, aimed at improving water quality in Long Lake, located in New Brighton.
- The City has worked with state and federal partners to address mitigation efforts following past disaster events such as the July 2016 severe wind event.
- Our city forester is part of the County's community wildfire protection plan.

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

- We need to update our 2018 Comprehensive Plan to address greater hazard mitigation, i.e., Flooding.
- The City needs additional funding to buy out properties and improve roads that experience repetitive flooding.
- The City needs additional funding to replace storm sewer pipes under TH 35W and TH 694.
- The City needs additional funding to add storm sewer mitigation techniques on private property to aid repetitive flooding at a large apartment complex.
- The City needs additional funding to remove sediment and revise drainage strategies to reduce/remove flooding potential to a local mobile home park and businesses in Roseville/New Brighton from a basin that receives drainage from over 3,000 acres of densely developed property.
- The City needs additional funding to install a new culvert from Rush Lake to avoid impacts experienced by beaver dams and the stock piles of a local business
- The mobile home park operators within our city have not met the storm shelter requirements set by MDH.

## CITY OF NORTH OAKS, MN

*Submitted By: Mike Robertson, City Administrator*

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

- North Oaks has a Comprehensive Plan that is updated every 10 years.

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

- North Oaks contracts with the Lake Johanna Fire Department for Emergency Services.
- City Manager Mike Robertson is the designated Emergency Manager.
- The North Oaks Homeowners Association has a Safe Community Committee which meets regularly and reviews safety issues.

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

- North Oaks does not have any floodplain issues that I am aware of.
- The City periodically holds a tabletop exercise with staff, elected officials and contractors to review emergency management procedures. The next such exercise will be held in Spring, 2018.
- Chippewa Middle School practices tornado drills on an annual basis.

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

- North Oaks is a private community and there is no public city-owned land. Because of this, mitigation efforts are necessary limited by private property and the willingness of private property owners to spend money.

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

- The City has determined that due to the rolling terrain, blanketing the entire community with warning sirens is impractical and hideously expensive. The City has only two full time staff, everything else is contracted. Because of this, we would need Ramsey County's help in a major crisis.

## CITY OF NORTH ST. PAUL, MN

*Submitted By: Scott Duddeck, Fire Chief; Dan Krier, Fire Inspector*

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

- We have a 22-year Comprehensive Plan (adopted in 2009) in plan that is designed to plan physical growth of the city and appropriate land uses. We are currently in the planning phase for developing for the 2020 Comprehensive Plan Update.
- We have a City Planning Commission that has established a floodplain ordinance.
- We have an annual transportation plan to address road improvement projects that include culvert and drainage improvements.
- The City works with our apartment buildings (>5 units) for emergency evacuation and shelter planning.
- The City works with our 6 elementary schools and 1 high school for emergency evacuation and sheltering in place (severe weather) planning.

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

- The Fire Chief is the City's designated Emergency Manager.
- We have a contract City Engineer and a Public Works Director that addresses road maintenance issues for flooding.
- The members of the paid-on-call Fire Department are the primary first responders to emergency incidents such as flooding and/or severe storms.
- The members of the Police Reserves and Community Service Officers from our Police Department are the primary responders for traffic control during flooding and/or severe storm events.

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

- The City has a severe weather siren.
- The City utilizes Social Media and the City Website to notify residents of emergencies.
- The City is working on developing and implement the Everbridge emergency notification system.
- The City's Fire Department has a Safe Haven program that educates homeowners on fire safety and severe weather safety (tornadoes, heat waves, winter weather).
- Our schools practice tornado drills on an annual basis.

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

- None

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

- Funding to buy out properties to create holding ponds, which assist with flood control.
- Additional contacts who can help with implementing and promoting the Everbridge notification system.

**CITY OF ROSEVILLE, MN**

*Submitted By: David Brosnahan, Assistant Fire Chief & Emergency Manager*

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

- We can utilize some capital improvement funds to make some improvements and mitigation steps. In addition, we look to work with our county and state peers to establish and review community needs for mitigation.

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

- The Assistant Fire Chief is the City's designated Emergency Manager. In addition, the City has a GIS Specialist that assists with public works, parks, and public safety projects.
- Our City Engineer, as well as Public Works Department are open and committed to assisting and addressing potential disaster threats.
- All Roseville employees are NIMS compliant. That includes City Council and the City Manager.

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

- The City of Roseville participates in the annual severe weather awareness week.
- The City utilizes social media to assist with emergency notifications as well as emergency information. The Roseville Area School District is fully compliant with their tornado, fire, and lockdown procedures. I am a part of their Emergency Response Team (ERT) that evaluates plans and progress in these areas.

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

- Our City has a capital improvement plan (CIP) that does have some funding for mitigation and improvements for roads, emergency sirens.

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

- I believe we need to make some updates to the strategic plan when it comes to mitigation issues in some areas of the community. One of our highest risks is around Fairview Avenue under Highway 36, which is prone to flooding during downpour events. This flooding has resulted in significant damage to vehicles as well as minor injuries.

**CITY OF SHOREVIEW, MN**

*Submitted By: Dan Curley, Public Works Superintendent/Emergency Manager*

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

- We have a 20-year Comprehensive Plan (2018) that is designed to plan physical growth of the city and appropriate land uses.
- The City participates in the National Flood Insurance Program (NFIP).

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

- The City's Public Safety Committee meets 6 times a year.
- Our Public Works Superintendent is the City's designated Emergency Manager.
- The City has its own GIS Specialist
- We have a City Engineer and a Public Works Supervisor that addresses road maintenance issues for flooding (culverts, repetitive flooding)

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

- The City participates in the annual Severe Winter/Spring Weather Awareness Week
- Our school practices tornado drills on an annual basis.

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

- The City maintains a 5-year Capital Improvements and Operating Budget.

- The City maintains a 30-year Comprehensive Infrastructure Replacement Plan.

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

- Funding
- Acquisition of flood prone properties (homes). Homeowners are not interested in selling now. There is one home that experiences frequent flooding and when the homeowner is ready to sell, it has been talked about the City acquiring the property and turning it into an open space, possibly a ponding area.

**CITY OF ST. ANTHONY, MN**

*Submitted By: Mark Sitarz – Fire Chief/Emergency Manager*

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

- 10-year Comprehensive Plan (2011) that is designed to anticipate future physical growth of the city and appropriate land uses.
- Annual Street and Utility replacement program. Each year the City replaces water, sanitary sewer, storm sewer and reconstructs roadways. The City has in place a Flood Hazard Mitigation Program. Goal of this program is to provide 100-year flood protection to every building. This is anticipated to be complete by 2024. Most recent project was Mirror Lake Improvements.
- We have identified and completed our 5-year mitigation plan for Hennepin County Emergency Management.
- Strategic Plan
- NIMS
- Rail Plan

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

- Our Fire Chief is the City's designated Emergency Manager.
- The City has partnered with WSB as our "City Engineer" for all projects as well as utilizing their GIS services.
- We have a City Engineer and a Public Works Supervisor that address road maintenance issues for flooding (culverts, repetitive flooding)
- Public Works Department meets every other month as a member of the Hennepin County Emergency Management Group. Collaboration discussions on equipment, incidents, personnel roles, etc.

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

- The City's fire department educates homeowners/residents on severe weather and understanding how to prepare.
- Our schools practice tornado drills on an annual basis.
- Flood Hazard Mitigation Program. The City has partnered with MNDNR and FEMA in the past to mitigate flood events and to prevent future damages from floods. The City continues to implement the program with the annual street reconstruction program.

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

- Minnesota DNR Flood Hazard Mitigation Grants.
- Rice Creek and Mississippi Watershed Grants.

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

- Additional funding and partners with regional governments to move projects forward. Some projects are programmed to take place in cooperation with Hennepin and Ramsey County. They own the roadways, drainage systems and ROW for planned mitigation projects.

**CITY OF VADNAIS HEIGHTS, MN**

*Submitted By: Ed Leier – Fire Chief / Kurt Frison – Fire Technician*

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

- We require a comprehensive plan with the Metropolitan Council.
- We are included in the County Wide Plan
- We have a City Planner and the City participates in the National Flood Insurance Program (NFIP).
- We have a transportation maintenance program
- We work with VLAWMO (Vadnais Lake Area Water Management Organization) on water quality, drainage ditch maintenance, run off, and storm water treatment.
- The City works with our I mobile home park to follow the Minnesota Department of Health requirements to plan for the evacuation and sheltering of the residents of the park in times of severe weather such as tornadoes, high winds, or floods.

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

- Our Fire Chief is the City's designated Emergency Manager.
- 3 Fire Technicians are Certified Emergency Managers to assist the Emergency Manager.
- The City contracts with SEH for GIS and Engineering.
- We have a City Engineer/Public Works Supervisor that addresses road maintenance issues for flooding (culverts, repetitive flooding). This position also works closely with VLAWMO and Contract Engineers.
- VLAWMO (Vadnais Lake Area Water Management Organization) houses in our City Hall which we have joint powers with.

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

- The City participate in IPAWs an Emergency Alert System that residents can sign up for on our website.
- The City participates in the County's Outdoor Warning Siren Program
- The City's fire department educates homeowners on implementing fuel-reduction measures around homes in the City's Rental Program to comply with City Ordinances.
- Our school practices tornado drills on an annual basis.
- Our City is a National Weather Service (NWS) "Weather Ready Ambassador".
- We have an active Health and Public Safety Commission that participates in community events by distributing family kits, plans, and public information messages.

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

- The City relies on tax dollars to support planning efforts. No federal or state funds are received for mitigation.

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

- The City needs additional funding for staffing to work in areas of mitigation and continuity of operation planning.

**CITY OF WHITE BEAR LAKE, MN**

*Submitted By: Dale M. Hager - Administrative Captain / EM Director*

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

- We work closely with the Ramsey County Emergency Manager to accomplish mitigation plans, authorities and policies for the City of White Bear Lake.

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

- Our Administrative Police Captain is the City's designated Emergency Management Director.
- We have a City Engineer and a Public Works Supervisor that addresses road maintenance issues for flooding (culverts, repetitive flooding).
- We work under the counsel of the Ramsey County Emergency Management Director.

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

- Our City adopts many, if not all, of the appropriate applicable programs set out by our Ramsey County Emergency Management Department.

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

- Our City utilizes funds set aside by our City Council, as well as any other funding sources deemed appropriate by the Ramsey County Emergency Management Department.

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

- We work with Ramsey County to identify gaps or deficiencies and in identifying solutions.

# **Appendix L**

## **Jurisdictional Questionnaires**

As part of the Ramsey County 2018 Multi-Hazard Mitigation Plan update, participating cities were invited to respond to a “**Jurisdictional Questionnaire**” to provide information on impacts of recent hazard events, the increase or decrease of community vulnerabilities, and ideas for local-level mitigation actions. Following are the responses from jurisdictions that participated.

### CITY OF ARDEN HILLS, MN

*Submitted By: Matt Sather, Lake Johanna Fire Department, Deputy Chief*

- 1. In the last 5 years has your community experienced any severe weather or disaster events that resulted in loss of life, caused property damage, or incurred costs for recovery? Please describe.** We have had wind/hail damage from storms but nothing of great significance.
- 2. In the last 5 years has your community taken any actions to reduce the vulnerability of your community against future severe weather or disaster events?** We are currently working though elevating a roadway that passes through a low-lying watershed area and flooded over this past spring.
- 3. In the past 5 years, has anything changed that you feel has increased your community’s vulnerability to future severe weather or disaster events?** No.
- 4. What concerns do you have / what mitigation actions you think would help your community to reduce or eliminate risk against future severe weather or disaster events?** None.

### CITY OF FALCON HEIGHTS, MN

*Submitted By: Sack Thongvanh, City Administrator*

- 1. In the last 5 years has your community experienced any severe weather or disaster events that resulted in loss of life, caused property damage, or incurred costs for recovery? Please describe.** We have had some severe storms in the last couple of years that our public safety personnel and staff has had to address.
- 2. In the last 5 years has your community taken any actions to reduce the vulnerability of your community against future severe weather or disaster events?** In the last year due to the killing of Philando Castile, the City has had to create procedures to address order of command and how things are approved.
- 3. In the past 5 years, has anything changed that you feel has increased your community’s vulnerability to future severe weather or disaster events?** Not that I am aware of.

4. **What concerns do you have / what mitigation actions you think would help your community to reduce or eliminate risk against future severe weather or disaster events?** Not that I am aware of, but training would help on how to react to true disasters.

### CITY OF LAUDERDALE, MN

*Submitted By: Heather Butkowski, City Administrator*

1. **In the last 5 years has your community experienced any severe weather or disaster events that resulted in loss of life, caused property damage, or incurred costs for recovery? Please describe.** Nothing other than ordinary storm damage.
2. **In the last 5 years has your community taken any actions to reduce the vulnerability of your community against future severe weather or disaster events?** No.
3. **In the past 5 years, has anything changed that you feel has increased your community's vulnerability to future severe weather or disaster events?** No.
4. **What concerns do you have / what mitigation actions you think would help your community to reduce or eliminate risk against future severe weather or disaster events?** Contract with an emergency management director.

### CITY OF LITTLE CANADA, MN

*Submitted By: Don Smiley, Fire Chief/Emergency Management Director*

1. **In the last 5 years has your community experienced any severe weather or disaster events that resulted in loss of life, caused property damage, or incurred costs for recovery? Please describe.** We have had some high wind events with some homes damaged, but mostly minor issues.
2. **In the last 5 years has your community taken any actions to reduce the vulnerability of your community against future severe weather or disaster events?** No.
3. **In the past 5 years, has anything changed that you feel has increased your community's vulnerability to future severe weather or disaster events?** No.
4. **What concerns do you have / what mitigation actions you think would help your community to reduce or eliminate risk against future severe weather or disaster events?** None.

### CITY OF MAPLEWOOD, MN

*Submitted By: Steve Lukin, Fire Chief/EM*

- 1. In the last 5 years has your community experienced any severe weather or disaster events that resulted in loss of life, caused property damage, or incurred costs for recovery? Please describe.** None.
- 2. In the last 5 years has your community taken any actions to reduce the vulnerability of your community against future severe weather or disaster events? Made some improvements to our storm water system to reduce flooding.**
- 3. In the past 5 years, has anything changed that you feel has increased your community's vulnerability to future severe weather or disaster events? None.**
- 4. What concerns do you have / what mitigation actions you think would help your community to reduce or eliminate risk against future severe weather or disaster events? Move power lines to underground.**

## CITY OF MOUNDS VIEW, MN

*Submitted By: Nate Harder, Chief of Police*

- 1. In the last 5 years has your community experienced any severe weather or disaster events that resulted in loss of life, caused property damage, or incurred costs for recovery? Please describe.** This past summer the City of Mounds View (along with Blaine and Spring Lake Park) had a severe thunderstorm come through that resulted in many downed trees, hail damage, and required city resources to open streets from debris.
- 2. In the last 5 years has your community taken any actions to reduce the vulnerability of your community against future severe weather or disaster events? This past summer, one of our three tornado warning sirens fell over and was destroyed due to rotten wood. The unit and pole were replaced with a new system.**
- 3. In the past 5 years, has anything changed that you feel has increased your community's vulnerability to future severe weather or disaster events? No.**
- 4. What concerns do you have / what mitigation actions you think would help your community to reduce or eliminate risk against future severe weather or disaster events? The City of Mounds View is in critical need of the city hall generator having the ability to come on in the event of a power outage. Currently, a city employee must come in to physically turn on the generator.**

## CITY OF NEW BRIGHTON, MN

*Submitted By: Trevor Hamdorf, Deputy EM Director*

- 1. In the last 5 years has your community experienced any severe weather or disaster events that resulted in loss of life, caused property damage, or incurred costs for recovery? Please describe.** Yes, the City of New Brighton has experienced several excessive rain events which resulted in overland flooding and damage to structures along with multiple high wind events resulting in structural damage along with damage to infrastructure.
- 2. In the last 5 years has your community taken any actions to reduce the vulnerability of your community against future severe weather or disaster events?** The City of New Brighton has taken several steps to mitigate the effects of severe weather. The city has invested in infrastructure improvements to increase the retention ability of the city stormwater system. The city has worked with private energy partners to place power lines underground during construction and re-construction projects.
- 3. In the past 5 years, has anything changed that you feel has increased your community's vulnerability to future severe weather or disaster events?** With the ongoing issues of climate change, we are seeing an increase in the number of high-risk rain and wind events.
- 4. What concerns do you have / what mitigation actions you think would help your community to reduce or eliminate risk against future severe weather or disaster events?** We would like to continue to invest in stormwater retention and mitigation efforts along with ongoing efforts to place power lines underground.

## CITY OF NORTH OAKS, MN

*Submitted By: Mike Robertson, City Administrator*

- 1. In the last 5 years has your community experienced any severe weather or disaster events that resulted in loss of life, caused property damage, or incurred costs for recovery? Please describe.** In the last 5 years, we had some severe storms which have downed trees and damaged some homes.
- 2. In the last 5 years has your community taken any actions to reduce the vulnerability of your community against future severe weather or disaster events?** In the last 5 years, we've become more pro-active about forcing homeowners to take down trees that are starting to lean over a road.
- 3. In the past 5 years, has anything changed that you feel has increased your community's vulnerability to future severe weather or disaster events?** I feel our vulnerability to flooding has gone down as we have replaced old, partially crushed culverts with

new culverts. We have little vulnerability to flooding anyway as much of our community is one big rain garden. Even though we are heavily wooded our Fire Chief feels that none of our homes are particularly vulnerable to wild fires due to their distances from trees.

4. **What concerns do you have / what mitigation actions you think would help your community to reduce or eliminate risk against future severe weather or disaster events?** My main concern is that I'd like to convince our residents to purchase a severe weather warning radio instead of depending on storm sirens.

## CITY OF NORTH ST. PAUL, MN

*Submitted By: Scott Duddeck, Fire Chief*

1. **In the last 5 years has your community experienced any severe weather or disaster events that resulted in loss of life, caused property damage, or incurred costs for recovery? Please describe.** Property damage from flooding after extreme rainfall. Hail damage during severe weather. No known loss of life or injury.
2. **In the last 5 years has your community taken any actions to reduce the vulnerability of your community against future severe weather or disaster events?** Improved storm sewer work in various areas of the city, especially those undergoing road reconstructions. Additionally, we have improved our sewer cleaning schedule. We have also encouraged homeowners to make improvements/renovations to their property to reduce damage from flooding (i.e., install drain tile and/or sump pump) while promoting Housing and Redevelopment Authority funding resources.
3. **In the past 5 years, has anything changed that you feel has increased your community's vulnerability to future severe weather or disaster events?** No.
4. **What concerns do you have / what mitigation actions you think would help your community to reduce or eliminate risk against future severe weather or disaster events?** Global climate change and how it has affected severe weather in our community.

## CITY OF ROSEVILLE, MN

*Submitted By: David Brosnahan, Assistant Fire Chief/Emergency Manager*

1. **In the last 5 years has your community experienced any severe weather or disaster events that resulted in loss of life, caused property damage, or incurred costs for recovery? Please describe.** We experienced a severe thunderstorm with high winds in June 2013 that caused extensive damage in the community with extended power outage, localized flooding, and damage to homes. The City of Roseville declared a state of emergency to assist with funding resources and assistance to assist with the clean-up process. The city has

experienced several severe storms since this storm, however the damage was relatively low with minimal loss occurring.

- 2. In the last 5 years has your community taken any actions to reduce the vulnerability of your community against future severe weather or disaster events?** The City of Roseville has improved our social media presence when it comes to weather warnings. The city has also made significant upgrades to multiple tornado sirens, purchasing three severe warning sirens in the last four years. In addition, we are working with our dispatch center to improve citizen notification with cellphone/text alerting through a company called Everbridge.

Several years ago, culvert and drainage improvements were made to the area on Fairview Avenue, under Highway 36. For many years there has been localized flooding issues there that has caused stalled vehicles, the need for water rescue, and injuries. The improvements have made it so that area does not flood as easily or quickly during large downpours.

- 3. In the past 5 years, has anything changed that you feel has increased your community's vulnerability to future severe weather or disaster events?** Nothing now. I do not feel Roseville is any more vulnerable than we were five years ago.
- 4. What concerns do you have / what mitigation actions you think would help your community to reduce or eliminate risk against future severe weather or disaster events?** The city has made some improvements with notification procedures as well as drainage improvements in some of our common localized flooding areas. We do have a small trailer park facility near County Road C and Lexington Avenue that does not have a safe house. This is a potential concern for those living there.

## CITY OF SHOREVIEW, MN

*Submitted By: Dan Curley, Public Works Superintendent, Emergency Manager*

- 1. In the last 5 years has your community experienced any severe weather or disaster events that resulted in loss of life, caused property damage, or incurred costs for recovery? Please describe.** There has been no loss of life, but there has been property damage and road closures. We have one property with a home on it that is particularly susceptible to flooding. When heavy rains are predicted, we assist the home owner with sand bagging in front of the garage. Also, there is one major collector road, heavily relied upon as a throughway that has flooded three of the past 5 years. An emergency 6" trash pump was purchased this year to relieve some of the flooding issues in this area.
- 2. In the last 5 years has your community taken any actions to reduce the vulnerability of your community against future severe weather or disaster events?** The city has approved plans and a project is scheduled to raise a portion of the road that is prone to flooding. In those plans is the addition of a "by-pass" trail that will allow travel throughout the

trail system that connects into Ramsey County's trail system through Grass Lake and surrounding open space.

3. **In the past 5 years, has anything changed that you feel has increased your community's vulnerability to future severe weather or disaster events?** The weather/climate changes in the last 5 years, with an increase in moisture, pond levels and lake levels are rising, and it has created higher ground water/water table elevations.
4. **What concerns do you have / what mitigation actions you think would help your community to reduce or eliminate risk against future severe weather or disaster events?** Raising the elevation of the flood prone roadway and adding a trail along that roadway will help alleviate road closures. Purchasing a home, when the homeowner is ready and willing, and creating an open space for better drainage and water storage will reduce flooding and potential property damage.

### CITY OF VADNAIS HEIGHTS, MN

*Submitted By: Ed Leier, Fire Chief & Kurt Frison, Fire Technician*

1. **In the last 5 years has your community experienced any severe weather or disaster events that resulted in loss of life, caused property damage, or incurred costs for recovery? Please describe.** No.
2. **In the last 5 years has your community taken any actions to reduce the vulnerability of your community against future severe weather or disaster events?** No.
3. **In the past 5 years, has anything changed that you feel has increased your community's vulnerability to future severe weather or disaster events?** No.
4. **What concerns do you have / what mitigation actions you think would help your community to reduce or eliminate risk against future severe weather or disaster events?** Preparing our citizens to be capable of managing themselves during an event so they do not need to be completely reliant on government agencies.

### CITY OF WHITE BEAR LAKE, MN

*Submitted By: Dale M. Hager, Administrative Police Captain / EM Director*

1. **In the last 5 years has your community experienced any severe weather or disaster events that resulted in loss of life, caused property damage, or incurred costs for recovery? Please describe.** The City of White Bear Lake suffered minor property damage during a wind storm in the summer of 2017.

2. **In the last 5 years has your community taken any actions to reduce the vulnerability of your community against future severe weather or disaster events?** We have invested in an upgrade to our mass notification audible alarm system to match the entire County's systems.
3. **In the past 5 years, has anything changed that you feel has increased your community's vulnerability to future severe weather or disaster events?** No
4. **What concerns do you have / what mitigation actions you think would help your community to reduce or eliminate risk against future severe weather or disaster events?** None

## RAMSEY COUNTY EMERGENCY MANAGEMENT COUNCIL

*Submitted By:*

- Kristy Stauffer, Deputy Director; Ramsey County EMHS
  - Bryan Mayer, EM Coordinator & Hazard Mitigation Planner; Ramsey County EMHS
  - Keith Ford, External Relations; American Red Cross
  - Ryc Lyden, External Relations; American Red Cross
  - Emily Colby, Enterprise Risk Manager; Ramsey County
  - Art McIntyre, Planning Specialist; Saint Paul/Ramsey County Public Health
  - John Ristad; Attorney; Ramsey County
  - Kristen Schultz, Occupational Safety; Ramsey County Human Resources
  - Shannon McNulty, Planner; Minnesota Dept. of Transportation
1. **In the last 5 years has your community experienced any severe weather or disaster events that resulted in loss of life, caused property damage, or incurred costs for recovery?**
    - Lilydale Park landslide resulting in deaths of two children and injury to one other child (5/22/2013).
    - Environmental Protection Agency Superfund Site in Saint Paul involving multiple chemicals (8/16/2017). Chemicals involved, if mixed, would create large-scale evacuations for surrounding areas.
    - Measles outbreak in Ramsey County (4/11/2017 to 8/25/2017).
    - Tuberculosis outbreak in Ramsey County (ongoing).
    - Tuberculosis outbreak in Ramsey County Jail (2008).
    - H1N1 (local) and Highly Pathogenic Avian Influenza (regional).
  2. **In the last 5 years has your community taken any actions to reduce the vulnerability of your community against future severe weather or disaster events?**

- Integration and updates to the siren system to include new equipment where needed and ability to use polygonal warning software.

**3. In the past 5 years, has anything changed that you feel has increased your community's vulnerability to future severe weather or disaster events?**

- Increased knowledge in the need for language services and cultural considerations to emergency notification and disaster response and recovery considerations given the growth in immigration populations in Ramsey County (see 6/21/2017 StarTribune news article).
- Increased growth in the 65 and older age groups may need to be taken into consideration in the future.
- Climate change/global warming.
- Trust/mistrust issues with some members of society and government.

**4. What concerns do you have / what mitigation actions you think would help your community to reduce or eliminate risk against future severe weather or disaster events?**

- Flu shots – immunizations as required.
- Assist local fire departments and the American Red Cross to promote the Home Fire Campaign. Depending on where you live and other factors, either an American Red Cross representative or one of our partner organizations will install a limited number of free smoke alarms for those who cannot afford to purchase smoke alarms or for those who are physically unable to install a smoke alarm.
  - Participating Fire Departments in Ramsey County
    - Maplewood
    - Mounds View (Blaine, Spring Lake Park, Mounds View)
    - New Brighton
    - North St. Paul
    - Spring Lake Park (Blaine, Spring Lake Park, Mounds View)
    - St. Anthony
    - St. Paul

**WHITE BEAR TOWNSHIP, MN**

*Submitted By: Paul Peltier, Public Works Lead*

- I. In the last 5 years has your community experienced any severe weather or disaster events that resulted in loss of life, caused property damage, or incurred costs for recovery? Please describe.** In 2014 or 2015 we had a high wind event that later was categorized as a F0 tornado. It started in North Oaks and moved into the northern part of White Bear Township near Hove Lane area. Several homes and a lot of debris. Estimate of \$50,000 in damages. Brooklyn Park and North St. Paul Public works helped us clean up the debris.

In 2018 we had 8 senior living townhome units flooded from a City of White Bear Lake water main break. The entire complex had to be remodeled. The City of White Bear Lake would have the amount on repair.

2. **In the last 5 years has your community taken any actions to reduce the vulnerability of your community against future severe weather or disaster events?** Just recently we have put a stormwater plan in place. White Bear Township has been working on repairing and replacing old stormwater facilities, clean storm sceptors, repair ditches and conduct regular maintenance.

Working with the City of White Bear Lake the township has updated their sirens in 2018 spending \$190,000 in new equipment.

WB Township has installed a weather station at the township public works building at 1283 Hammond Road and it is connected to weather underground and they monitor the readings during storms.

WB Township is working with White Bear Lake, Ramsey County, and Rice Creek Watershed on a storm water project at Stillwater Street and the South end of Bald Eagle Lake.

3. **In the past 5 years, has anything changed that you feel has increased your community's vulnerability to future severe weather or disaster events?** Public Works believes that rain events are producing more precipitation in smaller amounts of time that they saw 3 years ago.

4. **What concerns do you have / what mitigation actions you think would help your community to reduce or eliminate risk against future severe weather or disaster events?**

1. Lightning detection system added in Polar Lake Park at 1280 Hamline Road, they have 4 baseball fields and 6 soccer fields where several hundreds of children play each year spring through fall.
2. Install a weather shelter in Polar Lake Park.
3. 2 separate power generators at the public works station and the WB Township Administration Office. PW has an estimate to wire the buildings already.
4. Work with Xcel Energy and Connexus Energy (Electric Co-Op) to convert overhead power lines to underground.
5. White Bear Township manages 25 lift stations and 4 wells. Public Works would like to obtain generators for at least 1 generator for the in-house well station in the northern wells of the township, and at least 2 more portable generators for the lift stations.

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# **Appendix M**

## **Minnesota Department of Health Climate & Health Report**

# Planning for Climate & Health Impacts in Metro Minnesota

Emergency Management Considerations for HSEM Region 6

Published by the Minnesota Climate & Health Program in August 2018



## ABOUT THE REGIONAL PROFILE

### EXTREME WEATHER IS A FAMILIAR CONCERN FOR MINNESOTANS

While experience has helped Minnesotans adapt to historical weather patterns, climate change trends are pushing us to adapt even further to weather patterns and extreme events that pose major threats to our health, homes, environment, and livelihood. Over 50 years of storm data on record document that Minnesota has experienced an increase in the number and strength of weather-related natural disasters, particularly those related to rising temperatures and heavy downpours. These events cost our state millions in property loss, damaged infrastructure, disrupted business, medical care and support services, and put residents and responders at risk. Understanding how our weather is changing now and into the future will help planners and decision-makers in emergency management and supporting fields extend our progress in climate adaptation and lead to more resilient communities.

### CLIMATE PROJECTION DATA AS A TOOL

Climate projections can help us prepare for the future. These data result from highly sophisticated global climate models and provide a general idea of trends in temperature and precipitation many decades into the future at ever-increasing time and spatial scales. Like every dataset, there are limitations to our understanding and application of the information to real-life decision-making. Yet despite limitations, climate projection data offer a crucial glimpse into our potential futures, and allow us to start considering the best way to allocate our preparedness dollars and management resources to reduce the severe impacts of extreme weather.



*Golfer drinking water (Pexels, 2018)*

REGION 6 / 2

### PUTTING CLIMATE CHANGE INTO CONTEXT

Sometimes, climate change and extreme weather events and the impact on our communities appear distant and abstract. That is why the Minnesota Department of Health's Minnesota Climate & Health Program teamed up with state and local emergency management and preparedness professionals as well as state climatologists to develop a custom climate profile for each of the six Homeland Security and Emergency Management (HSEM) regions across the state. Each regional profile includes a description of climate change trends along with a summary of climate projection data to illustrate these trends. Regional climate data are presented alongside population projection data, as it's important to consider both our climate future and population future as we plan to minimize risk and build resilience against climate impacts.

Additionally, each regional profile provides a local case study, a "focusing event," to illustrate the links between extreme weather and natural disasters and what climate projection data can (and cannot) signify for similar events in the future. Each case study features a recent natural disaster that impacted the HSEM region and provides a comparison between temperature and precipitation measures related to that event alongside historical baseline trends and future projection estimates. Taken together, the six HSEM regional profiles provide an extensive overview of climate change trends for Minnesota and describe the potential impact of these trends for emergency management and preparedness professionals and their partners.

### FOR MORE INFORMATION

A long form report, including all six profiles, individual county data, and a more comprehensive description of climate change trends and supporting research will be available at:  
[Minnesota Climate & Health Planning Tools & Data](http://www.health.state.mn.us/divs/climatechange/data.html)  
 ([www.health.state.mn.us/divs/climatechange/data.html](http://www.health.state.mn.us/divs/climatechange/data.html))

## REGION 6 OVERVIEW

**REGION 6:** Metro

**COUNTIES**

- Anoka
- Carver
- Chisago
- Dakota
- Hennepin
- Isanti
- Ramsey
- Scott
- Sherburne
- Washington

**HSEM REGIONAL PROGRAM COORDINATOR:**  
 Gary Peterson  
 763-441-2896  
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## MINNESOTA CLIMATE & POPULATION TRENDS

### OUR KNOWLEDGE OF CLIMATE CHANGE IS EXPANDING RAPIDLY

Climate records show that across the Midwest and here in Minnesota we are experiencing an increase in warmer, wetter conditions as well as an increase in extreme weather events and related natural disasters. Experts expect these conditions to continue well into the future. By mid-century, Minnesotans can expect much warmer winters, more severe summer heat waves, a higher frequency of very heavy rain events, and a higher frequency of late growing season drought conditions.

Many communities in Minnesota rely on economies rooted in agriculture and outdoor recreation, such as wintertime tourism, including snowmobiling, ice fishing, and skiing. Future climate conditions may stress agricultural economies by delaying planting and fieldwork, increasing disease and pest pressure, and reducing crop yields due to cycles of flooding and dry spells. Rapidly warming winter temperatures will turn snowfall into rain and reduce the depth and timing of lake ice cover, affecting winter recreation.

Extreme rainfall events will increase flood risk, particularly in floodplain areas, disrupting transportation and utility service, and damaging property and infrastructure. In addition, surface runoff may lead to soil erosion, lake pollution, and reduced drinking water quality. Nutrient runoff in particular, along with warmer temperatures, are likely to contribute to a larger occurrence of harmful algal blooms on waters, many valued for recreation. Changing climate conditions are likely to strain the viability of native species, including popular recreational fish, invite encroachment by invasive species, and increase the geographic range and types of ticks and mosquitoes.

Some of these trends are evident in the current climate projection data that are available. However, because these data are often averaged or summarized for large areas over large time periods, they can mask the local peaks in temperature and precipitation that can trigger disasters. Until more finely-scaled climate projection data become available to Minnesota planners and decision-makers, the current data still remain useful for exploring the future ahead and establishing a baseline understanding of what our weather challenges may be moving forward.

## REGION 6 CLIMATE PROFILE

*Use the following information on temperature, precipitation, and vulnerable populations to help plan for future weather-related incidents.*

### TEMPERATURE

**There has been an increase in winter and summer temperatures.** Our average winter lows are rising rapidly, and our coldest days of winter are now warmer than we have ever recorded. In fact, Minnesota winters are warming nearly 13 times faster than our summers. The continued rise in winter temperatures will result in less snow pack, which will increase chances for grassland/wildfires as well as drought. The warmer winter temperatures will also have major consequences for our ecosystems, including native and invasive species, whose growth, migration, and reproduction are tied to climate cues. The increase in Lyme disease across Minnesota is also likely influenced in part by the loss of our historical winters, due to a longer life-cycle period for ticks. Freeze-thaw cycles are likely to increase as well, damaging roads, power lines and infrastructure, and causing hazardous travel conditions. By mid-century our average summer highs will also see a substantial rise, coupled with an increase in more severe, prolonged heat waves that can contribute to drought and wildfires and pose a serious health threat, particularly to children and seniors. Here are temperature trends for HSEM Region 6:



Average Summer Maximum Temperature for HSEM Region 6		
1981-2010	2050-2075	Change
81.1 °F	88.7 °F	+7.7 °F



Average Winter Minimum Temperature for HSEM Region 6		
1981-2010	2050-2075	Change
7.6 °F	17.2 °F	+9.6 °F

### PRECIPITATION

**There has been an increase in total average as well as heavy precipitation events, with longer periods of intervening dry spells.** Our historical rainfall patterns have changed substantially, giving rise to larger, more frequent heavy downpours. Minnesota’s high-density rain gauge network has captured a nearly four-fold increase in “mega-rain” events just since the year 2000, compared to the previous three decades. Extreme rainfall events increase the probability of disaster-level flooding and new research suggests a recent increase in precipitation-triggered landslide activity in the metro region. However, there is also an increased probability that by mid-century heavy downpours will be separated in time by longer dry spells, particularly during the late growing season. Over the past century, the Midwest hasn’t experienced a significant change in drought duration. However, the average number of days without precipitation is projected to increase in the future, leading Minnesota climate experts to state with moderate-to-high confidence that drought severity, coverage, and duration are likely to increase in the state. Modeling future precipitation amounts and patterns is less straight-forward compared to temperature. Some climate models do a better job than others representing rainfall for the Midwest, and available data sources only provide average estimates on a monthly scale, masking the spikes in extremes that trigger flood and drought disasters. Trend data provided here for HSEM Region 6 are summarized for early summer, when historically Minnesota receives most of its rainfall, and for early fall when rainfall scarcity may threaten crop harvests and local agricultural economies:



Average Early Summer Precipitation for HSEM Region 6		
1981-2010	2050-2075	Change
4.4"	5.0"	+0.6"



Average Early Fall Precipitation for HSEM Region 6		
1981-2010	2050-2075	Change
2.9"	2.9"	0.0"

## VULNERABLE POPULATIONS

**There has been an increase in the older adult population.** Extreme weather events cause a range of health impacts and disruptions that vary across population groups. The vulnerability of a group is a function of its sensitivity to a hazard, exposure to risks, and capacity for responding or coping with the impacts. Children and older adults are often identified as groups vulnerable to climate change threats, including extreme weather and natural disasters. For example, physiologically these groups have a lower capacity to tolerate extreme heat and are often dependent on others for transportation to cooling centers. These groups are also often critically dependent on others during a disaster, such as needing help to evacuate during a flood or wildfire, or to find alternative housing if displaced. Planning for the specific needs of vulnerable populations strengthens local efforts to reduce the impact of extreme weather-related events. Population trend data provided here for HSEM Region 6 are intended to highlight the changes in two key demographic groups for the region, but planners and managers should also consider future changes in other populations of concern, such as those with low incomes, immigrant groups, indigenous peoples, persons with disabilities, or vulnerable occupational groups (such as outdoor workers):



Childhood Population (0-14) Projection Estimates for HSEM Region 6		
2015	2050	Change
1,274,638	1,616,484	+27%



Elder Population (65+) Projection Estimates for HSEM Region 6		
2015	2050	Change
585,000	1,039,608	+78%

## REGION 6 CASE STUDY

The following case study is intended to illustrate the links between climate and weather and natural disasters. Acting as a “focusing event,” the case study demonstrates how a previous weather-related event (i.e., drought and extreme heat) impacted important economic drivers, environmental resources, and population health. Then, the Climate Projection Data section compares weather data from the case study with baseline and projected weather data to show the possibilities of future disaster events. This case study highlights the relevancy of climate projection data for understanding future climate and weather risks in Minnesota.

**EVENT: EXTREME HEAT**

**DATE: JULY 2011**

The Extreme Heat Wave of 2011 impacted all Region 6 counties in addition to the rest of Minnesota and much of the Midwest, putting nearly 141 million Americans under some level of heat advisory or warning. By far, the most intense heat and humidity records were recorded in Minnesota, where Minneapolis experienced its most humid day on record and tied the all-time record for a heat index (119 degrees). The magnitude and persistence of high dew point temperatures and heat index values led meteorologists to label the event a “humidity storm”. In the metro area, temperatures soared both day and night – two days hit a maximum 100 degrees and 12 more reached 90 degrees, while a record of 80 degrees was set for nighttime lows. Due to the urban heat island effect, temperatures in the metro region are often higher compared to less urban surrounding areas, usually an average of 2 degrees higher. However, during heat waves this temperature difference can spike to as much as 9 degrees. Ultraviolet (UV) monitoring showed dangerously elevated levels of radiation during the heat wave, which can lead to acute and chronic effects on the skin, eyes, and immune system, including skin cancer and cataracts. The average UV index for July 2011 (9.7) was the highest for any July since 1994. The UV index for days during peak heat intensity were above 10, a level associated with a very high risk of serious health effects.

## REGION 6 CASE STUDY: KEY IMPACTS

It is nearly impossible to capture all the various impacts from a natural disaster. These impacts broadly include costly infrastructure damage, disrupted utility service, prolonged work and school absences, acute physical injury, and persistent strains on mental health, on scales ranging from the community to the household to the individual.

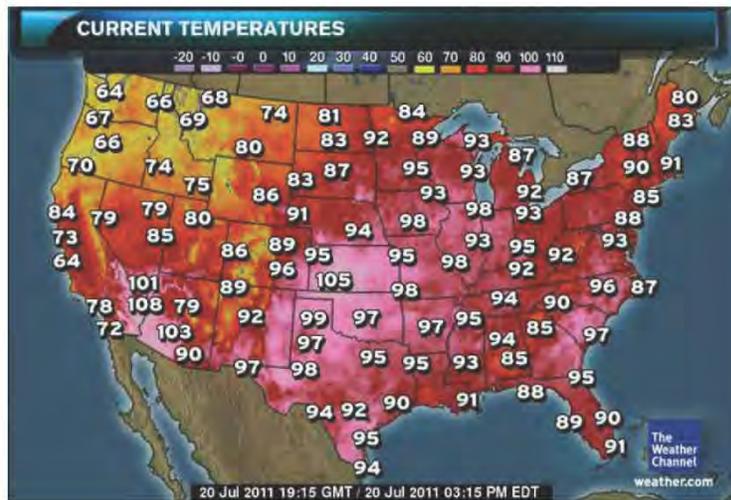
The extensive costs associated with the 2011 Extreme Heat Wave are difficult to capture in a single estimate, in part due to challenges with capturing representative data. For example, extreme heat exposure can aggravate many common medical conditions, like heart and lung disease, diabetes, or mental illness. When patients seek medical assistance, heat exposure is not often included in hospital records as a contributing cause. It is likely that there are many more heat-related illness cases, and thus medical expenditures, than are actually captured by current health monitoring efforts. In addition, when temperatures soar, the reliance on air-conditioning also escalates and can lead to substantial strains on the energy grid as well as high utility bills for customers. Some residents on restricted incomes may jeopardize their comfort, and well-being, by not utilizing their air-conditioning, even when a unit is present.

Following are a few examples of the adverse impacts on HSEM Region 6 communities from the 2011 Extreme Heat Wave:

**PUBLIC SAFETY:** Large numbers of residents sought medical attention for conditions brought on or aggravated by the heat. Nearly 800 people in the metro region were taken to the emergency department or hospitalized for specifically coded heat-related illness, and at least a few fatalities were recorded.

**INFRASTRUCTURE DAMAGE:** The Minnesota Department of Transportation (MnDOT) reported numerous points of road buckling, including areas of I-94, which can be extremely dangerous for motorists.

**STRAIN ON ESSENTIAL SERVICES:** Utilities were strained to meet cooling demands. Although not located in Region 6, one utility in northeastern Minnesota reported using more power during a single day of the heat wave than on any other day in the company's records. Besides the upsurge in activity for paramedics and emergency services personnel, police officers were asked to take on wellness checks for people in their patrol areas who might be susceptible to problems with the heat, like elderly and people experiencing homelessness.



*Temperatures on July 20, 2011 (The Weather Channel, 2011)*



“

*Minneapolis experienced its most humid day on record and tied the all-time record for a heat index (119 °F).*

”



*Top: Pavement buckled on I-94 N creating a logjam heading out of Minneapolis (Brian Peterson, 2011)*

*Bottom left: Hazy sunrise (Pexels, 2018)*

*Bottom right: Brian Dozier from the Minnesota Twins cooling down during a hot game (Carles Rex Arbogast, 2018)*

## CLIMATE PROJECTION DATA

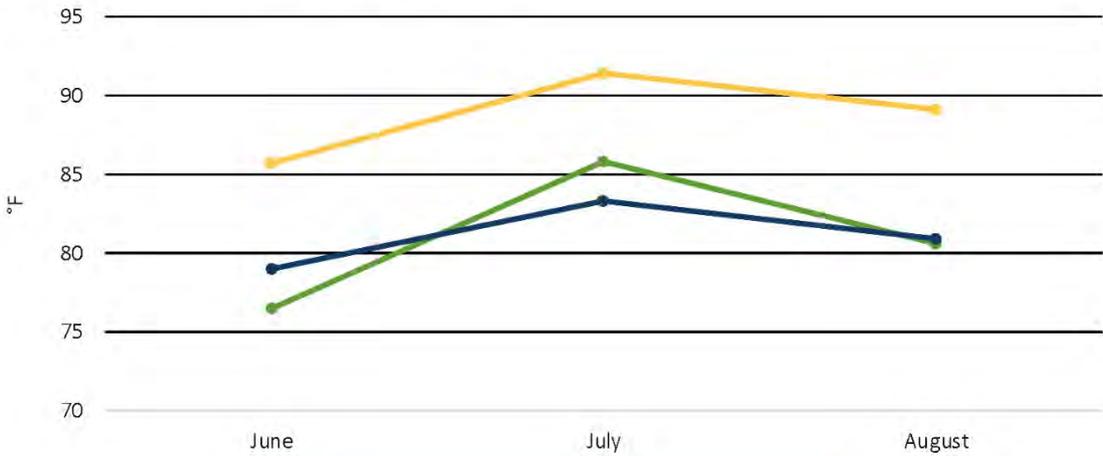
Following are visual representations of climate projection data for Region 6. Data for all counties included in Region 6 were averaged to derive regional estimates. (Data for individual counties are available in the long-form report.) The graphs below compare future temperature and precipitation projection data (in yellow) with a historical climate baseline (in blue) and climate measures from the regional case study event (in green). Although peak heat intensity occurred in July, measures for June and August are also included.

**LEGEND**

- **Historical:** 1981- 2010
- **Case Study:** 2011 extreme heat event
- **Projected:** 2050- 2074

### Maximum Temperature

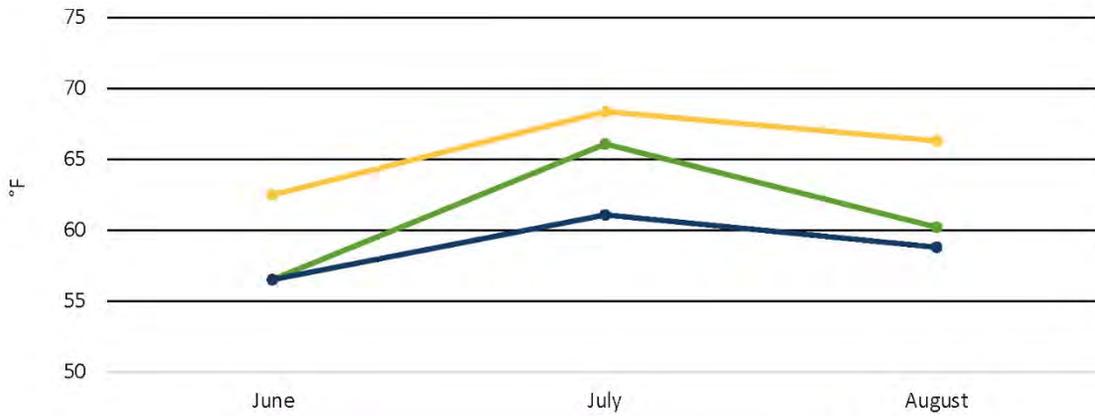
Trend comparison to 2011 extreme heat event data



	June	July	August
Historical	79.0	83.3	80.9
Case Study	76.5	85.8	80.6
Projected	85.7	91.4	89.1

**Minimum Temperature**

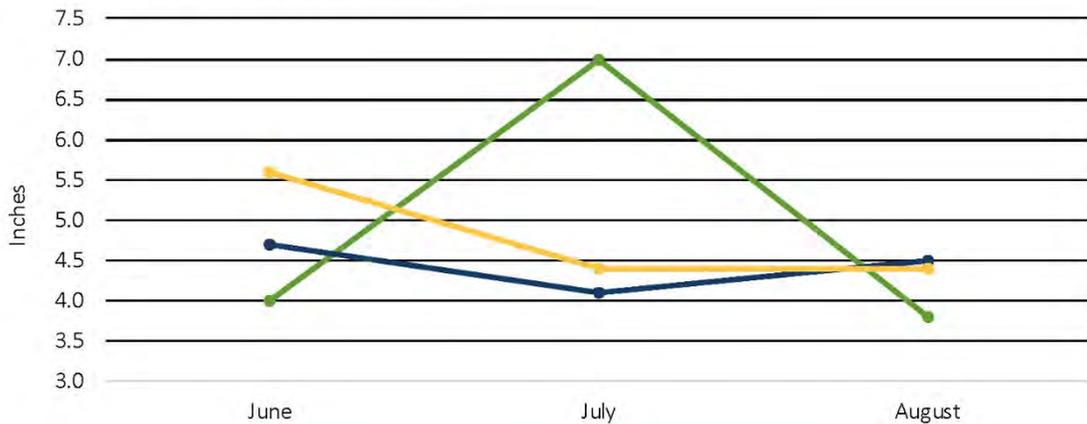
Trend comparison to 2011 extreme heat event data



	June	July	August
Historical	56.5	61.1	58.8
Case Study	56.5	66.0	60.2
Projected	62.5	68.3	66.3

**Total Precipitation**

Trend comparison to 2011 extreme heat event data



	June	July	August
Historical	4.7	4.1	4.5
Case Study	4.0	7.0	3.8
Projected	5.6	4.4	4.4

## SUMMARY

**CLIMATE DATA EXPERTS** expect that future climate conditions across the Midwest will continue to change and affect our environment, economy, and public health. Such conditions are projected to lead to a higher frequency of late growing season drought conditions, elevated winter temperatures with reduced snowpack, prolonged high heat days, and extended periods of low rainfall. For the 2011 Extreme Heat Wave, maximum and minimum temperatures for July, when the heat wave peaked, were well above baseline values. Mid-century climate estimates indicate that average summer maximum and minimum temperatures for Region 6 counties will be approximately 6-9°F warmer than historical trends. As average temperatures increase, the likelihood of more frequent extremes also increases. Currently, the primary response to protecting ourselves from the stress of high outdoor heat is to remain in air-conditioned indoor spaces.

However, this reliance comes at a cost, particularly to Region 6 communities where much of the state's population is concentrated. Over 98% of housing units in the Twin Cities metro region have some form of air-conditioning. The addition of schools, businesses, entertainment venues, and other cooled buildings puts a hefty strain on the region's energy grid during prolonged periods of extreme heat, and this strain is projected to increase more in Region 6 counties than any other region of the state. The consequences go beyond rising utility costs to residents, which may lead some to risk getting a heat-illness to avoid unmanageable bills. Rising electricity usage may also lead to power disruption or even prolonged outages, which can have further negative health effects.

Another concern is when multiple disaster events happen together. In addition to the 2011 Extreme Heat Wave, a large cluster of July thunderstorms swept through the metro region bringing 1-2 inch diameter hail, wind gusts over 80 mph, and a number of tornado sightings. Damage was widespread, including electricity outages and downed power lines. The most intense rain was focused on the metro area and dropped 1 inch of rain in just over 20 minutes. Region 6 counties received an average July rainfall far above historical norms posing a potential flood risk. When extreme events co-occur the demands can overwhelm utilities, derail the power grid, and tax emergency management and response resources beyond capacity.

*Climate data is a critical tool in planning for resilient communities into the future.*

**CLIMATE DATA IS A CRITICAL TOOL** in planning for resilient communities into the future. Assessing threats from climate change and planning effective mitigation and response strategies is a key element for emergency managers and other planners to reduce future risk. It is crucial to understand the potential impacts of climate change and the associated priorities and vulnerabilities of communities, including population, the environment, critical infrastructure, and more. However, vulnerability is a nuanced concept and most effective as an indicator of risk when planners seek to understand and address vulnerability as close to the individual level as possible and in association with a specific hazard.

For example, in HSEM Region 6, population projections show a sizable increase in children alongside a substantial increase in seniors. Children and seniors have a reduced physical capacity to adjust to and cope with high heat, and are often partially dependent on others to ensure their personal safety and well-being, characteristics that contribute to increased vulnerability. In addition, children often spend more time engaged in physical activity outdoors, while seniors on limited incomes may struggle to pay for air-conditioning. Considering the impacts of climate change to vulnerable populations is just one example of how to prioritize mitigation and response planning.

**CLIMATE PROJECTION DATA** continues to improve and should be considered as a priority to advance. Minnesota would benefit from a statewide high-quality climate projection dataset that is derived using the climate and environment features unique to our state, similar to datasets developed for other states. Meanwhile, data from national resources, like the U.S. Geological Survey (USGS) and National Oceanic and Atmospheric Administration (NOAA), can still provide a powerful input to regional scenario-planning efforts by allowing planners, managers, and analysts a means of "unpacking" general climate change predictions for the Midwest by looking at potential monthly fluctuations in coarse precipitation and temperature measures for Minnesota and its counties.

## NEXT STEPS: MINIMIZE RISK & BUILD RESILIENCE

Prepare today for tomorrow's climate hazards. Emergency managers, planners, elected officials, and the public play a critical role in creating safe and healthy communities, especially in the face of extreme weather events. There are steps you can take to minimize local risk and build more resilient communities:



**BRING EVERYONE TO THE TABLE:** Build an inclusive yet nimble team to collectively identify climate hazards and potential impacts. Be sure to include members of the community; local department professionals responsible for built, natural, and health resources; planning commissioners; faith-based and cultural organizations; research centers; and commercial organizations. Including diverse perspectives throughout your process will help support more equitable planning efforts that best leverage cross-functional resources.



**INCORPORATE CLIMATE INTO PLANNING:** Incorporate climate projection data into planning efforts, such as exercise scenarios and long-range planning, to comprehensively identify future climate hazards and potential cascading effects. Explore how these interact with non-climate hazards in the community, such as aging infrastructure, to understand potential exposure to multiple threats and prioritize actions that build the community's capacity to respond.



**CHAMPION CLIMATE & HEALTH:** Be a champion for climate and health data. Seek opportunities to learn about these data and incorporate it in your work on an iterative basis. Support its application in professional networks and articulate the need to fund dynamically downscaled climate projection datasets for Minnesota. Climate data is a critical multi-discipline tool in proactively planning for resilient communities.

## RESOURCES & REFERENCES

### TOOLS & DATA

- [Climate at a Glance: National Climatic Data Center](http://www.ncdc.noaa.gov/cag/), National Oceanic and Atmospheric Administration  
Source for all historical and much of the case study data presented in this profile.  
[www.ncdc.noaa.gov/cag/](http://www.ncdc.noaa.gov/cag/)
- [Minnesota Climate and Health Profile Report \(PDF\)](http://www.health.state.mn.us/divs/climatechange/docs/mnprofile2015.pdf), Minnesota Department of Health  
Profiles historic climate trends, future projections, and likely climate change impacts on the health of Minnesotans.  
<http://www.health.state.mn.us/divs/climatechange/docs/mnprofile2015.pdf>
- [Minnesota Climate Change Vulnerability Assessment \(PDF\)](http://www.health.state.mn.us/divs/climatechange/docs/mnclimvulnreport.pdf), Minnesota Department of Health  
Assesses five climate hazards and the populations that are most vulnerable to the hazards in Minnesota.  
<http://www.health.state.mn.us/divs/climatechange/docs/mnclimvulnreport.pdf>
- [Minnesota Population Projection Data](https://mn.gov/admin/demography/data-by-topic/population-data/our-projections/), Minnesota State Demographic Center  
Source for all population projection data presented in this profile.  
<https://mn.gov/admin/demography/data-by-topic/population-data/our-projections/>
- [National Climate Change Viewer](http://www2.usgs.gov/climate_landuse/clu_rd/nccv/viewer.asp), United States Geological Survey  
Source for all climate projection data presented in this profile.  
[www2.usgs.gov/climate\\_landuse/clu\\_rd/nccv/viewer.asp](http://www2.usgs.gov/climate_landuse/clu_rd/nccv/viewer.asp)

## RESOURCES & REFERENCES

### KNOWLEDGE & CAPACITY

- [Climate Change and Minnesota](#), Minnesota Department of Natural Resources  
Source of information on climate change trends and impacts for Minnesota, with an emphasis on natural resources.  
[www.dnr.state.mn.us/climate/climate\\_change\\_info/index.html](http://www.dnr.state.mn.us/climate/climate_change_info/index.html)
- [Extreme Heat](#), Center for Disease Control and Prevention  
General information on health protective actions for the general public and vulnerable populations.  
[www.cdc.gov/disasters/extremeheat/index.html](http://www.cdc.gov/disasters/extremeheat/index.html)
- [Extreme Heat Events](#), Minnesota Department of Health  
Information of health protective actions for Minnesotans, including an Extreme Heat Toolkit.  
[www.health.state.mn.us/divs/climatechange/extremeheat.html](http://www.health.state.mn.us/divs/climatechange/extremeheat.html)
- [Five Steps Toward Enhancing Climate Resilience](#), Emily Wasley, DomesticPreparedness.com  
Practical action steps to help emergency managers build a path to enhance their climate resilience.  
<https://www.domesticpreparedness.com/resilience/five-steps-toward-enhancing-climate-resilience/>
- [U.S. Climate Resilience Toolkit](#), United States Global Change Research Program  
Information and tools to help communities adapt to climate change, featuring real-world case studies.  
<https://toolkit.climate.gov/>

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- Auffhammer et al., 2017. [Climate Change is Projected to have Severe Impacts on the Frequency and Intensity of Peak Electricity Demand Across the United State \(PDF\)](#).  
<http://www.pnas.org/content/pnas/114/8/1886.full.pdf>



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Front cover photo: Sunrise (Pexels, 2018)

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[www.health.state.mn.us/divs/climatechange/](http://www.health.state.mn.us/divs/climatechange/)



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# Appendix N: Technological Hazards

Technological hazards 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 because 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 manufacturing, transportation, storage, and use of hazardous materials.

Ramsey County Emergency Management and Homeland Security staff and subject matter experts reviewed available data and current trends to continue to include technological hazards posing the greatest threat to residents and property as part of this plan update. These hazards have a potential for low to moderate occurrence but could have a high impact to the population.

**Table 32 – Technological Hazards**

Epidemics/Pandemics	Terrorism	Hazardous Materials Spills
Energy/Fuel Shortage	Power Failure	Aircraft Accidents
Critical Facilities and Infrastructure Loss	Civil Disturbance	Water Contamination
Cyberattack	Invasive Species	

## Epidemics/Pandemics

### Hazard Identification

An epidemic/pandemic incident is a plausible incident in Ramsey County. An epidemic, or widespread outbreak of disease, is a danger to emergency responders, healthcare providers, and the public at large. A pandemic is a global disease outbreak, impacting multiple regions or even continents.

Examples of epidemics H5NI, Severe Acute Respiratory Syndrome (SARS), or the 2014 Ebola outbreak. A biological incident without an available vaccine or treatment could result in an epidemic. Intentional bioterrorism incidents are included in this identified hazard area.

### Hazard Profile

Seasonal influenza comes to Ramsey County every winter, usually between October and March. Influenza is a viral infection that is responsible for a substantial number of hospitalizations (sometimes death) each year. Between 2012-2016, annual flu-related hospitalizations in Ramsey County varied between 163 and 551 (Minnesota Department of Health, 2017). Continuous genetic changes in the flu virus, called “antigenic drift,” means that people can get sick from a slightly different influenza virus each year; last year’s flu shot does not prevent this year’s illness.

Severe acute respiratory syndrome, or SARS, is a respiratory illness caused by a coronavirus first identified in Asia in February 2003. During 2003, SARS outbreaks were reported across multiple continents (North America, South America, Europe, and Asia), eventually leading to the deaths of 773

people (CDC, 2004). Like influenza, SARS was transmitted primarily through contact with infected saliva or mucus (respiratory droplets). Evidence suggested that the virus could linger on surfaces for hours (like measles), enhancing risk of transmission.

MERS Co-V (Middle East respiratory syndrome coronavirus) appears less transmissible than SARS but continues to raise concerns for global outbreaks (pandemics). 798 MERS-associated deaths have occurred since September 2012 (World Health Organization 2018). MERS Co-V has its origins as a zoonotic virus, meaning transmission has been documented from animals (camels) to humans (again, primarily through droplet exposure and close contact with someone who is already symptomatic).

Ebola disease is also caused by a zoonotic virus and is spread through direct contact with body fluids, including blood. Between December 2013 and January 2016, an outbreak of Ebola caused the deaths of 11,310 individuals, primarily in West Africa (World Health Organization 2018).

### **Vulnerability Assessment**

All populations within Ramsey County are susceptible to epidemic/pandemic events that occur in the County.

### **Assets Exposed to Hazard**

- **Property Risk/Vulnerability:** All critical facilities as well as all public, private, and commercial properties are susceptible to an epidemic, due to people being ill and unable to maintain the facilities or their related services.
- **People Risk/Vulnerability:** Risk/vulnerability includes the entire population of Ramsey County, since there is no way to determine the impact/magnitude of an epidemic/pandemic and no perfect way to predict which target group(s) will be the most susceptible to a novel virus. In addition to sickness (morbidity) and death (mortality), the impact on human resources would be significant, with the potential of approximately 40 percent of the workforce becoming ill. Ramsey County's just-in-time economy could suffer major setbacks in community infrastructure such as public water supply, health care delivery, and energy resources.
- **Environment Risk/Vulnerability:** Risks to the environment are low should an epidemic/pandemic occur, unless a specific virus is transmissible among animal populations (agricultural production areas) within the County.

### **Damage Assessment**

Although epidemics/pandemics like polio and plague have largely been eradicated from the world, past historical impacts on human health were devastating and any new infectious diseases could have health emergency implications. SARS, H1N1, and Ebola all demonstrate that health emergencies are unpredictable, can erupt quickly, and have significant impact on communities, including Ramsey County.

### **Land Use and Development Trends**

As more people move into populated areas and population density increases, all of Ramsey County is susceptible to outbreaks.

### **Vulnerability**

#### **Epidemics/Pandemics**

Frequency of Occurrence	Likely
Warning Time	More than 12 hours
Geographic Extent	County-wide
Potential Impact	Minor to Moderate

**Multijurisdictional Concerns**

No one area in Ramsey County is less susceptible than another from the effects of an epidemic/pandemic. Of course, the more densely populated the area is, the greater threat of the spread of the epidemic/pandemic.

**Hazard Summary**

Epidemics/pandemics pose a threat to all of Ramsey County. As part of a countywide effort, staff from the St. Paul-Ramsey County Public Health Department participate in emergency preparedness planning, drills, tabletop and functional exercises, and education and outreach. The Health Department conducts this work with local, state, and federal government agencies as well as health care organizations, private businesses, and individuals from the community.

### **Terrorism**

#### **Hazard Identification**

Ramsey County is a densely populated county, home to the state capital and many federal buildings, thus making it an attractive terrorist target. Additional analyses to further characterize the risks of this hazard and the development of suitable mitigation action items will be conducted in the future based on periodic reviews of this hazard mitigation plan and available resources.

#### **Hazard Profile**

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." According to the Department of Homeland Security terrorist tactics continue to evolve. Terrorists seek sophisticated means of attack, including biological, radiological, nuclear, explosive weapons, and cyber-attacks.

#### **Vulnerability Assessment**

Terrorist operations have occurred in Ramsey County since the last plan update. According to news reports on January 17, 2018 a former Saint Catherine University student set nine fires in multiple campus buildings. This former student claimed this was an act of Jihad and hoped people would get killed and would like to kill for al-Qaida. There have been federal charges of terrorism brought against this individual.

The Minnesota Fusion Center noted Minnesota's connection to terrorism over the last several years:

- Minnesota imagery appearing in al-Qaida's "Path to Paradise" video series released on social media.
- In February 2018 study, George Washington University (GWU) identified Minnesota as one of three states with the highest proportional rates of terrorist recruitment and the highest rates of travelers per capita.
- In September 2016 an assailant wore a private security officer uniform and stabbed nine people at the Crossroads Center Mall in Saint Cloud, Minnesota at least partially motivated by "radical Islamic groups" stated by former FBI Director James Comey.

In the United States, most terrorist incidents have involved small extremist groups using terrorism to further a designated objective or obtain publicity for a cause. Bombings have been the most frequent

method of attack in the United States. Other possibilities include attacks against transportation facilities, utilities, or other public services, or an incident involving chemical or biological materials.

The primary objectives of most terrorist groups include the following:

- Gain publicity.
- Stimulate loss of confidence in the government.
- Attract recruits.
- Get public support.
- Gain financial support, and ultimately weaken and overthrow the government.

Techniques used to gain an audience for their platform include hostage-taking, product-tampering, criminal extortion, arson, sabotage, threats against individual family members, assassinations, kidnapping, explosive bombings, and armed attacks. The most likely targets of these forms of terrorism are political leaders, key military personnel, foreign missions, military facilities, corporate executives and facilities, and celebrities. Unfortunately, the risk of terrorist acts exists in the state of Minnesota and cannot be ruled out for Ramsey County. Terrorist attacks can take a wide variety of forms, ranging from a verbal threat to sabotage to biological weapons to a bomb.

The most frequently used terrorist methods in the United States include, but are not limited to:

- **Bombs, Guns, Edged Weapons, and Explosives.** These are the “traditional” weapons used by terrorists worldwide. Typically, these weapons are less technically and resource demanding.
- **Biological Weapons.** These weapons use infectious microbes or toxins to produce illness or death in people, animals, or plants. Potential biological weapons include anthrax, botulism, smallpox, viral hemorrhagic fevers, water safety threats (for example, cholera), and food safety threats (for example, salmonella). Biological weapons are relatively difficult to cultivate and disseminate.
- **Chemical Weapons.** Chemical weapons cause severe health reactions designed to incapacitate or cause death. There is a wide array of potential chemical agents that could be used as weapons. These agents vary in how their effects on the body, required dose, exposure mechanism, length of exposure, toxicity, origination, and form (for example, liquid gas). Examples of chemical agents include sarin, mustard agent, VX, and cyanide. The Twin Cities metro area is one of 30 U.S. metropolitan areas participating in a federal early warning system called Bio Watch designed to quickly detect certain substances in the air.
- **Radiological and Nuclear Weapons.** Although there has been much speculation by media and various governmental agencies regarding the potential for a terrorist to obtain fissionable material or a nuclear bomb, there are no known unclassified cases of any such organization or

group obtaining weapons-grade material. Constructing a nuclear bomb would be relatively difficult and require special resources, training, and materials.

- Vehicle Ramming. The use of a vehicle as a weapon is not new. Recent terrorist incidents have shown this kind of attack to continue to be of interest to a terrorist. Attacks of this nature can have a devastating impact in crowded places with low levels of visible security.

**Assets Exposed to Hazard**

- Property Risk/Vulnerability: All assets within Ramsey County are susceptible to being affected by a terrorist incident. Ramsey County is also home to several labs that perform experiments and test chemicals on animals. This increases the risk that animal activist groups may pose a threat within the County. Typically, animal activist groups target property and infrastructure as opposed to people.
- People Risk/Vulnerability: In evaluating vulnerability of the population in the County, it was determined that risk/vulnerability includes the entire population of Ramsey County since there is no way to determine the impact/magnitude of a terrorist incident and no way to predict where and when a terrorist incident will occur. People are vulnerable to terrorist events through physical injury or disease, power outages, effects on transportation routes, establishment of shelters, effect of incident on mental state of the public, confidence of public in law enforcement support, etc.
- Environment Risk/Vulnerability: Risks to the environment are high should a terrorist incident occur but the frequency of terrorist events in Ramsey County are low. Environmental concerns would be interruption or contamination of water or food supplies, secondary events such as fires and hazardous materials accidents (such as gas pipelines rupturing, rupture of hazardous material containers at facilities, etc.).

**Land Use and Development Trends**

Future development throughout Ramsey County will take into consideration possible events.

**Vulnerability**

**Terrorism**

Frequency of Occurrence	Unlikely
Warning Time	None - Minimal
Geographic Extent	Community-wide
Potential Impact	Negligible to Major

### **Multijurisdictional Concerns**

All of the County is subject to events and therefore should be included in any prospective mitigation projects.

### **Hazard Summary**

There has been one terrorism event in Ramsey County in the last five years, multiple attacks in different areas of the United States remind us that terrorism is always a threat. Ramsey County officials work with state and federal officials on domestic preparedness efforts, the details of which go beyond the scope of this plan. The community should always remain vigilant to the threat of an attack, whether it is via explosives, agriculture, or a cyber-attack.

### **Hazardous Materials Spills**

#### **Hazard Identification**

Historical data from Ramsey County and the Environmental Protection Agency (EPA) shows incidents involving hazardous materials spills in Ramsey County. Hazardous materials are substances that are harmful to the health and safety of people and property. Hazardous materials spill often occur along roadways, highways, and railways. Facilities that produce, process, or store hazardous materials are at risk, as are facilities that treat or dispose of hazardous waste. Ramsey County is required by the State of Minnesota to regulate generators of hazardous waste.

#### **Hazard Profile**

Hazardous materials spills occur frequently within the County but with minimal impact. However, since the last plan update, in August 2013, the North Suburban Hazardous Materials Response Team (NSHM) responded to a hazardous materials transportation incident that spanned two counties, three cities, and a school district. It included the chemical called Muriatic Acid where a truck leaking the chemical located at 37th Ave NW/Highcrest adjacent to an elementary school with a vapor cloud and shelter in place order.

Many of the hazardous materials incidents in the County are a household gas or carbon monoxide leak. In the past five years, the Minnesota Duty Officer provided Ramsey County with 955 reports of hazardous materials spills. According to the Minnesota State Fire Marshall's Office report the following Fire Departments responded to hazardous materials calls for assistance: Falcon Heights Fire Department had 116 hazmat calls for assistance, Lake Johanna Fire Department 22 hazmat calls for assistance, Little Canada Fire Department 22 hazmat calls for assistance, Little Canada Fire Department 22 hazmat calls for assistance, Maplewood Fire Department 29 hazmat calls for assistance, New Brighton Fire Department 264 hazmat calls for assistance, North St. Paul Fire Department 29 hazmat calls for assistance, Roseville Fire Department 19 hazmat calls for assistance, Vadnais Heights Fire Departments 137 calls, and White Bear Lake Fire Department 373 hazmat calls for assistance. The NSHM, has responded to 15 hazmat incidents of significance. It should also be noted that 22 facilities use anhydrous ammonia for refrigeration in the area.

Ramsey County is also at risk to transportation related hazardous materials incidents. This is directly attributable to the presence of multiple highways (Interstate 35E, 35W, 94, 494, 694; U.S. Hwy 10, 52, 61; MN Hwy 5, 13, 36, 51, 96, 120, 149, 156, 280) running through portions of the County as well as the several railroads that carry materials through the County.

**Vulnerability Assessment**

Ramsey County averages approximately 190 hazardous materials spills occurring in any given year.

**Assets Exposed to Hazard**

- **Property Risk/Vulnerability:** With multiple highway system, all critical facilities have the possibility of being affected by a hazardous materials incident.
- **People Risk/Vulnerability:** In evaluating vulnerability of the population in Ramsey County, it was determined that risk/vulnerability includes the entire population of the County since there is no way to determine the impact/magnitude of a hazardous materials incident and no way to predict where and when a hazardous materials incident will occur. People are vulnerable to hazardous materials incidents through effects on transportation routes, establishment of shelters, etc.
- **Environment Risk/Vulnerability:** Risks to the environment are high should a hazardous materials accident occur. Environmental concerns would be interruption of water supply and secondary events such as fires and hazardous materials accidents (such as gas pipelines rupturing, rupture of hazardous material containers at facilities, etc.). When spills do occur, whether inside or outside facilities or along roadways, shutdowns, lost time, and expended man-hours are all factors mitigation planners must consider.

**Damage Assessment**

It is difficult to determine the damage to the environment associated with hazardous materials spills. Ramsey County has no recorded instances of critical facilities and/or other property being damaged because of hazardous materials spills.

**Land Use and Development Trends**

Ramsey County currently has no land use or development trends related to hazardous materials spills.

**Vulnerability**

<b>Hazardous Materials</b>	
Frequency of Occurrence	Highly Likely
Warning Time	None – Minimal
Geographic Extent	Localized to Community-Wide
Potential Impact	Moderate

**Multijurisdictional Concerns**

All of Ramsey County is vulnerable to both fixed location and transportation-related hazardous materials spills. The highways (Interstate 35E, 35W, 94, 494, 694; U.S. Hwy 10, 52, 61; MN Hwy 5, 13,

36, 51, 96, 120, 149, 156, and 280) are most vulnerable to transportation-related spills. Fixed location spills are possible in all areas of the County.

### **Hazard Summary**

Hazardous materials spills are a relatively common occurrence in Ramsey County. The volume of spills experienced in the past dictates that mitigation measures be considered. The types of hazardous materials passing through Ramsey County are many and varied. The presence of multiple highways with an unknown quantity of hazardous materials traveling through the County daily poses a challenge in the development of adequate mitigation measures. A current commodity flow study could be conducted to ensure accurate planning data is obtained and updated every five years.

### **Energy/Fuel Shortage**

#### **Hazard Identification**

Recent storm events in the past five years have identified the possibility of energy/fuel shortage for Ramsey County. This is due to limited supplies coming into the area following an incident and therefore causing fuel rations or the prioritization of fuel supply for both emergency services and residents of the County. An energy/fuel shortage could also be due to damage to natural gas pipelines post-storm and the need to shut down the pipelines for repairs.

#### **Hazard Profile**

There have been no energy/fuel shortages in the past in Ramsey County. However, in the last five years, events have shown the potential is there for an interruption/shortage of fuel supply. In 2014 the Upper Midwest felt the strain on natural gas supply and high fuel prices as it was a perfect storm of events. Propane stocks were already low from the fall farm usage drying corn, pipeline outages in both December and January occurred, and record-breaking cold in January. The U.S. Department of Transportation issued emergency orders to extend truck driver time on the road for transport of the commodity and propane retailers were rationing supplies to their customers.

#### **Vulnerability Assessment**

The probability of energy/fuel shortage is minimal. The low probability of an incident suggests that the potential for impacts is minimal.

Information provided by Xcel Energy there are three types of risk that could occur regarding a natural gas constraint.

- 1) Physical interruption to infrastructure risk: This would likely have the most impact on a customer or area. The most common cause is the accidental contact by someone digging near natural gas infrastructure. In the winter, the amount of underground work is greatly reduced due to the cost and effort required in Ramsey County's climate. Typically, such contact is limited in scope and does not impact many customers since the natural gas distribution system has multiple pipes that service most of the areas.
- 2) Interstate Pipeline Transportation service interruption risk: Firm pipeline transport capacity does not get curtailed or allocated unless there is a physical constraint (pipeline failure, compressor failure) and pipelines plan to provide firm service 24/7/365. Interruptible pipeline capacity does get curtailed, but only interruptible distribution customers rely on this service (i.e. large distribution customers that have an alternate fuel they can use during a curtailment).
- 3) Supply interruption risk: As a distribution company Xcel Energy ensures that firm customers have the resources they need for service under the harshest conditions. Interruptible customers receive lower cost distribution charges in exchange for agreeing to switch to their alternate fuel. To the extent that firm customers do not require the firm transport, then the interruptible customers are able to use that capacity to continue using natural gas. Premium resources such as LNG or LPG-air supplies are reserved for firm customers use during the peak periods of demand on the distribution system.

**Assets Exposed to Hazard**

- **Property Risk/Vulnerability:** All critical facilities are considered as having the possibility of being affected by an energy/fuel shortage.
- **People Risk/Vulnerability:** In evaluating vulnerability of the population in Ramsey County, it was determined that risk/vulnerability includes the entire population of the County since there is no way to determine the impact/magnitude of an energy/fuel shortage incident and no way to predict where and when an energy/fuel shortage incident will occur. People are vulnerable to energy/fuel shortage events through effects on transportation routes, pipelines being damage, etc.
- **Environment Risk/Vulnerability:** Risks to the environment are low should an energy/fuel shortage occur. Environmental concerns would be interruption of natural gas fuel supply and secondary events such as fires and hazardous materials accidents (such as gas pipelines rupturing, rupture of hazardous material containers at facilities, etc.). When spills do occur, whether inside or outside facilities or along roadways, shutdowns, lost time, and expended man-hours are all factors mitigation planners must consider.

**Damage Assessment**

Interruption of fuel supply to the County would have a detrimental effect on the County. The magnitude of the interruption and the long-term expectations of the incident would determine the impact on both emergency services and residents of Ramsey County.

**Land Use and Development Trends**

Ramsey County currently has no land use or development trends related to energy/fuel shortage.

**Vulnerability**

**Energy/Fuel Shortage**

Frequency of Occurrence	Occasionally
Warning Time	More than 12 hours
Geographic Extent	County-wide
Potential Impact	Moderate

**Multijurisdictional Concerns**

All of Ramsey County is vulnerable to an energy/fuel shortage.

**Hazard Summary**

Energy/fuel shortages are an uncommon occurrence in Ramsey County. However, the potential for an energy/fuel shortage in the County poses an interesting challenge in the development of adequate mitigation measures.

### Power Failure

#### Hazard Identification

A power outage is the loss of electricity supply to an area. Power failure can result from winter storms, high winds, tornadoes, severe summer storms, energy shortages, damage to a power line or other part of the distribution system, a short circuit, or the overloading of electricity mains. If lost entirely, a power loss is referred to as a blackout. A brownout occurs when some power is retained but the voltage level is below the minimum level specified for the system. Connexus Energy Co-op and Xcel Energy provide electricity services to Ramsey County. Connexus Energy is Minnesota's largest electric cooperative, providing electricity to portions of Ramsey County and approximately 4,000 customers. Xcel Energy based in Minneapolis provides power to more than 508,000 Ramsey County customers.

A power failure can last seconds, hours, and in some extreme cases days. Power failures are particularly hazardous during winter months when they threaten the ability to heat a home or office, directly impacting the health of its inhabitants. Extreme temperatures in summer months can be difficult to manage if power outages impact air conditioning. Transportation routes are affected when traffic signals are disrupted by power outages. Additionally, when power is restored surges can cause fires.

#### Hazard Profile

Power outages occur frequently in the residential and business areas of Ramsey County. These outages have been due to winter storms, severe summer storms, transformer outages, and flooding. A transformer blast in June 2018 cut power to 30,000 residents and a large portion of downtown St. Paul where several county buildings were without power for several hours on a weekday morning.

Xcel Energy reports electric utilities measure themselves for reliability by applying two common matrices; **SAIDI** (System Average Interruption Durations Index) and **SAIFI** (System Average Interruption Frequency Index). The SAIDI index is determined by dividing the sum of all customer interruption *durations* by the total number of customers served by the utility. For 2017, Northern States Power (NSP-MN) measured 73 minutes, an improvement over the 2016 number of 93 minutes. SAIFI is determined by dividing the total number of customer interruptions by the total number of customers served. For 2017, NSP Minnesota's storm normalized 0.72, an improvement of the 2016 number of 0.83. Storms are normalized out of the data to reflect unusual events.

#### Vulnerability Assessment

Ramsey County averages approximately 6 power failures every year.

#### Assets Exposed to Hazard

- **Property Risk/Vulnerability:** All critical facilities have the possibility of being affected by a power failure.
- **People Risk/Vulnerability:** In evaluating vulnerability of the population in Ramsey County, it was determined that risk/vulnerability includes the entire population of the County since there is no

way to determine the impact/magnitude of a power failure and no way to predict where and when a power failure will occur.

- Environment Risk/Vulnerability: Risks to the environment are minimal should a power failure occur.

**Land Use and Development Trends**

With increased population trends can increase electricity consumption. This can potentially put additional load strain on certain power regions.

**Vulnerability**

**Power Failure**

Frequency of Occurrence	Highly Likely
Warning Time	None
Geographic Extent	Localized
Potential Impact	Moderate

**Multijurisdictional Concerns**

All of Ramsey County is vulnerable to a power outage.

**Hazard Summary**

Power failure’s greatest threat is disrupting the daily operations of business and government. The economic effects of an outage impact the entire community. Preparing for power outages includes storing alternative electricity sources such as flashlights in the home and generators in office buildings. Xcel Energy’s Advanced Grid Intelligence and Security (Advanced Grid), is a long-term strategic initiative that will improve power reliability, reduce power outages, make service smarter, integrate increasingly clean energy onto the grid, and empower customers with more information to control and track their energy use. Xcel Energy is currently working with regulators in Colorado on this initiative and anticipates submitting a similar regulatory our Minnesota regulators. This multi-year investment plan seeks will make our electrical system more resilient over the next 5 to 10 years.

### Aircraft Accidents

#### Hazard Identification

Ramsey County is in the flight pathway of the Minneapolis-St. Paul International Airport, St. Paul Downtown Airport (Holman Field), Anoka County-Blaine Airport (Janes Field), and Benson Airport making it vulnerable to the effects of aircraft accidents. Additional information regarding the Anoka-Blaine Airport and Benson Airport are in operation for general aviation aircraft (private aircraft). The Minnesota State Patrol, Minnesota Department of Transportation, and the Army National Guard Aviation operates out of Holman Field. The Air National Guard operates out of the Minneapolis-St. Paul International Airport.

#### Hazard Profile

According to the Federal Aviation Administration Aviation Safety Information Analysis and Sharing (ASIAS) database there has been a cumulative of only 10 aircraft accidents in the last five years at the airports identified:

- According to the FAA Minneapolis-St. Paul International Airport has eight concrete runways running 24 hours a day averaging 1,140 flights per day.
- St. Paul Downtown Airport (Holman Field) operates six asphalt runways averaging 182 flights a day.
- Anoka County-Blaine Airport (Janes Field) operates four asphalt runways averaging 192 flights a day.
- Benson Airport has two turf runways with no lights, only running during the day with 25 aircraft based on the field and an average of 88 flights per week. It is mainly recreational planes using the runways but also the Metro Mosquito control uses for their flights, Minnesota State patrol and could be used for emergency purposes for helicopters or small airplanes.

#### Vulnerability Assessment

The probability of an aircraft accident is minimal. The low probability of an incident suggests that the potential for impact is minimal. Based on historical records from the past 10 years, the probability of an aircraft accident occurring in Ramsey County and the planning area is considered low.

#### Assets Exposed to Hazard

- **Property Risk/Vulnerability:** It was determined that all critical facilities have the possibility of being affected by an aircraft accident.
- **People Risk/Vulnerability:** In evaluating vulnerability of the population in Ramsey County, it was determined that risk/vulnerability includes the entire population of the County since there is no way to determine the impact/magnitude of an aircraft accident and no way to predict where and when an aircraft accident will occur. People are vulnerable to aircraft accident events due to the location of the County to the Minneapolis-St. Paul International Airport as well as additional air traffic from the St. Paul Downtown Airport (Holman Field), Anoka County-Blaine Airport, and the Benson Airport.

- **Environment Risk/Vulnerability:** Risks to the environment are low should an aircraft accident occur. Environmental concerns would be impact of the aircraft in or near a natural gas line and secondary events such as fires and hazardous materials accidents (gas pipelines rupturing, rupture of hazardous materials containers at facilities, etc.).

### Damage Assessment

An aircraft accident in the County could have a detrimental effect. The magnitude of the accident and the long-term effects of the incident would determine the impact on both emergency services and residents of Ramsey County.

### Land Use and Development Trends

Ramsey County currently has no land use or development trends related to aircraft accidents.

### Vulnerability

#### Aircraft Accidents

Frequency of Occurrence	Occasionally
Warning Time	None
Geographic Extent	Localized
Potential Impact	Minor to Moderate

### Multijurisdictional Concerns

All of Ramsey County is vulnerable to an aircraft accident.

### Hazard Summary

The probability of an aircraft accident is minimal. According to the Federal Aviation Administration Aviation Safety Information Analysis and Sharing (ASIAS) database there have been a cumulative of only 10 aircraft accidents in the last five years at the four airports in the Ramsey County planning area. Technology has improved airline safety significantly in the last 20 years. Statistically air transportation is one of the safest modes of transportation in the United States and the potential for an aircraft accident is low.

**Critical Facilities and Infrastructure Loss**

**Requirement 44 CFR 201.6(c) (2) (ii)(A)(B)**

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. (B) An estimate of the potential dollar losses to vulnerable structures identified in ... this section and a description of the methodology used to prepare the estimate.

**Hazard Identification**

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 seven general categories: fire and emergency services, telecommunications infrastructure, hospitals, law enforcement, educational buildings, government services, and public utilities.

Ramsey County Emergency Management and Homeland Security maintains a database for critical facilities and infrastructure. Participating organizations provided the critical facilities and/or assets within their communities. County Emergency Management identifies the structure value of all critical assets and structures.

**Hazard Profile**

All facilities and infrastructure within Ramsey County are susceptible to natural and terrorist events. Lightning and wind within the County can cause damage to facilities. The possibility of a fire within the facilities could cause damage, as could flooding and hazardous materials incidents. Ramsey County houses several facilities and infrastructure that should be highlighted. 40 percent of the state’s gross domestic product passes through the Port of St. Paul. Ramsey County would likely be impacted by an evacuation from both the Monticello Nuclear Power Plant in Monticello and the Prairie Island Nuclear Generating Plant Red Wing, MN. In addition, the County is highly reliant on the City of St. Paul’s Water Department for potable water. There are few redundancies in the system.

Table 33 – Ramsey County Critical Facility Summary

Critical Infrastructure	Number of Critical Facilities
Fire Stations	20
Care Facilities	224
Law Enforcement Facilities	12
Educational Facilities	114
<b>Totals</b>	<b>370</b>

**Assets Exposed to Hazard**

All assets within the County are susceptible to being affected by natural or terrorist incident. Plans have been developed to prevent terrorist events from impacting facilities and infrastructure. Natural events may have some impact on facilities and infrastructure but building codes have been developed to reduce the damage to facilities. The table below details the critical facilities in the county, where they are located, and the assessed loss should they be damaged or destroyed.

Table 34 – Ramsey County Critical Facility Values (2018 Building Values)

Critical Facility	City	Address	Estimated Loss	Facility Type
Arden Hills City Hall	Arden Hills	1245 West Highway 96	\$3,627,300 .00	Government Center
Arden Hills Parks - Arden Manor Park	Arden Hills	4601 Prior Avenue	\$495,300.0 0	City Park
Arden Hills Parks - Arden Oaks Park	Arden Hills	1413 Arden Oaks Drive	\$274,800.0 0	City Park
Arden Hills Parks - Crepeau Nature Preserve	Arden Hills	1145 Benton Way	\$2,591,100 .00	City Park
Arden Hills Parks - Cummings Park	Arden Hills	1219 Cummings Park Drive	\$4,639,000 .00	City Park
Arden Hills Parks - Floral Park	Arden Hills	1423 West Floral Drive	\$4,988,200 .00	City Park
Arden Hills Parks - Freeway Park	Arden Hills	1370 West County Road E	\$266,100.0 0	City Park
Arden Hills Parks - Hazelnut Park	Arden Hills	3301 New Brighton Road	\$2,976,700 .00	City Park
Arden Hills Parks - Ingerson Park	Arden Hills	3255 North Lexington Avenue	\$1,229,500 .00	City Park
Arden Hills Parks - Johanna Marsh Pond	Arden Hills	3168 Ridgewood Road	\$186,600.0 0	City Park
Arden Hills Parks - Lindey's Park	Arden Hills	North Snelling Ave & County Road E	unknown	City Park

## TECHNOLOGICAL HAZARDS

Arden Hills Parks - Perry Park	Arden Hills	3700 New Brighton Road	\$3,398,800 .00	City Park
Arden Hills Parks - Royal Hills Park	Arden Hills	Snelling Avenue & McClung Drive	\$722,600.0 0	City Park
Arden Hills Parks - Sampson Park	Arden Hills	1900 Lake Lane	\$116,100.0 0	City Park
Arden Hills Parks - Valentine Park	Arden Hills	1650 Lake Valentine Road	\$514,000.0 0	City Park
Bethel University & Seminary	Arden Hills	3900 Bethel Drive	\$124,454,3 00.00	Higher Education
ISD #621 - Mounds View High School	Arden Hills	1900 Lake Valentine Road	\$29,117,60 0.00	Schools; Public
ISD #621 - Valentine Hills Elementary School	Arden Hills	1770 West County Road E2	\$8,580,300 .00	Schools; Public
MN National Guard Arden Hills Armory (also Ben Franklin Readiness Ctr, AHATS, U.S. Army Reserve HQ)	Arden Hills	4761 Hamline Avenue N 1245 County Road 96 4655 Lexington Ave N	\$78,043,70 0.00	Military Installations
Ramsey County Parks - Tony Schmidt County Park	Arden Hills	3500 Lake Johanna Boulevard	\$13,972,70 0.00	County Parks
Ramsey County Public Works Garage & Administration (also ISD#621, Arden Hills Public Works, Ramsey County EOC, Ramsey County	Arden Hills	1425 Paul Kirkwold Drive 1411 Paul Kirkwold Drive	\$17,613,60 0.00	Public Works Facility

## TECHNOLOGICAL HAZARDS

Sheriff Patrol Station, Ramsey ECC back-up facility)				
RCWD - County Road E2 South Wetland Baffle Weir	Arden Hills	1837 County Road E2 W	Washington	
RCWD - Lake Johanna Outlet Structure	Arden Hills	1761 Lake Johanna Boulevard	Washington	
Arden Hills Dialysis Unit	Arden Hills	3900 Northwood Drive Suite 110	\$9,427,000.00	Health Practitioner (Physician, Dentist)
HealthPartners Arden Hills Clinic	Arden Hills	3930 Northwoods Dr.	\$9,427,000.00	Health Practitioner (Physician, Dentist)
Now Medical Inc.	Arden Hills	3717 Lexington Ave. N	\$6,938,000.00	Health Practitioner (Physician, Dentist)
Falcon Heights City Hall (includes fire department, public works)	Falcon Heights	2077 Larpenteur Ave W	\$2,332,100.00	Government Center
Minnesota State Fairgrounds	Falcon Heights	1265 Snelling Avenue N	\$10,778,200.00	Fairgrounds
ISD #623 - Falcon Heights Elementary School	Falcon Heights	1393 Garden Avenue W	\$6,452,800.00	Schools; Public
Ramsey County Historical Society @ Gibbs Farm Museum	Falcon Heights	2097 West Larpenteur Avenue	\$3,881,300.00	Museum
Falcon Heights Parks - Curtiss Field Park	Falcon Heights	1551 Iowa Avenue	\$543,900.00	City Park
University of Minnesota - Saint Paul Campus	Falcon Heights		\$673,866,300.00	Schools; Public
University of Minnesota - Bell Museum of Natural History	Falcon Heights	2088 Larpenteur Ave W	\$6,115,100.00	Museum

## TECHNOLOGICAL HAZARDS

(Includes Falcon Heights Parks - University Grove Park)				
Fairgrounds Tank	Falcon Heights	1491 Snelling Ave N	Washington	Treated (Finished) Water Storage (Reservoirs)
Gem Lake City Hall	Gem Lake	4200 Otter Lake Road	\$634,000.00	Government Center
Lauderdale City Hall	Lauderdale	1891 Walnut Street	\$503,500.00	Government Center
Lauderdale Parks - Community Park	Lauderdale	1885 Fulham Street	\$1,317,800.00	City Park
Lauderdale Parks - Nature Area	Lauderdale	Idaho Avenue & Fulham Street	\$479,800.00	City Park
Lauderdale Parks - Skyview Park	Lauderdale	Walnut Street & Ione Street	\$115,800.00	City Park
Lauderdale Parks - Walsh Park	Lauderdale	Ryan Avenue & Pleasant Avenue	\$29,900.00	City Park
North Oaks Sanitary Sewer Lift Station #9	Lino Lakes	1400 Ash Street (Anoka County)	Washington	Wastewater Collection Systems (Sewers)
ISD #623 - Little Canada Elementary School	Little Canada	440 Eli Road	\$6,498,000.00	Schools; Public
ISD #623 - Roseville Area Middle School	Little Canada	15 County Road B2 E	\$21,674,000.00	Schools; Public
ISD #916 East View Academy (Includes Alternate Learning Program & Work Experience/Life Skills - WELS South)	Little Canada	70 West County Road B2	\$12,545,500.00	Schools; Public
Little Canada City Hall	Little Canada	515 Little Canada Road E	\$1,097,300.00	City Public Works

## TECHNOLOGICAL HAZARDS

(includes Public Works)				
Little Canada Fire Department (includes Firefighters Historical Trail & Park)	Little Canada	327 Little Canada Road E	\$1,100,500.00	Fire Department
Little Canada Parks - Firebarns Skate Park	Little Canada	430 Little Canada Road E	\$159,900.00	City Park
Little Canada Parks - Gervais Mill Park	Little Canada	Edgerton Street & Little Canada Road	\$2,272,100.00	City Park
Little Canada Parks - Nadeau Wildlife Park	Little Canada	Demont Avenue & Jackson Street	\$565,000.00	City Park
Little Canada Parks - Old Fire Hall	Little Canada	440 Little Canada Road E	\$817,000.00	City Park
Little Canada Parks - Pioneer Park	Little Canada	2950 Centerville Road	\$5,803,900.00	City Park
Little Canada Parks - Spooner Park	Little Canada	350 Eli Road	\$3,867,600.00	City Park
Minnesota Waldorf School (PreK-8)	Little Canada	70 East County Road B	\$4,363,800.00	Schools; Private
Ramsey County Sheriff's Water Patrol / Impound Lot	Little Canada	5 South Owasso Boulevard	\$2,454,200.00	Police Department
Saint John School of Little Canada (PreK-8)	Little Canada	2621 McMenemy Street	\$4,457,800.00	Schools; Private
CARDIGAN RIDGE	Little Canada	3300 RICE STREET	\$9,828,200.00	Assisted Living Facility
Little Canada Clinic	Little Canada	75 Little Canada Rd. W	\$319,900.00	Health Practitioner (Physician, Dentist)
Capital City Adventist	Maplewood	1220 McKnight Road S	\$2,387,300.00	Schools; Private

## TECHNOLOGICAL HAZARDS

Christian School (PreK-8)				
Gethsemane Lutheran School (PreK-8)	Maplewood	2410 Stillwater Road E	\$5,046,700 .00	Schools; Private
Hill-Murray School	Maplewood	2625 Larpenteur Avenue E	\$25,622,10 0.00	Schools; Private
ISD #622 - Beaver Lake Education Center	Maplewood	1060 Sterling Street North	\$6,400,600 .00	Schools; Public
ISD #622 - Carver Elementary School	Maplewood	2680 Upper Afton Road	\$5,599,600 .00	Schools; Public
ISD #622 - Gladstone Community Education Center	Maplewood	1945 Manton Street	\$4,693,000 .00	Schools; Public
ISD #622 - Harmony Learning Center (Included Alternate Learning Program)	Maplewood	1961 East County Road C	\$5,826,700 .00	Schools; Public
ISD #622 - John Glenn Middle School	Maplewood	1560 East County Road B	\$11,819,00 0.00	Schools; Public
ISD #622 - Maplewood Middle School	Maplewood	2410 Holloway Avenue	\$9,766,300 .00	Schools; Public
ISD #622 - Weaver Elementary School	Maplewood	2135 Birmingham Street	\$5,774,100 .00	Schools; Public
ISD #623 - Edgerton Elementary School	Maplewood	1929 Edgerton Street	\$7,224,900 .00	Schools; Public
ISD #623 - Harambee Elementary School	Maplewood	30 County Road B E	\$12,416,50 0.00	Schools; Public

## TECHNOLOGICAL HAZARDS

Maplewood City Hall (Includes Police Department)	Maplewood	1830 County Road B East	\$1,093,000 .00	Government Center
Maplewood Community Center	Maplewood	2100 White Bear Avenue	\$8,321,200 .00	Government Center
Maplewood Fire Department - Station 1 (South/Administration)	Maplewood	600 McKnight Road N	\$3,239,700 .00	Fire Department
Maplewood Fire Department - Station 2 (Central)	Maplewood	1955 Clarence Street N	\$1,208,700 .00	Fire Department
Maplewood Fire Department - Station 3 (North)	Maplewood	1530 County Road C East	\$1,016,500 .00	Fire Department
Maplewood Nature Center	Maplewood	2659 East 7th Street	\$361,800.0 0	City Park
Maplewood Parks - Afton Heights Park (Includes Ramsey County Water Park)	Maplewood	63 Sterling Street N	\$4,723,300 .00	City Park
Maplewood Parks - Applewood Park	Maplewood	822 Sterling Street S	\$52,300.00	City Park
Maplewood Parks - City Hall Campus Park	Maplewood	1830 County Road B E	\$1,093,000 .00	City Park
Maplewood Parks - Crestview Park	Maplewood	2501 Londin Lane E	\$1,997,600 .00	City Park
Maplewood Parks - Edgerton Park	Maplewood	2001 Bradley Street N	\$2,461,300 .00	City Park

## TECHNOLOGICAL HAZARDS

Maplewood Parks - Flicek Park	Maplewood	1141 Frost Avenue	\$1,383,400 .00	City Park
Maplewood Parks - Four Seasons Park	Maplewood	1685 Gervais Avenue	\$2,486,500 .00	City Park
Maplewood Parks - Geranium Park	Maplewood	2568 Geranium Avenue E	\$985,200.0 0	City Park
Maplewood Parks - Gethsemane Park	Maplewood	2411 East 7th Street	\$2,459,400 .00	City Park
Maplewood Parks - Gloster Park	Maplewood	1839 Frank Street	\$3,638,900 .00	City Park
Maplewood Parks - Goodrich Park	Maplewood	1980 North Saint Paul Road	\$4,730,300 .00	City Park
Maplewood Parks - Harvest Park	Maplewood	2561 North Barclay Street	\$4,671,600 .00	City Park
Maplewood Parks - Hazelwood Park	Maplewood	1663 County Road C	\$13,512,80 0.00	City Park
Maplewood Parks - Hillside Park	Maplewood	1879 Myrtle Street N	\$1,917,100 .00	City Park
Maplewood Parks - Joy Park	Maplewood	2615 Joy Road	\$3,303,600 .00	City Park
Maplewood Parks - Playcrest Park	Maplewood	2390 Lydia Avenue E	\$2,657,800 .00	City Park
Maplewood Parks - Pleasantview Park	Maplewood	1100 Marnie Street	\$174,300.0 0	City Park
Maplewood Parks - Robinhood Park	Maplewood	2039 Manton Street	\$4,396,400 .00	City Park
Maplewood Parks - Roselawn Park	Maplewood	393 Roselawn Avenue E	\$338,600.0 0	City Park

## TECHNOLOGICAL HAZARDS

Maplewood Parks - Sherwood Park	Maplewood	2237 Kennard Street	\$338,600.00	City Park
Maplewood Parks - Sterling Oaks Park	Maplewood	1440 Sterling Street	\$744,800.00	City Park
Maplewood Parks - Upper Sunset Ridge Park	Maplewood	3020 Frank Street	\$18,200.00	City Park
Maplewood Parks - Vista Hills Park	Maplewood	2480 Mailand Road E	\$162,300.00	City Park
Maplewood Parks - Wakefield Park	Maplewood	1860 Hazelwood Street N	\$8,686,100.00	City Park
Maplewood Parks - Western Hills Park	Maplewood	1825 Adolphus Street	\$1,489,800.00	City Park
Maplewood Public Works	Maplewood	1902 County Road B East	\$4,650,500.00	City Public Works
Mounds Park Academy	Maplewood	2051 Larpenteur Avenue E	\$29,731,400.00	Schools; Private
Presentation of Mary School (PreK-8)	Maplewood	1725 Kennard Street N	\$5,643,100.00	Schools; Private
Ramsey County Correctional Facility (RCCF)	Maplewood	297 South Century Avenue	\$52,417,000.00	Corrections Facility
Ramsey County Library - Maplewood Branch	Maplewood	3025 Southlawn Avenue N	\$5,678,900.00	Library
Ramsey County Nursing Home (Includes Family Service Center)	Maplewood	2000 White Bear Avenue N	\$8,485,800.00	Nursing Home
Ramsey County Parks - Aldrich Ice Arena	Maplewood	1850 North White Bear Avenue	\$7,222,000.00	County Parks
Ramsey County Parks - Battle Creek Regional Park	Maplewood	2301-2401 Upper Afton Road	\$119,089,000.00	County Parks

## TECHNOLOGICAL HAZARDS

Ramsey County Parks - Beaver Lake Park	Maplewood	1050 Edgewater Boulevard	\$3,467,700 .00	County Parks
Ramsey County Parks - Gervais Lake County Park	Maplewood	2520 Edgerton Street	\$1,083,000 .00	County Parks
Ramsey County Parks - Goodrich Gold Course	Maplewood	1820 Ripley Avenue E	\$18,617,70 0.00	County Parks
Ramsey County Parks - Keller Regional Park (Includes Keller Golf Course, Spoon Lake Park)	Maplewood	2039-2099 U.S. Highway 61	\$32,112,70 0.00	County Parks
Ramsey County Parks & Recreation Administration (Includes Ag Barn)	Maplewood	2020 White Bear Avenue N	\$6,880,700 .00	County Parks
Ramsey County Suburban Courts	Maplewood	2050 White Bear Avenue	\$2,035,500 .00	Government Center
Saint Jerome School (PreK-8)	Maplewood	384 Roselawn Avenue E	\$5,873,700 .00	Schools; Private
Saint Paul Regional Water Services	Maplewood	1900 Rice Street	\$29,933,20 0.00	Water/Sewer
Maplewood Pump Station (Beebe Road)	Maplewood	1695 Beebe Road	\$184,800.0 0	Treated Water Distribution Control
Cope Ave Tank	Maplewood	1989 Cope Ave E	Washingto n	Treated (Finished) Water Storage (Reservoirs)
Ferndale Ave Tank	Maplewood	1060 Sterling St N	Washingto n	Treated (Finished) Water Storage (Reservoirs)
Highwood Standpipe	Maplewood	Mcknight Rd and Hillwood	Washingto n	Treated (Finished) Water Storage (Reservoirs)
Mailand Rd Pump Station	Maplewood	2287 Mailand Rd	Washingto n	Treated Water Distribution Control
McKnight Rd Standpipe	Maplewood	393 McKnight Rd N	Washingto n	Treated (Finished) Water Storage (Reservoirs)

## TECHNOLOGICAL HAZARDS

MDH Well #200443 - Goodrich Golf Course	Maplewood	1820 Van Dyke Street	Washington	
MDH Well #200874 - Northern States Power	Maplewood	1550 Century Avenue	Washington	
MDH Well #244345 - Maplewood Bowl	Maplewood	1955 English Street	Washington	
Roselawn Ave Pump Station	Maplewood	16 Roselawn Ave E	Washington	Treated Water Distribution Control
Saint Paul Regional Water Services	Maplewood	1900 Rice Street	Washington	Water Treatment
Allergy and Asthma Care, PA	Maplewood	1675 Beam Avenue	\$4,704,200.00	Health Practitioner (Physician, Dentist)
Allina Medical Clinic - Parkview Ob/Gyn - Maplewood	Maplewood	1560 Beam Avenue	\$2,432,500.00	Health Practitioner (Physician, Dentist)
Aspen Medical Group- Maplewood (Allina)	Maplewood	1850 Beam Ave.	\$3,390,000.00	Health Practitioner (Physician, Dentist)
Attending Physicians Internal Medicine, PA	Maplewood	1650 Beam Ave.	\$2,706,200.00	Health Practitioner (Physician, Dentist)
BRIGHTSTAR CARE OF Saint Paul	Maplewood	2375 ARIEL STREET N STE A	\$4,081,600.00	HEALTHCARE FACILITY
CHILDREN'S THERAPLAY LLC	Maplewood	2399 ARIEL STREET NORTH	\$4,081,600.00	HEALTHCARE FACILITY
FHSM Afton Road Clinic	Maplewood	2716 Upper Afton Rd.	\$1,136,100.00	Health Practitioner (Physician, Dentist)
FHSM Maplewood Clinic	Maplewood	1814 North Saint Paul Rd.	\$1,014,800.00	Health Practitioner (Physician, Dentist)
FMC Maplewood HEIGHTS	Maplewood	2017 WOODLYN AVENUE	\$2,659,000.00	HEALTHCARE FACILITY

## TECHNOLOGICAL HAZARDS

HealthEast - Maplewood Clinic - Pediatricians for Health	Maplewood	3100 Kennard St.	\$7,381,100 .00	Health Practitioner (Physician, Dentist)
HealthEast Heart Care	Maplewood	1600 St Johns Boulevard	\$6,728,000 .00	Hospital, General
HealthEast Maplewood Outpatient	Maplewood	1655 Beam Avenue	\$7,800,000 .00	Hospital, General
HealthEast St John's Hospital	Maplewood	1575 Beam Avenue	\$38,878,80 0.00	Hospital, General
HEALTHEAST SURG CTR Maplewood	Maplewood	1655 BEAM AVENUE	\$7,800,000 .00	HEALTHCARE FACILITY
HealthPartners Maplewood Clinic	Maplewood	2165 White Bear Ave.	\$2,982,000 .00	Health Practitioner (Physician, Dentist)
Maplewood DIALYSIS CENTER	Maplewood	2785 WHITE BEAR AVENUE STE 201	\$3,187,600 .00	HEALTHCARE FACILITY
Metropolitan OB/GYN - Maplewood	Maplewood	1655 A Beam Ave.	\$7,800,000 .00	Health Practitioner (Physician, Dentist)
Millennium Neurosurgery, PA	Maplewood	1675 A Beam Ave.	\$4,704,200 .00	Health Practitioner (Physician, Dentist)
Minnesota Oncology Hematology, PA	Maplewood	1580 Beam Ave.	\$4,004,500 .00	Health Practitioner (Physician, Dentist)
Minnesota Surgical Associates, PA	Maplewood	1973 Sloan Pl.	\$1,854,000 .00	Health Practitioner (Physician, Dentist)
MN EYE LASER & SURG CTRS LLC	Maplewood	1965 11TH AVENUE EAST #102	\$1,705,100 .00	HEALTHCARE FACILITY
MN Gastroenterolo gy, PA Maplewood Clinic	Maplewood	1973 A Sloan Pl	\$1,854,000 .00	Health Practitioner (Physician, Dentist)
MNGI ENDOSCOPY Maplewood	Maplewood	1997 SLOAN PLACE	\$3,659,100 .00	HEALTHCARE FACILITY

## TECHNOLOGICAL HAZARDS

Partners Ob/Gyn, PA	Maplewood	1737 Beam Ave.	unknown	Health Practitioner (Physician, Dentist)
Pediatric and Young Adult Medicine - Maplewood	Maplewood	1655 B Beam Ave.	\$7,800,000 .00	Health Practitioner (Physician, Dentist)
Saint Paul Infectious Disease Associates, Ltd.	Maplewood	1959 Sloan Pl. Ste 200	\$1,683,600 .00	Health Practitioner (Physician, Dentist)
Saint Paul Surgeons, Ltd.	Maplewood	1655 C Beam Ave.	\$7,800,000 .00	Health Practitioner (Physician, Dentist)
The Shores of Lake Phalen	Maplewood	1870 East Shore Drive	\$13,125,00 0.00	Assisted Living Facility
WALKER METHODIST HAZEL RIDGE	Maplewood	2730 HAZELWOOD STREET	\$8,841,900 .00	Assisted Living Facility
ISD #621 - Area Learning Center	Mounds View	2574 Mounds View Boulevard	\$2,375,300 .00	Schools; Public
ISD #621 - Bridges Program	Mounds View	2408 Mounds View Boulevard	\$155,800.0 0	Schools; Public
ISD #621 - Edgewood Middle School	Mounds View	5100 Edgewood Drive N	\$14,744,60 0.00	Schools; Public
ISD #621 - Pinewood Elementary School	Mounds View	5500 Qunicy Street	\$7,342,400 .00	Schools; Public
Mounds View City Hall (Includes City Hall Park, Police Department, Public Works Water Tower and Well #3)	Mounds View	2401 Mounds View Boulevard	\$7,742,700 .00	Government Center
Mounds View Community Center	Mounds View	5394 Edgewood Drive	\$1,884,200 .00	Government Center
Mounds View Parks - Greenfield Park	Mounds View	2335 Knoll Drive	\$1,555,700 .00	City Park

## TECHNOLOGICAL HAZARDS

Mounds View Parks - Groveland Park	Mounds View	2815 Ardan Avenue	\$895,600.00	City Park
Mounds View Parks - Hillview Park	Mounds View	7901 Hillview Road	\$496,100.00	City Park
Mounds View Parks - Lambert Park	Mounds View	5324 Jackson Drive	\$802,700.00	City Park
Mounds View Parks - Random Park	Mounds View	5214 Long Lake Road	\$113,400.00	City Park
Mounds View Parks - Silver View Park	Mounds View	2700 County Road I	\$13,365,200.00	City Park
Mounds View Parks - Woodcrest Park	Mounds View	2752 Woodcrest Drive	\$232,300.00	City Park
Ramsey County Library - Mounds View Branch	Mounds View	2576 Mounds View Drive	\$1,660,000.00	Library
Mounds View - Well #5	Mounds View	5100 Long Lake Road	\$121,000.00	Raw Water Storage (Reservoir)
Mounds View - Well #6	Mounds View	7545 Groveland Road	\$201,700.00	Raw Water Storage (Reservoir)
BEL RAE SENIOR LIVING	MOUNDS VIEW	2330 MOUNDS VIEW BLVD	\$8,326,200.00	Assisted Living Facility
ISD #621 - Bel Air Elementary School	New Brighton	1800 5th Street NW	\$7,489,200.00	Schools; Public
ISD #621 - Early Childhood Education Center	New Brighton	500 10th Street NW	\$1,803,900.00	Schools; Public
ISD #621 - Highview Middle School	New Brighton	2300 7th Street NW	\$11,301,900.00	Schools; Public
ISD #621 - Irondale High School	New Brighton	2425 Long Lake Road	\$22,568,400.00	Schools; Public
ISD #621 - Pike Lake Kindergarten Center	New Brighton	2101 14th Street NW	\$7,116,900.00	Schools; Public

## TECHNOLOGICAL HAZARDS

ISD #621 - Sunnyside Elementary School	New Brighton	2070 County Road H	\$6,402,000 .00	Schools; Public
New Brighton City Hall (Includes Veterans Park)	New Brighton	803 Old Hwy 8	\$2,071,600 .00	Government Center
New Brighton Community Center (Includes New Brighton Branch Library)	New Brighton	400 10th Street NW	\$7,561,500 .00	Government Center
New Brighton Parks - Meadow Wood Park	New Brighton	2081 29th Avenue NW	\$595,100.0 0	City Park
New Brighton Parks - Brightwood Hills Golf Course	New Brighton	1975 Silver Lake Road	\$2,969,400 .00	City Park
New Brighton Parks - Creekview Park	New Brighton	2400 Mississippi Street	\$1,384,200 .00	City Park
New Brighton Parks - Driftwood Park	New Brighton	2705 5th Street NW	\$3,475,000 .00	City Park
New Brighton Parks - Freedom Park	New Brighton	2121 14th Street NW	\$2,525,400 .00	City Park
New Brighton Parks - Hansen Park & New Brighton Well #11	New Brighton	1555 5th Street NW	\$13,127,60 0.00	City Park
New Brighton Parks - Hidden Oaks Park	New Brighton	1550 29th Avenue NW	\$1,606,000 .00	City Park
New Brighton Parks - Innsbruck Park	New Brighton	1150 27th Avenue NW	\$513,200.0 0	City Park
New Brighton Parks - Pike Lake Trail Park	New Brighton	1021 Pike Lake Drive	\$625,800.0 0	City Park

## TECHNOLOGICAL HAZARDS

New Brighton Parks - Silver Oaks Park	New Brighton	340 Oakwood Drive	\$1,901,100 .00	City Park
New Brighton Parks - Sunny Square Park	New Brighton	2200 Sunnyside Terrace	\$2,165,800 .00	City Park
New Brighton Parks - Totem Pole Park	New Brighton	1111 Foss Road	\$1,203,800 .00	City Park
New Brighton Parks - Vermont Park	New Brighton	150 1st Avenue SE	\$516,200.0 0	City Park
New Brighton Public Safety Center	New Brighton	785 Old Highway 8 NW	\$3,561,600 .00	Police Department
New Brighton Public Works Facility	New Brighton	700 5th Street NW	\$2,282,600 .00	City Public Works
Ramsey County Parks - Long Lake Regional Park	New Brighton	1500 Old Highway 8	\$54,724,70 0.00	County Parks
Saint John the Baptist School (PreK-8)	New Brighton	835 2nd Avenue NW	\$10,146,90 0.00	Schools; Private
New Brighton PGAC Plant	New Brighton	3001 5th Street NW	\$1,965,700 .00	Water Treatment
New Brighton Water Reservoir	New Brighton	2400 Mississippi Street	\$1,486,600 .00	Raw Water Storage (Reservoir)
New Brighton Well #10	New Brighton	660 5th Street SW	\$894,600.0 0	Raw Water Storage (Reservoir)
Benedictine Health Center at Innsbruck	New Brighton	1101 Black Oak Drive	\$3,616,600 .00	Health Practitioner (Physician, Dentist)
Fairview Northeast Clinic	New Brighton	1151 Silver Lake Road NW	\$12,745,00 0.00	Health Practitioner (Physician, Dentist)
Meadowood Shores Senior Housing	New Brighton	2100 Silver Lake Road	\$12,418,60 0.00	Assisted Living Facility
MERWIN IV & SPECIALTY PHARMACY	New Brighton	1811 OLD HIGHWAY 8 NW STE C	\$3,027,800 .00	HEALTHCARE FACILITY
MINNESOTA VASCULAR SUR CTR LLC	New Brighton	600 COUNTY ROAD D STE 2	\$6,081,000 .00	HEALTHCARE FACILITY

## TECHNOLOGICAL HAZARDS

New Brighton SENIOR ASSISTED L	New Brighton	2700 RICE CREEK ROAD	\$6,686,500 .00	HEALTHCARE FACILITY
ISD #621 - Chippewa Middle School	North Oaks	5000 Hodgson Road	\$26,077,80 0.00	Schools; Public
Lake Johanna Fire Department - Station #120	North Oaks	4676 Hodgson Road	\$822,900.0 0	Fire Department
North Oaks City Hall	North Oaks	100 Village Center Drive	\$3,361,100 .00	Government Center
North Oaks Sanitary Sewer Lift Station #1	North Oaks	68 1/2 Pleasant Lake Road W	unknown	Wastewater Collection Systems (Sewers)
North Oaks Sanitary Sewer Lift Station #10	North Oaks	28 Osprey Court	unknown	Wastewater Collection Systems (Sewers)
North Oaks Sanitary Sewer Lift Station #11	North Oaks	16 Phoebe Lane	unknown	Wastewater Collection Systems (Sewers)
North Oaks Sanitary Sewer Lift Station #12	North Oaks	24A Maycomb	unknown	Wastewater Collection Systems (Sewers)
North Oaks Sanitary Sewer Lift Station #2	North Oaks	58 1/2 Pleasant Lake Road W	unknown	Wastewater Collection Systems (Sewers)
North Oaks Sanitary Sewer Lift Station #3	North Oaks	16 1/2 Lake Court	unknown	Wastewater Collection Systems (Sewers)
North Oaks Sanitary Sewer Lift Station #4	North Oaks	52 Wildflower Way	unknown	Wastewater Collection Systems (Sewers)
North Oaks Sanitary Sewer Lift Station #5	North Oaks	1 Peterson Place	unknown	Wastewater Collection Systems (Sewers)
North Oaks Sanitary Sewer Lift Station #6	North Oaks	4 Pine Road	unknown	Wastewater Collection Systems (Sewers)
North Oaks Sanitary Sewer Lift Station #7	North Oaks	14 1/2 White Pine Road	unknown	Wastewater Collection Systems (Sewers)
North Oaks Sanitary Sewer Lift Station #8	North Oaks	901 Wilkinson Lake Boulevard	unknown	Wastewater Collection Systems (Sewers)

## TECHNOLOGICAL HAZARDS

Pleasant Lake (raw water supply)	North Oaks	W Pleasant Lake Rd & Long Marsh Ln	unknown	Raw Water Storage (Reservoir)
Christ Lutheran Church WELS (PreK-8)	North Saint Paul	2475 17th Avenue E	\$3,069,700 .00	Schools; Private
ISD #622 - Cowern Elementary School	North Saint Paul	2131 North Margaret Street	\$223,200.0 0	Schools; Public
ISD #622 - District #622 Transportation Department	North Saint Paul	2225 McKnight Road N	\$2,022,800 .00	Schools; Public
ISD #622 - Next Step Transition Program	North Saint Paul	2586 East 7th Avenue	\$3,881,600 .00	Schools; Public
ISD #622 - North High School	North Saint Paul	2416 11th Avenue E	\$33,057,60 0.00	Schools; Public
ISD #622 - North St. Paul/Maplewood/Oakdale Dist. #622 Offices	North Saint Paul	2520 East 12th Avenue	\$3,815,000 .00	Schools; Public
ISD #622 - Polar Arena	North Saint Paul	2444 11th Avenue E	\$33,057,60 0.00	Schools; Public
ISD #622 - Richardson Elementary School	North Saint Paul	2615 First Street N	\$4,848,500 .00	Schools; Public
ISD #622 - Webster Elementary School	North Saint Paul	2170 East 7th Avenue	\$4,377,400 .00	Schools; Public
Maplewood Public Safety Training Center	North Saint Paul	1881 Century Ave N	\$3,221,600 .00	Fire Department
North Saint Paul City Hall (Includes Fire, Police and Public Works Departments)	North Saint Paul	2400 Margaret Street N	\$4,418,200 .00	Government Center

## TECHNOLOGICAL HAZARDS

North Saint Paul Parks - Casey Lake Park	North Saint Paul	2101 17th Avenue	\$11,369,600.00	City Park
North Saint Paul Parks - Colby Hills Park	North Saint Paul	2092 7th Street N	\$52,900.00	City Park
North Saint Paul Parks - Dorothy Park	North Saint Paul	2916 Lake Boulevard	\$222,600.00	City Park
North Saint Paul Parks - Hause Park	North Saint Paul	2616 4th Avenue	\$606,900.00	City Park
North Saint Paul Parks - McKnight Field Complex	North Saint Paul	2310 10th Avenue	\$4,154,300.00	City Park
North Saint Paul Parks - Northwood Park	North Saint Paul	1850 1st Street	\$2,464,100.00	City Park
North Saint Paul Parks - Polar Park	North Saint Paul	2390 Shawnee	\$185,600.00	City Park
North Saint Paul Parks - Rotary Park (Includes North St. Paul Library Branch)	North Saint Paul	2290 2nd Street N	\$3,162,100.00	City Park
North Saint Paul Parks - Silver Lake Park	North Saint Paul	2601 19th Avenue	\$1,404,800.00	City Park
North Saint Paul Parks - Southwood Nature Preserve	North Saint Paul	2651 Holloway Avenue	\$2,736,500.00	City Park
North Saint Paul Parks - Tower Park	North Saint Paul	2380 14th Avenue	\$1,574,100.00	City Park
North Saint Paul Parks - Urban Ecology Center	North Saint Paul	County Road B East & McKnight Road	\$419,300.00	City Park
North Saint Paul Parks - Veterans Park	North Saint Paul	2480 Margaret Street N	\$156,600.00	City Park

## TECHNOLOGICAL HAZARDS

Saint Peter Catholic School (PreK-8)	North Saint Paul	2620 Margaret Street N	\$6,799,700 .00	Schools; Private
FHSM North Saint Paul Clinic	North Saint Paul	2601 Centennial Dr.	\$3,074,000 .00	Health Practitioner (Physician, Dentist)
North Saint Paul City Hall	North Saint Paul	2400 Margaret Street N	\$4,196,000 .00	Government Center
North Saint Paul Fire Department	North Saint Paul	2400 Margaret Street N	\$4,196,000 .00	Fire Department - Station
North Saint Paul Public Works	North Saint Paul	2400 Margaret Street N	\$4,196,000 .00	City Public Works
Saint Peter Catholic School (PreK-8)	North Saint Paul	2620 Margaret Street N	\$6,799,700 .00	Schools; Private
Concordia Academy (9-12)	Roseville	2400 Dale Street N	\$8,529,300 .00	Schools; Private
ISD #623 - Brimhall Elementary School	Roseville	1744 County Road B W	\$10,680,00 0.00	Schools; Public
ISD #623 - Central Park Elementary School	Roseville	535 County Road B2 W	\$8,266,600 .00	Schools; Public
ISD #623 - Fairview Alternative High School (Includes Fairview Community Ctr.)	Roseville	1910 County Road B W	\$20,524,10 0.00	Schools; Public
ISD #623 - Parkview Center School (Includes Early Childhood Elementary School)	Roseville	701 County Road B W	\$18,997,00 0.00	Schools; Public
ISD #623 - Roseville Area High School (Includes District Offices)	Roseville	1240 West County Road B2	\$42,007,20 0.00	Schools; Public

## TECHNOLOGICAL HAZARDS

King of Kings Lutheran School (PreK-8)	Roseville	2330 North Dale Street	\$3,737,400 .00	Schools; Private
Minneapolis Business College	Roseville	1711 County Road B West	\$4,546,500 .00	Higher Education
North Heights Christian Academy (PreK-8)	Roseville	2701 Rice Street	\$7,704,600 .00	Schools; Private
Ramsey County Library - Roseville Branch	Roseville	2180 Hamline Avenue N	\$6,869,500 .00	Library
Ramsey County Parks - Lake Josephine County Park	Roseville	3027 North Lexington Avenue	\$3,753,500 .00	County Parks
Ramsey County Woodview Women's Detention Facility	Roseville	1771 North Kent Street	\$6,156,100 .00	Corrections Facility
Roseville City Hall (includes Police, Fire, Public Works, Skating Center)	Roseville	2660 Civic Center Drive	\$14,381,90 0.00	Government Center
Roseville Parks - Acorn Park	Roseville	286 County Road C West	\$7,798,800 .00	City Park
Roseville Parks - Applewood Park	Roseville	2838 Arona Street	\$910,400.0 0	City Park
Roseville Parks - Autumn Grove Park	Roseville	1365 Lydia Avenue W	\$4,005,100 .00	City Park
Roseville Parks - Bruce Russell Park	Roseville	1175 Roselawn Avenue W	\$843,500.0 0	City Park
Roseville Parks - Cedarholm Golf Course	Roseville	2323 Hamline Avenue N	\$3,462,400 .00	City Park
Roseville Parks - Central Park (Includes	Roseville	2555 Dale Street N	\$31,509,10 0.00	City Park

## TECHNOLOGICAL HAZARDS

Lexington, Dale, North and Victoria Ballfield Sections)				
Roseville Parks - Concordia Park	Roseville	2394 Dale Street N	\$1,759,200 .00	City Park
Roseville Parks - Cottontail Park	Roseville	1281 County Road C2 West	\$1,638,300 .00	City Park
Roseville Parks - Evergreen Park	Roseville	1810 County Road B West	\$1,766,500 .00	City Park
Roseville Parks - Harriet Alexander Nature Center	Roseville	2520 Dale Street N	\$16,822,20 0.00	City Park
Roseville Parks - Howard Johnson Park	Roseville	1260 Woodhill Drive	\$2,536,400 .00	City Park
Roseville Parks - Keller Mayflower Park	Roseville	2070 Fernwood Street	\$678,900.0 0	City Park
Roseville Parks - Ladyslipper Park	Roseville	299 Owasso Boulevard S	\$1,159,100 .00	City Park
Roseville Parks - Langton Lake Park	Roseville	1894 County Road C2 West	\$8,226,000 .00	City Park
Roseville Parks - Mapleview Park	Roseville	2917 Matilda Street	\$1,466,600 .00	City Park
Roseville Parks - Materion Park	Roseville	225 Minnesota Avenue	\$1,191,800 .00	City Park
Roseville Parks - Muriel Sahlin Arboretum	Roseville	2525 Dale Street N	\$2,910,900 .00	City Park
Roseville Parks - Oasis Park	Roseville	1700 County Road C2 West	\$3,765,100 .00	City Park
Roseville Parks - Owasso Ballfields	Roseville	2659 Victoria Street N	\$1,778,100 .00	City Park
Roseville Parks - Owasso Hills Park	Roseville	593 Owasso Hills Drive	\$2,290,600 .00	City Park
Roseville Parks - Pioneer Park	Roseville	1966 Chatsworth Street	\$1,560,900 .00	City Park

## TECHNOLOGICAL HAZARDS

Roseville Parks - Pocahontas Park	Roseville	2540 Pascal Street	\$2,476,000 .00	City Park
Roseville Parks - Reservoir Woods (Includes Dale Street Reservoir)	Roseville	1901 Alta Vista Drive	\$6,520,700 .00	City Park
Roseville Parks - Rosebrook Park	Roseville	2590 Fry Street	\$4,908,000 .00	City Park
Roseville Parks - Sandcastle Park	Roseville	3060 Patton Road	\$1,073,400 .00	City Park
Roseville Parks - Tamarack Park	Roseville	1745 Farrington Street	\$3,332,800 .00	City Park
Roseville Parks - Valley Park	Roseville	3110 Avon Street	\$1,501,800 .00	City Park
Roseville Parks - Villa Park	Roseville	2055 Cohansey Boulevard	\$7,681,800 .00	City Park
Roseville Parks - Willow Pond	Roseville	1283 County Road B2 West	\$1,962,900 .00	City Park
Roseville Parks - Woodhill Park	Roseville	2724 Western Avenue	\$528,200.0 0	City Park
University of Northwestern - Saint Paul	Roseville	3003 Snelling Avenue N	\$70,787,80 0.00	Higher Education
Ramsey County Parks - Lake McCarrons County Park	Roseville	1795 North Rice Street	\$3,177,000 .00	County Parks
Roseville Lift Station #1 - Center Street	Roseville	201 Center Street	unknown	Wastewater Collection Systems (Sewers)
Associated Medical and Dental Clinic	Roseville	2381 Rice St.	\$450,000.0 0	Health Practitioner (Physician, Dentist)
Concordia Academy (9-12)	Roseville	2400 Dale Street N	\$8,529,300 .00	Schools; Private
Dr. Erskine Caperton, Rheumatology	Roseville	2233 Hamline Ave. N	\$4,483,800 .00	Health Practitioner (Physician, Dentist)
FMC DIALYSIS SVCES Roseville	Roseville	2045 RICE STREET	\$573,400.0 0	HEALTHCARE FACILITY

## TECHNOLOGICAL HAZARDS

HealthPartners North Suburban Family Physicians- Roseville	Roseville	2831 Snelling Ave. N	\$1,470,700 .00	Health Practitioner (Physician, Dentist)
LARPENTEUR AVE DIALYSIS	Roseville	1739 LEXINGTON AVENUE NORTH	\$3,233,000 .00	HEALTHCARE FACILITY
Lo Medical Clinic	Roseville	2353 Rice St.	\$1,452,000 .00	Health Practitioner (Physician, Dentist)
Multicare Associates - Roseville Medical Center	Roseville	1835 County Rd. C West	\$9,999,600 .00	Health Practitioner (Physician, Dentist)
Now Medical Inc.	Roseville	1955 County Rd. B2 West	\$5,745,200 .00	Health Practitioner (Physician, Dentist)
PRESBYTERIAN ASSISTED LIVING	Roseville	2845 HAMLIN AVENUE NORTH	\$4,090,300 .00	Assisted Living Facility
PRESBYTERIAN HOMES OF Roseville	Roseville	1910 WEST COUNTY ROAD D	\$11,347,00 0.00	Nursing Home
ROSE OF SHARON MANOR	Roseville	1000 LOVELL AVENUE	\$2,173,600 .00	Assisted Living Facility
Saint Paul Rheumatology, PA	Roseville	2680 Snelling Ave. N	\$4,531,700 .00	Health Practitioner (Physician, Dentist)
The Estates at Roseville LLC	Roseville	2727 Victoria Street N	\$6,800,400 .00	HEALTHCARE FACILITY
Saint Anthony Lift Station (Foss Road)	Saint Anthony	3900 Foss Road	unknown	
Saint Anthony Lift Station (Harding Street)	Saint Anthony	3651 Harding Street	unknown	
Saint Anthony Public Works	Saint Anthony	3805 Chandler Road	\$1,789,800 .00	
Saint Anthony Water treatment	Saint Anthony	3305 Silver Lake Road	unknown	Wastewater Treatment
Saint Anthony Well House #3	Saint Anthony	3435 Silver Lake Road	unknown	
Saint Anthony Well Houses (x2)	Saint Anthony	3107 33rd Avenue NE	unknown	

## TECHNOLOGICAL HAZARDS

Saint Anthony HEALTH & REHAB	Saint Anthony	3405 37th Avenue NE	\$5,247,400 .00	Nursing Home
Minnesota National Guard - East Saint Paul Armory	Saint Paul	1530 Maryland Avenue E	\$2,717,300 .00	Military Installations
Saint Paul Downtown Airport (Includes Saint Paul Army Aviation Facility)	Saint Paul	644 Bayfield Street	\$87,459,20 0.00	Airport
Minnesota State Capitol Complex (Includes Cedar Street Armory)	Saint Paul	75 Dr. Martin Luther King Jr. Blvd	\$387,585,1 00.00	Government Center
Ramsey County - Landmark Center	Saint Paul	75 West 5th Street	\$9,861,400 .00	Government Center
Ramsey County Courthouse (Includes all departments)	Saint Paul	15 West Kellogg Boulevard #220	\$34,124,70 0.00	Government Center
American Red Cross - Donor Center Saint Paul	Saint Paul	176 South Robert Street	\$3,405,900 .00	Government Center
American Red Cross - North Central Blood Region	Saint Paul	100 South Robert Street	\$510,200.0 0	Government Center
Ramsey County Boys Totem Town	Saint Paul	398/400 Totem Road	\$1,331,500 .00	Corrections Facility
Ramsey County Government Center East (Includes all departments)	Saint Paul	160 East Kellogg Boulevard	\$18,210,30 0.00	Government Center
Ramsey County Juvenile &	Saint Paul	25 West Seventh Street	\$19,067,50 0.00	Corrections Facility

TECHNOLOGICAL HAZARDS

Family Service Center				
Ramsey County Medical Examiner's Office (Includes Regions Hospital)	Saint Paul	300 East University Avenue	\$294,700,000.00	Morgue Facility
Ramsey County Metro Square	Saint Paul	121 Seventh Place East	\$20,253,600.00	Government Center
Ramsey County Offices - Plato Building	Saint Paul	90 West Plato Blvd	\$1,512,500.00	Government Center
Ramsey County Parks - Biff Adams Ice Arena	Saint Paul	743 Western Avenue N	\$1,383,100.00	County Parks
Ramsey County Parks - Gustafson Phalen Ice Arena (Includes Johnson High School)	Saint Paul	1320 Walsh Street	\$25,159,400.00	County Parks
Ramsey County Parks - Harding Ice Arena (Includes Harding High School)	Saint Paul	1496 6th Street E	\$32,904,900.00	County Parks
Ramsey County Parks - Ken Yackel West Side	Saint Paul	44 Isabel Street E	\$1,485,300.00	County Parks
Ramsey County Parks - Oscar Johnson Arena	Saint Paul	1039 DeCourcy Drive	\$1,769,400.00	County Parks
Ramsey County Parks - Pleasant Arena	Saint Paul	848 Pleasant Avenue	\$2,162,500.00	County Parks
Ramsey County Sheriff's Law Enforcement Center	Saint Paul	425 Grove Street	\$35,963,800.00	Police Department

## TECHNOLOGICAL HAZARDS

(Includes Jail, ECC, Detox)				
Saint Paul/Ramsey County Public Health	Saint Paul	555 Cedar Street	\$3,761,800 .00	Healthcare & Public Health Oversight
Union Depot	Saint Paul	214 4th Street E, #300	\$30,902,10 0.00	Government Center
Highland Park Pump Stations #1, #3, Highland Park Pump Tanks #2, #3, Highland Park Water Tower, Snelling Avenue Reservoirs #1, #2, Ramsey County Parks - Charles Shultz-Highland Park Ice Arena	Saint Paul	750 Snelling Ave S A	\$18,024,20 0.00	Treated Water Distribution Control
Met Council - Metropolitan Wastewater Treatment Plant	Saint Paul	2400 Childs Road	\$29,591,80 0.00	Wastewater Treatment
Shoreview City Hall & Community Center	Shoreview	4600 Victoria St. N.	\$17,008,70 0.00	
ISD #621 - CLT Shoreview	Shoreview	1037A West Highway 96	\$8,813,300 .00	Schools; Public
ISD #621 - Island Lake Elementary School	Shoreview	3555 Victoria Street N	\$7,614,600 .00	Schools; Public
ISD #621 - Reach Academy	Shoreview	3490 Lexington Avenue	\$4,907,400 .00	Schools; Public
ISD #621 - Snail Lake Kindergarten Center	Shoreview	350 Highway 96 W	\$8,379,000 .00	Schools; Public
ISD #621 - Turtle Lake	Shoreview	1141 Lepak Court	\$10,438,60 0.00	Schools; Public

## TECHNOLOGICAL HAZARDS

Elementary School				
ISD #623 - Emmet D. Williams Elementary School	Shoreview	955 County Road D W	\$8,631,600 .00	Schools; Public
Ramsey County Library - Administration	Shoreview	4560 Victoria Street N	\$6,366,800 .00	Library
Ramsey County Library - Shoreview Branch (Includes ISD #621 Career & Life Transition Program, District Administration Offices)	Shoreview	4570 Victoria Street N	\$3,042,600 .00	Library
Ramsey County Parks - Island Lake County Park	Shoreview	3611 Victoria Street N	\$8,128,000 .00	County Parks
Lake Johanna Fire Department - Station #130	Shoreview	5545 Lexington Avenue N	\$1,008,900 .00	Fire Department - Station
Lake Johanna Fire Department - Station #140	Shoreview	3615 Victoria Street N	\$538,100.0 0	Fire Department - Station
Ramsey County - Lake Owasso Residence	Shoreview	210 North Owasso Boulevard	\$5,913,000 .00	Assisted Living
Ramsey County Parks - Lake Owasso County Park	Shoreview	370 North Owasso Boulevard	\$2,208,300 .00	County Parks
Ramsey County Parks - Shoreview Ice Arena	Shoreview	877 West Highway 96	\$1,918,000 .00	County Parks

## TECHNOLOGICAL HAZARDS

Ramsey County Parks - Snail Lake & Grass Lake Regional Parks	Shoreview	4191 Snail Lake Boulevard	\$25,858,300.00	County Parks
Ramsey County Parks - Rice Creek Regional Trail	Shoreview	5959 Lexington Avenue N	\$24,699,200.00	County Parks
Ramsey County Parks - Turtle Lake County Park	Shoreview	4979 Hodgson Road	\$3,314,800.00	County Parks
Ramsey County Parks - Vadnais-Sucker Lake Regional Park (Includes Saint Paul Regional Water Services - Watershed Operations)	Shoreview	4191 Snail Lake Boulevard	\$76,245,200.00	County Parks
Shoreview Maintenance Facility	Shoreview	4615 Victoria St. N.	\$2,994,400.00	
Shoreview Parks - Bobby Theisen Park	Shoreview	3575 Vivian Avenue	\$5,495,100.00	City Park
Shoreview Parks - Bucher Park	Shoreview	5900 Mackubin Avenue	\$5,878,700.00	City Park
Shoreview Parks - Lake Judy Park	Shoreview	900 Arbogast Street	\$805,400.00	City Park
Shoreview Parks - McCullough Park	Shoreview	955 County Road I	\$19,345,800.00	City Park
Shoreview Parks - Ponds Park	Shoreview	190 Sherwood Road	\$337,800.00	City Park
Shoreview Parks - Rice Creek Fields	Shoreview	5880 Rice Creek Parkway	\$2,388,700.00	City Park

## TECHNOLOGICAL HAZARDS

Shoreview Parks - Shamrock Park	Shoreview	5623 Snelling Avenue	\$4,726,500 .00	City Park
Shoreview Parks - Sitzer Park	Shoreview	4344 Hodgson Road	\$2,391,200 .00	City Park
Shoreview Parks - Wilson Park	Shoreview	815 County Road F	\$3,383,600 .00	City Park
Shoreview - Booster Station	Shoreview	883 West Highway 96	unknown	Treated Water Distribution Control
Shoreview - Well #6	Shoreview	4965 North Hodgson Road	unknown	Raw Water Storage (Reservoir)
Shoreview Water Tower #1	Shoreview	745 County Road E	\$1,211,500 .00	Treated (Finished) Water Storage (Reservoirs)
Shoreview Water Tower #2	Shoreview	5880 Lexington Ave N	\$272,000.0 0	Treated (Finished) Water Storage (Reservoirs)
Allergy Asthma and Immunology Clinic	Shoreview	4625 Churchill St. Suite 211	\$1,625,000 .00	Health Practitioner (Physician, Dentist)
Entria Family Clinic	Shoreview	404 West Highway 96	\$1,388,200 .00	Health Practitioner (Physician, Dentist)
Generations Women's Health Center	Shoreview	1030 County Rd. E West	\$1,582,400 .00	Health Practitioner (Physician, Dentist)
SCANDIA SHORES	Shoreview	418 HIGHWAY 96	\$12,728,60 0.00	HEALTHCARE FACILITY
Shoreview SENIOR LIVING	Shoreview	4710 CUMBERLAND STREET	\$21,606,30 0.00	HEALTHCARE FACILITY
ST THERESE HOME INC	Shoreview	3500 VIVIAN AVENUE	\$430,100.0 0	HEALTHCARE FACILITY
VISITING ANGELS	Shoreview	3550 LEXINGTON AVENUE N #211	\$1,423,100 .00	HEALTHCARE FACILITY
Wingspan Life Resources - Harriet	Shoreview	707 HARRIET AVENUE	\$313,100.0 0	HEALTHCARE FACILITY
Saint Odilia School	Shoreview	3495 Victoria Street N	\$12,623,40 0.00	Schools; Private
Shoreview Booster Station	Shoreview	885 West Highway 96	unknown	Treated Water Distribution Control
Shoreview Lift Station - #1 (North Lexington)	Shoreview	4680 Lexington Avenue	unknown	Wastewater Collection Systems (Sewers)

## TECHNOLOGICAL HAZARDS

Shoreview Lift Station - #10 (Reiland Lane)	Shoreview	4338 Reiland Lane	unknown	Wastewater Collection Systems (Sewers)
Shoreview Lift Station - #11 (Gramsie)	Shoreview	875 Gramsie Road	unknown	Wastewater Collection Systems (Sewers)
Shoreview Lift Station - #12 (Woodbridge)	Shoreview	3121 Woodbridge Street	unknown	Wastewater Collection Systems (Sewers)
Shoreview Lift Station - #13 (Cohansey)	Shoreview	3580 Cohansey Street	unknown	Wastewater Collection Systems (Sewers)
Shoreview Lift Station - #14 (South Carlson)	Shoreview	3194 1/2 West Owasso Boulevard	unknown	Wastewater Collection Systems (Sewers)
Shoreview Lift Station - #15 (North Carlson)	Shoreview	3212 West Owasso Boulevard	unknown	Wastewater Collection Systems (Sewers)
Shoreview Lift Station - #16 (South Lexington)	Shoreview	3366 Lexington Avenue	unknown	Wastewater Collection Systems (Sewers)
Shoreview Lift Station - #17 (Chatsworth)	Shoreview	4468 Chatsworth	unknown	Wastewater Collection Systems (Sewers)
Shoreview Lift Station - #18 (Hwy 96)	Shoreview	591 Highway 96	unknown	Wastewater Collection Systems (Sewers)
Shoreview Lift Station - #19 (Bucher)	Shoreview	740 Bucher Avenue	unknown	Wastewater Collection Systems (Sewers)
Shoreview Lift Station - #2 (Lake Beach)	Shoreview	1088 Lake Beach Drive	unknown	Wastewater Collection Systems (Sewers)
Shoreview Lift Station - #3 (Turtle Lake)	Shoreview	5024 East Turtle Lane	unknown	Wastewater Collection Systems (Sewers)
Shoreview Lift Station - #4 (Oakridge)	Shoreview	915 Oakridge	unknown	Wastewater Collection Systems (Sewers)
Shoreview Lift Station - #5 (Schifsky)	Shoreview	699 Schifski	unknown	Wastewater Collection Systems (Sewers)

## TECHNOLOGICAL HAZARDS

Shoreview Lift Station - #6 (Dale & 96)	Shoreview	636 West Highway 96	unknown	Wastewater Collection Systems (Sewers)
Shoreview Lift Station - #7 (Rice & Bridge)	Shoreview	4465 Rice Street	unknown	Wastewater Collection Systems (Sewers)
Shoreview Lift Station - #8 (Snail Lake Stub)	Shoreview	4412 Snail Lake Road	unknown	Wastewater Collection Systems (Sewers)
Shoreview Lift Station - #9 (Snail Lake)	Shoreview	4307 Snail Lake Road	unknown	Wastewater Collection Systems (Sewers)
Shoreview Reservoir	Shoreview	885 West Highway 96	unknown	Raw Water Storage (Reservoir)
Shoreview Water Treatment Plant	Shoreview	881 West Highway 96	unknown	Wastewater Treatment
Shoreview Well #2	Shoreview	883 West Highway 96	unknown	Raw Water Storage (Reservoir)
Shoreview Well #3	Shoreview	4675 North Victoria	unknown	Raw Water Storage (Reservoir)
Shoreview Well #4	Shoreview	902 1/2 Monterey Drive	unknown	Raw Water Storage (Reservoir)
Shoreview Well #5	Shoreview	750 Mound	unknown	Raw Water Storage (Reservoir)
Shoreview Well #6	Shoreview	4965 Hodgson Road	unknown	Raw Water Storage (Reservoir)
Shoreview Well #7	Shoreview	785 West Highway 96	unknown	Raw Water Storage (Reservoir)
Mounds View Parks - Lakeside Lions Park	Spring Lake Park	7840 Pleasant View Drive	\$734,100.00	City Park
Spring Lake Park-Blaine-Mounds View Fire Department - Station 1	Spring Lake Park	1710 County Highway 10	\$1,221,300.00	Fire Department - Station
ISD #624 - Vadnais Heights Elementary School	Vadnais Heights	3645 Centerville Road	\$6,308,200.00	Schools; Public

## TECHNOLOGICAL HAZARDS

Ramsey County Parks - Vadnais Sport Center	Vadnais Heights	1490 County Road E	\$9,874,000 .00	County Parks
Vadnais Heights City Hall (Includes Public Works)	Vadnais Heights	800 East County Road E	\$6,291,400 .00	Government Center
Vadnais Heights Fire Department - North Station & Community Center	Vadnais Heights	665 East County Road F	\$7,504,800 .00	Fire Department
Vadnais Heights Fire Department - South Station	Vadnais Heights	3595 Arcade Street N	\$3,061,700 .00	Fire Department
Vadnais Heights Parks - Berwood Park	Vadnais Heights	780 Berwood Avenue	\$2,692,000 .00	City Park
Vadnais Heights Parks - Bridgewood Park	Vadnais Heights	4224 1/2 Bridgewood Terrace	\$5,943,300 .00	City Park
Vadnais Heights Parks - Community Park	Vadnais Heights	641 East County Road F	\$9,553,600 .00	City Park
Vadnais Heights Parks - Elmwood Park	Vadnais Heights	3892 Elmwood Avenue	\$180,000.0 0	City Park
Vadnais Heights Parks - Greenhaven Park	Vadnais Heights	4470 Greenhaven Drive	\$75,000.00	City Park
Vadnais Heights Parks - Heritage Park	Vadnais Heights	4345 Heritage Court	\$283,600.0 0	City Park
Vadnais Heights Parks - Kohler Meadows Park	Vadnais Heights	365 East County Road F	\$5,670,900 .00	City Park
Vadnais Heights Parks - Lily Pond Park	Vadnais Heights	325 Lily Pond Lane	\$2,268,800 .00	City Park

## TECHNOLOGICAL HAZARDS

Vadnais Heights Parks - Morningside Park	Vadnais Heights	4485 Morningside Drive	\$443,200.00	City Park
Vadnais Heights Parks - Oak Creek Park	Vadnais Heights	485 Oak Creek Parkway	\$330,300.00	City Park
Vadnais Heights Parks - Westfield Park	Vadnais Heights	520 Westfield Lane	\$2,099,700.00	City Park
Vadnais Heights Parks - Wolters Park	Vadnais Heights	1351 Willow Lake Boulevard	\$484,800.00	City Park
FHSM Vadnais Heights Clinic	Vadnais Heights	3550 LaBore Rd.	\$2,933,300.00	Health Practitioner (Physician, Dentist)
HealthEast - Vadnais Heights Clinic	Vadnais Heights	1055 Centerville Circle	\$2,299,700.00	Health Practitioner (Physician, Dentist)
Northeast Pediatric Clinic	Vadnais Heights	4520 Centerville Rd.	\$2,482,000.00	Health Practitioner (Physician, Dentist)
Northern Lights Pediatrics and Adolescent Medicine	Vadnais Heights	3555 Willow Lake Blvd.	\$5,305,800.00	Health Practitioner (Physician, Dentist)
Suite Living Memory & Assisted Living	Vadnais Heights	580 Liberty Way	\$14,000.00	Assisted Living Facility
Vadnais Heights SURGERY CENTER	Vadnais Heights	3580 ARCADE STREET STE 200	\$16,080,600.00	HEALTHCARE FACILITY
ISD #623 - Normandy Park Education Center & White Bear Senior Center	White Bear Lake	2468 East County Road F	\$2,298,100.00	Schools; Public
ISD #624 - Birch Lake Elementary School	White Bear Lake	1616 Birch Lake Avenue	\$5,700,100.00	Schools; Public
ISD #624 - Insight Recovery High School & Area Learning Center	White Bear Lake	2449 Orchard Lane	\$4,811,100.00	Schools; Public

TECHNOLOGICAL HAZARDS

ISD #624 - Lakeaires Elementary Schools	White Bear Lake	3963 Van Dyke Street	\$6,051,600 .00	Schools; Public
ISD #624 - Lincoln Elementary School	White Bear Lake	1961 6th Street	\$6,222,700 .00	Schools; Public
ISD #624 - Matoska International (IB World School)	White Bear Lake	2530 Spruce Place	\$6,395,800 .00	Schools; Public
ISD #624 - Otter Lake Elementary School	White Bear Lake	1401 County Road H2 E	\$14,678,00 0.00	Schools; Public
ISD #624 - Sunrise Park Middle School (IB World School)	White Bear Lake	2399 Cedar Avenue	\$12,963,90 0.00	Schools; Public
ISD #624 - White Bear Lake Area High School (North Campus) & Central Middle School (Includes district offices)	White Bear Lake	5045 Division Street	\$43,253,70 0.00	Schools; Public
ISD #624 - White Bear Lake Area High School (South Campus) & ISD #916 Alternate Learning Program	White Bear Lake	3551 McKnight Road	\$27,768,70 0.00	Schools; Public
ISD #624 - Willow Lane Elementary School	White Bear Lake	3375 Willow Avenue	\$6,940,300 .00	Schools; Public
ISD #916 Mahtomedi Academy	White Bear Lake	2735 County Road D	\$561,800.0 0	Schools; Public

## TECHNOLOGICAL HAZARDS

ISD #916 Northeast Metro 916 Intermediate School District	White Bear Lake	2540 County Road F East	\$5,368,900 .00	Schools; Public
Liberty Classical Academy (PreK- 12)	White Bear Lake	3878 Highland Avenue	\$752,000.0 0	Schools; Private
Magnuson Christian School (K-8)	White Bear Lake	4000 Linden Street	\$8,396,700 .00	Schools; Private
MnSCU - Century College (West Campus)	White Bear Lake	3401 East County Line Road N	\$43,402,30 0.00	Higher Education
Ramsey County Library - White Bear Lake Branch	White Bear Lake	2150 2nd Street	\$1,889,700 .00	Library
Ramsey County Parks - Bald Eagle/Otter Lake Park Regional Park	White Bear Lake	5800 Hugo Road	\$37,039,20 0.00	County Parks
Ramsey County Parks - Manitou Ridge Golf Course	White Bear Lake	3200 North McKnight Road	\$24,899,80 0.00	County Parks
Ramsey County Parks - White Bear Ice Arena	White Bear Lake	2160 Orchard Lane	\$2,127,100 .00	County Parks
Ramsey County Parks - White Bear Lake County Park	White Bear Lake	5050 Lake Avenue	\$1,892,300 .00	County Parks
Saint Anne's Academy (1-12)	White Bear Lake	2445 County Road E East	\$1,270,300 .00	Schools; Private
White Bear Lake Armory	White Bear Lake	2228 4th Street	\$651,400.0 0	Government Center
White Bear Lake Fire Department - Station #1 & City Hall	White Bear Lake	4701 Highway 61	\$5,257,400 .00	Fire Department
White Bear Lake Fire	White Bear Lake	3595 McKnight Road	\$771,900.0 0	Fire Department

## TECHNOLOGICAL HAZARDS

Department - Station #2				
White Bear Lake Parks - Bossard Park	White Bear Lake	3725 Prairie Road	\$4,227,300 .00	City Park
White Bear Lake Parks - Ebba Park	White Bear Lake	3450 Ebba Street	\$358,600.0 0	City Park
White Bear Lake Parks - Hidden Hollow Park	White Bear Lake	4150 Myrle Avenue	\$2,459,100 .00	City Park
White Bear Lake Parks - Lakewood Hills Park	White Bear Lake	2110 Orchard Lane	\$10,617,50 0.00	City Park
White Bear Lake Parks - Lions Park	White Bear Lake	4410 Lake Avenue S	\$1,745,600 .00	City Park
White Bear Lake Parks - Matoska Park	White Bear Lake	4810 Lake Avenue N	\$3,128,900 .00	City Park
White Bear Lake Parks - McCarty Park	White Bear Lake	1799 Elm Street	\$638,100.0 0	City Park
White Bear Lake Parks - Memorial Park/Beach & West Park	White Bear Lake	4980 Lake Avenue N	\$816,900.0 0	City Park
White Bear Lake Parks - Podvin Park	White Bear Lake	1700 9th Street	\$4,856,800 .00	City Park
White Bear Lake Parks - Railroad Park	White Bear Lake	4752 Highway 61	\$192,300.0 0	City Park
White Bear Lake Parks - Ramaley Park	White Bear Lake	1883 Park Street	\$748,800.0 0	City Park
White Bear Lake Parks - Rotary Nature Preserve	White Bear Lake	4840 White Bear Parkway	\$6,574,400 .00	City Park

## TECHNOLOGICAL HAZARDS

White Bear Lake Parks - Spruce Park	White Bear Lake	3653 McKnight Road	\$547,800.00	City Park
White Bear Lake Parks - Stellmacher Park	White Bear Lake	3930 Linden Street	\$2,429,800.00	City Park
White Bear Lake Parks - Varney Lake Park	White Bear Lake	2051 Orchard Lane	\$14,400.00	City Park
White Bear Lake Parks - Babe Ruth Baseball Park	White Bear Lake	1705 9th Street	\$2,267,500.00	City Park
White Bear Lake Parks - Willow Marsh Reserve	White Bear Lake	1710 Fair Oaks	\$2,223,800.00	City Park
White Bear Lake Parks - Yost Park	White Bear Lake	1856 Florence Street	\$753,300.00	City Park
White Bear Lake Public Works	White Bear Lake	3950 Hoffman Road	\$4,254,700.00	City Public Works
White Bear Lake Sports Center	White Bear Lake	1328 Highway 96 E	\$7,893,200.00	City Park
White Bear Lake - Water Treatment Plant	White Bear Lake	2393 Orchard Lane	Washington	Water Treatment
RCWD - Ramsey County Ditch 11	White Bear Lake	See Shapefile	Washington	See Shapefile
Aspen Medical Group-White Bear Lake (Allina)	White Bear Lake	2555 County Road E E	\$243,000.00	Health Practitioner (Physician, Dentist)
Associates in Newborn Medicine	White Bear Lake	4770 White Bear Pkwy	\$550,000.00	Health Practitioner (Physician, Dentist)
HealthPartners White Bear Lake Clinic	White Bear Lake	1430 Highway 96 E	\$4,089,000.00	Health Practitioner (Physician, Dentist)

## TECHNOLOGICAL HAZARDS

SYMPHONY SENIOR SERVICES INC	White Bear Lake	4711 CLARK AVENUE	\$1,008,700 .00	HEALTHCARE FACILITY
WHITE BEAR HEIGHTS	White Bear Lake	4650 CENTERVILLE ROAD	\$11,007,00 0.00	HEALTHCARE FACILITY
Ramsey County Parks - Poplar Lake County Park	White Bear Township	5900 Sherwood Road	\$21,032,60 0.00	County Parks
Ramsey County Parks - Tamarack Nature Center	White Bear Township	5287 Otter Lake Road	\$22,707,00 0.00	County Parks
White Bear Township City Hall & Public Works	White Bear Township	1281 Hammond Road	\$2,229,600 .00	Government Center
White Bear Township Parks - Anderson Park	White Bear Township	1188 Anderson Lane	\$52,000.00	City Park
White Bear Township Parks - Apple Tree Park	White Bear Township	4399 Oakmede Lane	\$251,900.0 0	City Park
White Bear Township Parks - Bellaire Beach	White Bear Township	2499 South Shore Boulevard	\$778,100.0 0	City Park
White Bear Township Parks - Bellaire Park	White Bear Township	2560 County Road F	\$2,328,600 .00	City Park
White Bear Township Parks - Birch Park	White Bear Township	2150 Overlake Avenue	\$84,000.00	City Park
White Bear Township Parks - Brandlwood Park	White Bear Township	5801 Meadowview Drive	\$3,613,400 .00	City Park
White Bear Township Parks - Columbia Park	White Bear Township	1759 Highway 96 E	\$2,900,600 .00	City Park
White Bear Township Parks - Deer Meadow Park	White Bear Township	2625 Parkview Drive	\$6,968,100 .00	City Park

## TECHNOLOGICAL HAZARDS

White Bear Township Parks - Eagle Park	White Bear Township	5485 Township Drive	\$559,000.00	City Park
White Bear Township Parks - Four Seasons Park	White Bear Township	5287 Hugo Road	\$1,640,800.00	City Park
White Bear Township Parks - Fox Meadow Park	White Bear Township	4230 White Bear Parkway	\$917,200.00	City Park
White Bear Township Parks - Garden Creek Park	White Bear Township	5383 Portland Avenue	\$112,000.00	City Park
White Bear Township Parks - Glider Park	White Bear Township	2626 Suzanne Circle	\$154,600.00	City Park
White Bear Township Parks - Longville Park	White Bear Township	5300 Portland Avenue	\$514,000.00	City Park
White Bear Township Parks - Manor Park & Pump House #1	White Bear Township	2569 Stacker Boulevard	\$62,400.00	City Park
White Bear Township Parks - Mead Park & Pump House #4	White Bear Township	5130 Dillon Street	\$1,110,800.00	City Park
White Bear Township Parks - Meadowlands Park	White Bear Township	4600 Stoddart Circle	\$3,695,300.00	City Park
White Bear Township Parks - Moon Lake Park	White Bear Township	4701 Greenhaven Drive	\$422,000.00	City Park
White Bear Township Parks - Otter Park	White Bear Township	5868 Otterview Trail	\$272,200.00	City Park
White Bear Township Parks - Polar Lakes Park	White Bear Township	1280 Hammond Road	\$7,423,800.00	City Park

## TECHNOLOGICAL HAZARDS

White Bear Township Parks - Red Pine Park	White Bear Township	5860 Red Pine Boulevard	\$1,735,900.00	City Park
White Bear Township Parks - Rutherford Park	White Bear Township	2673 Lake Avenue	\$973,300.00	City Park
White Bear Township Parks - Sandterra Park	White Bear Township	5891 Pintail Lane	\$123,600.00	City Park
White Bear Township Parks - Walhof Park	White Bear Township	5335 Reed Place	\$102,400.00	City Park
White Bear Township Pump House #2A	White Bear Township	4099 Bellaire Avenue	unknown	Treated Water Distribution Control
White Bear Township Pump House #3	White Bear Township	2230 Park Avenue	unknown	Treated Water Distribution Control
White Bear Township Pump House #5	White Bear Township	4295 Otter Lake Road	unknown	Treated Water Distribution Control
White Bear Township Pump House #6	White Bear Township	2525 Buffalo Street	unknown	Treated Water Distribution Control
White Bear Township Sanitary Sewer Lift Station #1	White Bear Township	2701 County Road F	unknown	Wastewater Collection Systems (Sewers)
White Bear Township Sanitary Sewer Lift Station #10	White Bear Township	2545 Buffalo Street	unknown	Wastewater Collection Systems (Sewers)
White Bear Township Sanitary Sewer Lift Station #2	White Bear Township	2629 South Shore Boulevard	unknown	Wastewater Collection Systems (Sewers)
White Bear Township Sanitary Sewer Lift Station #3	White Bear Township	5520 Bald Eagle Boulevard W	unknown	Wastewater Collection Systems (Sewers)
White Bear Township Sanitary Sewer Lift Station #4	White Bear Township	5675 Hugo Road	unknown	Wastewater Collection Systems (Sewers)

## TECHNOLOGICAL HAZARDS

White Bear Township Sanitary Sewer Lift Station #5	White Bear Township	1375 County Road H2	unknown	Wastewater Collection Systems (Sewers)
White Bear Township Sanitary Sewer Lift Station #6	White Bear Township	5563 Otter View Trail	unknown	Wastewater Collection Systems (Sewers)
White Bear Township Sanitary Sewer Lift Station #7	White Bear Township	5937 Otter View Trail	unknown	Wastewater Collection Systems (Sewers)
White Bear Township Sanitary Sewer Lift Station #8	White Bear Township	1230 Bibeau Road	unknown	Wastewater Collection Systems (Sewers)
White Bear Township Sanitary Sewer Lift Station #9	White Bear Township	4351 Otter Lake Road	unknown	Wastewater Collection Systems (Sewers)
White Bear Township Water Tower #1 (South Tower)	White Bear Township	3955 Effress Road	unknown	Treated (Finished) Water Storage (Reservoirs)
White Bear Township Water Tower #2 (Hammond Tower)	White Bear Township	1283 Hammond Road	unknown	Treated (Finished) Water Storage (Reservoirs)
White Bear Township Water Tower #3 (Northeast Tower)	White Bear Township	5858 Highway 61 N	unknown	Treated (Finished) Water Storage (Reservoirs)
		Total	\$4,602,067,500.00	

### Damage Assessment

Ramsey County has recorded instances of critical facilities and/or other property being damaged because of natural events such as wind and rain. Recently, in April 2018 the roof collapsed of the Ramsey County owned Vadnais Sports Center due to large quantities of snow total cost of repair was \$4,602,067,500.00.

**Land Use and Development Trends**

Future development throughout the County will take into consideration possible all-hazard events.

**Vulnerability**

**Critical Facilities and Infrastructure**

Frequency of Occurrence	Occasionally
Warning Time	None – More than 12 hours
Geographic Extent	Localized to County-wide
Potential Impact	Negligible to Major

**Multijurisdictional Concerns**

All of the County is subject to events and therefore should be included in any prospective mitigation projects.

**Hazard Summary**

Critical facilities in Ramsey County are susceptible to all hazards, including but not limited to flood; wildfires; severe weather including tornadoes; terrorism; and energy shortages. The destruction of critical facilities or outage of infrastructure can affect the entire community for a long period amount of time. Mitigating against their loss is of the utmost importance for the continuing operational ability of the County.

**Civil Disturbance**

**Hazard Identification**

Any incident that disrupts a community where intervention is required to maintain public safety is a civil disturbance. Examples include rallies, demonstrations, riots, strikes, public nuisances, and criminal activities.

**Hazard Profile**

Ramsey County includes the urban area of St. Paul. History shows that civil disturbances most often take place in cities and are the result of socio-political issues or even the result of sporting events. There are several large sporting arenas in the Twin Cities area and a win or significant loss may provide motivation for a civil disturbance in the area. In the past, the County has experienced civil disturbances during protests in the 1960s as well as during the 2008 Republican National Convention, and most recently July 2016 several hundred protesters marched onto Interstate 94, shutting down the main highway for several hours and targeted officers with fireworks and bricks.

**Assets Exposed to Hazard**

All assets within the County are susceptible to being affected by a civil disturbance.

**Damage Assessment**

There are no recorded instances of damage to facilities because of civil disturbance.

**Land Use and Development Trends**

There are no land use and development trends related to civil disturbance.

**Vulnerability**

**Civil Disturbance**

Frequency of Occurrence	Occasionally
Warning Time	More than 12 hours
Geographic Extent	Localized
Potential Impact	Negligible to Moderate

**Multijurisdictional Concerns**

All of the County is subject to events and therefore should be included in any prospective mitigation projects.

**Hazard Summary**

In the last three years Ramsey County mobile field force has been called out 35 times to situations where law enforcement intervention was needed. With several sporting arenas and the many socio-political demonstrations that may occur, the potential for a civil disturbance is high.

### **Drinking Water Contamination**

#### **Hazard Identification**

Any incident that disrupts a community's water system through introduction of point or non-point source contaminants into the public groundwater or surface water supplies, treatment plants, storage tanks, or distribution systems.

#### **Hazard Profile**

Threats to Ramsey County's drinking water systems are increased as the population increases, new contaminants of concern are identified, and aging infrastructure needs repair or replacement.

**Lead:** water systems throughout Ramsey County continually work to minimize lead exposure in drinking water. The city of New Brighton had a lead action level exceedance in May 2018, when the city was purchasing water from Minneapolis while the city's treatment plant was under renovation to reduce concentrations of 1,4-dioxane from the Twin Cities Army Ammunition Plant (TCAAP) plume. Residents in any community can help to reduce their exposure by using cold water only, running their tap prior to use for 3-5 minutes if they have a lead service line (30-60 seconds if they don't), identifying and removing lead from home plumbing or service lines, and/or using a filter prior to use.

**TCAAP Plume:** New Brighton and Saint Anthony Village are served by wells that are affected by the TCAAP groundwater plume, and treatment is provided to remove Trichloroethylene (TCE) and 1,4-dioxane.

**Contaminants of Emerging Concern (CECs):** Regular monitoring is done to insure drinking water meets federal SDWA water quality standards, but as analytical methods improve, and/or new health information is available, there will be other contaminants of concern.

**Infrastructure:** Most of the water system infrastructure in Ramsey County was initially constructed at the same time development occurred (late 1800s-1980s). Water system Capital Improvement Programs include water main replacements, storage rehabilitations, treatment plant updates, and telemetry improvements. Maintaining infrastructure is key to preventing water main breaks, low pressure incidents, storage deficiencies, chemical feed problems, and other emergencies.

**Drinking Water Advisories (Boil Water, Do Not Drink, or Do Not Use):** community public water systems issue a drinking water advisory when there may be a risk of contamination. Blaine issued Boil Water Advisories in January and February 2017, resulting from loss of pressure due to telemetry problems between water storage and supply. The city acted quickly in notifying residents and businesses, and they've shared their experience with other cities, resulting in others reviewing and updating their own telemetry systems.

**Disinfection:** There are a few large cities in Minnesota that do not have permanent disinfection. It's recommended that cities with relatively large distribution systems regularly review the addition of disinfection to prevent coliform detects (acute) versus the risk (chronic) associated with Disinfection By-Products.

**Assets Exposed to Hazard**

All assets within the County can be susceptible to being part of a water contamination incident (emergency or on-going). These assets include, but are not limited to, city wells and surface water intakes, elevated and ground storage, treatment plants, water mains, and telemetry systems.

**Damage Assessment**

There are no reports of increased contamination levels in Ramsey County, and the number of Drinking Water Advisories, water quality exceedances, and infrastructure deficiencies have not increased.

**Land Use and Development Trends**

Saint Paul Regional Water Services and the cities they serve use surface water and ground water as sources, while the other cities in Ramsey County use ground water. Large-scale water supply systems tend to rely on surface water resources such as rivers, lakes, and reservoirs. Smaller systems tend to use ground water pumped from wells that are drilled into aquifers, geologic formations that contain water. Conservation by consumers (water efficient washing machines, low flow toilets, smart irrigation controls, etc.) may balance the increased demands from new development and land uses, with most cities in Ramsey County beginning to see some reductions in demand.

**Vulnerability**

Water Contamination	
Frequency of Occurrence	Occasionally
Warning Time	Less than 1 hour from detection (email notice)
Geographic Extent	Localized
Potential Impact	Negligible to Moderate

**Multijurisdictional Concerns**

All of the County is subject to incidents and therefore should be included in any prospective mitigation projects. Lead is an issue that affects all consumers (there is no safe level), and treatment options for lead can be done by individual residents: corrosion control and piping upgrades, automatic resin based System with special medium for lead reduction, reverse osmosis- point of use only (small volumes), distillation unit- point of use only (small volumes), carbon block filtration, or whole house multiple barrier filtration.

**Hazard Summary**

There are no reports of drinking water contamination in Ramsey County that have resulted in reported or confirmed illnesses.

**Cyber Attack**

**Hazard Identification**

Cyber-attack is defined as malicious attempts to damage, disrupt or gain unauthorized access to computer systems, networks or devices. Risks and vulnerabilities facing Ramsey County and critical infrastructure is high and may impact its communities, businesses, and residents.

**Hazard Profile**

Within Ramsey County, threats to government systems through cyberspace, or cyber-attacks, pose one of the most serious economic and national security challenges of the 21<sup>st</sup> Century. According to statistics provided by MN I.T. (Minnesota Information Technology) in which Ramsey County network infrastructure uses internet services showed the state network obtained over 100,000 attempts to gain unauthorized access to the firewall in a six-minute period.

**Assets Exposed to Hazard**

1. Sophisticated phishing of users leading to loss of credentials and breach of county data.
2. Unpatched software leads to vulnerabilities in the network.
3. Unclassified data being stored across the network. The top 2 exploits can be used to infiltrate this data.
4. Ramsey County is not in compliance with cyber security requirements.

**Damage Assessment**

Ramsey County IS security determined on August 9, 2018 the county network received a cyberattack which compromised about 30 employee email accounts of some 4,000-total staff at Ramsey County.

**Land Use and Development Trends**

There are no land use and development trends related to cyber-attack.

**Vulnerability**

**Cyber Attack**

Frequency of Occurrence	Occasionally
Warning Time	More than 12 hours
Geographic Extent	Localized
Potential Impact	High

**Multijurisdictional Concerns**

All of Ramsey County is subject to cyber-attack events and should be included in any projects to improve or mitigate against network intrusion.

### **Hazard Summary**

Within Ramsey County, threats to government systems through cyberspace, or cyber-attacks, pose one of the most serious economic and national security challenges of our time. There is a high probability Ramsey County will face cyber-attack each day.

### **Invasive Species**

#### **Hazard Identification**

Invasive species are plants and animals that are not native to our region and may grow aggressively, eventually changing the local habitat. The control of invasive species is difficult and expensive. They can cause economic or environmental harm. The changes to our habitat created by invasive species (disruptions to shade or tree canopy, for example) may have a significant impact on human health.

#### **Hazard Profile**

Within Ramsey County, there are terrestrial (land) invasive species and aquatic (water) invasive species. In 2018, the primary land invasive species include European Buckthorn, Glossy Buckthorn, Garlic Mustard, Reed Canary grass, purple loosestrife, leafy spurge, spotted knapweed, smooth brome, and earthworms (for additional updates, see [www.eddmaps.org/midwest/](http://www.eddmaps.org/midwest/)).

The main water invasive species are zebra mussels and Eurasian water milfoil (see the Minnesota Aquatic Invasive Species Research Center for updates). These invasive species cause undesirable effects on native plants, native animals, ecological processes, critical infrastructure, and our local economy (as they may prevent people's use and enjoyment of lakes, including fishing). Controlling these species varies, from mechanical and chemical techniques to biological suppression. Ramsey County works with the Department of Natural Resources (DNR) to track and develop programs to minimize the impacts of invasive species.

#### **Assets Exposed to Hazard**

The impacts of invasive species within Ramsey County are mainly localized to parks and natural areas, including public and private land, as well as lakes, rivers, streams, and other bodies of water.

#### **Damage Assessment**

There are no recorded instances of damage to Ramsey County facilities as an immediate result of invasive species. However, there is quite a bit of documentation around the long-term damage that some invasive species, such as zebra mussels, may pose to water treatment facilities and other infrastructure.

#### **Land Use and Development Trends**

There are no land use and development trends related to invasive species.

#### **Vulnerability**

**Invasive Species**

Frequency of Occurrence	Often
Warning Time	More than 12 hours
Geographic Extent	Localized
Potential Impact	Negligible to Moderate

**Multijurisdictional Concerns**

Impacts of invasive species within Ramsey County are mainly localized to parks and wooded areas as well as lakes, rivers, streams, and other bodies of water, but effects could continue to expand if not mitigated.

**Hazard Summary**

There are a variety of invasive species that have been identified in Ramsey County and the State of Minnesota. The county and state engage in programs and activities to reduce the spread and impact of these invasive species. Ramsey County has a Cooperative Weed Management Area and coordinates these efforts with other partners across the state.