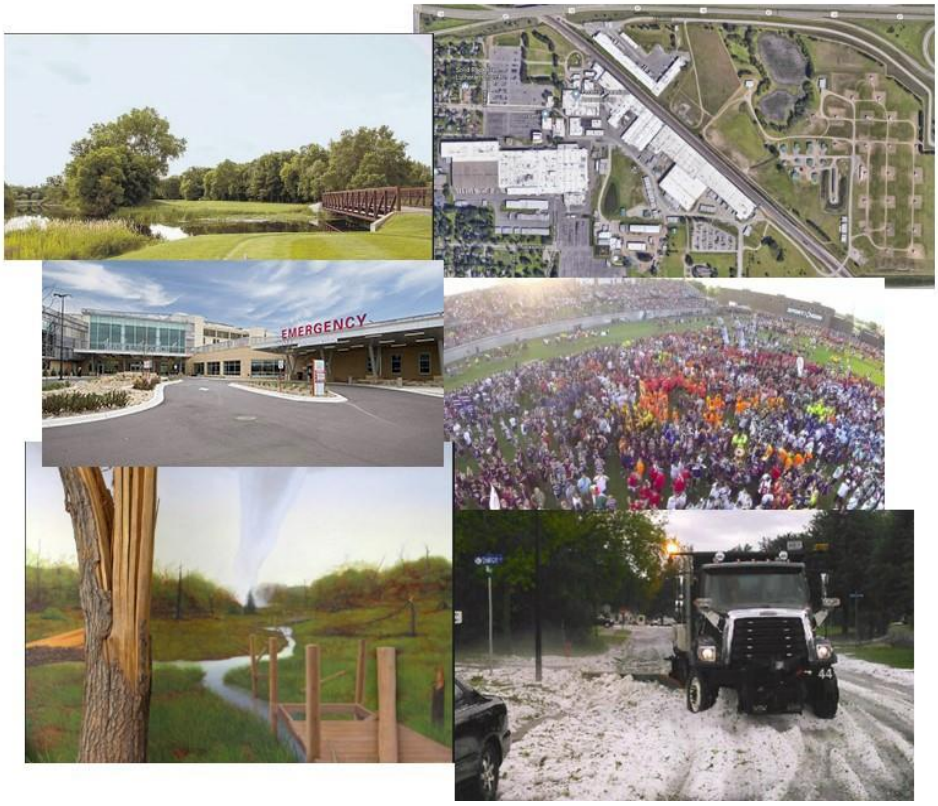
Anoka County 2019
Multi-Jurisdictional
All Hazards Mitigation Plan



Anoka County
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Anoka County 2019
Multi-Jurisdictional
All Hazards Mitigation Plan

Plan
Approved
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Version 1.0
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SECTION 1: PLAN INTRODUCTION

This section provides a general introduction to the Anoka County Multi-Jurisdictional All Hazards Mitigation Plan. It consists of the following:

- Overview
- Emergency Management Background
- Hazard Mitigation Legislative Background
- Plan Purpose
- Plan Scope
- Plan Authority
- Plan Outline

1.1 Overview

Anoka County has and may in the future experience a variety of natural and manmade hazards that cause loss of life and damage to property. Anoka County Emergency Management has prepared a countywide hazard mitigation plan that re-shapes Anoka County and local communities into a more resilient framework, enabling it to recover more quickly and easily from disasters. Using this plan, Anoka County and the local jurisdictions will decrease the community's vulnerability to disasters and enhance response to disasters and public threats.

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

Natural and manmade hazards pose a threat to every citizen and community within Anoka County on some level and frequency. Often, the reality of potential hazards to a community are not fully understood or realized until a major disaster occurs. It is then that a community experiences the extreme hardship of significant human and economic losses. The process of all-hazard mitigation planning is the first step toward protecting a community from losses associated with hazards and resulting disasters. The Federal Emergency Management Agency (FEMA) regarding hazard mitigation planning provides the following definitions:

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

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

The process of hazard mitigation planning is a critical part of any community's planning program. Because most hazards occur infrequently, mitigation programs for hazards are usually initiated and funded as a reaction to recover from the most recent disaster event. This form of hazard mitigation response is typically costlier, both in property and human losses, on a long-term basis, than is pre-disaster planning and mitigation.

1.2 Emergency Management Background

Commented [REK1]: Reviewed and updated 02-07-19

Over the past fifty years, the meaning and scope of homeland security and emergency management has significantly evolved in response to changes in political, military, and natural environments. Emergency management has grown from a narrow civil defense focus, to its present position of providing a wide array of services in response to natural and manmade hazards, including aspects of homeland security. This evolution has resulted in a shift from federal based initiatives to one of fostering both local and state developed and delivered programs. Within this framework, local emergency management organizations work to implement local, state, and federal emergency management and homeland security policy. By working collaboratively with governmental agencies, private industry, and citizens, and by providing technical assistance and support, local emergency management organizations are expanding capabilities to contribute a broad spectrum of professional services.

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

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

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

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

In the 1990s, federal, state, and local governments recognized the increasing threat of terrorism. Domestic and foreign events, including the bombing of the New York World Trade Center in February 1993; the April 1995 bombing of the Alfred P. Murrah Federal Building in Oklahoma City; the bombing of the Khobar Towers in Saudi Arabia in June 1996; the bombing of the U.S.S. Cole in Yemen in October 2000; terrorist attacks on September 2001; and the Boston Marathon bombing in 2013 demonstrated terrorists' willingness to use weapons of mass destruction. Federal agencies began to examine the causes and effects of these events, to shape U.S. policy, and fund domestic anti-terrorism preparedness activities.

The September 11, 2001 terrorist attacks on the New York World Trade Center and the Pentagon was a defining moment in the war on terrorism. The restructuring of domestic and foreign policy, and the development of nationwide initiatives to detect and prevent terrorist attacks and protect national critical infrastructure and systems witness this. At the federal level, anti-terrorism activities resulted in the creation of the Department of Homeland Security. The Department of Homeland Security continues delivering guidance, technical support, and funding for all aspects of threats and hazards in our communities.

Commented [RK2]: Current as of 2019

Four phases of Emergency Management

1.3 Hazard Mitigation Legislative Background

Commented [REK3]: Reviewed and updated 02-07-19

Disaster Mitigation Act of 2000: In support of the expanded role of emergency management, Congress approved the Disaster Mitigation Act of 2000, (DMA2K), commonly known as the 2000 Stafford Act. Section 322 is the amendment to the Stafford Act that primarily deals with the development of local hazard mitigation plans. The DMA2K legislation was signed into law on October 30, 2000 (Public Law 106-390). The Interim Final Rule for planning provisions (implemented at 44 CFR Part 201) was initially published in the Federal Register in February 2002 and several additional Interim Final Rules have been published since 2002. Local hazard mitigation planning requirements are implemented in 44 CFR Part 201.6. The purpose of DMA2K, and it's continued amendments, are to amend the Stafford Act to establish a national program for pre-disaster mitigation, streamline administration of disaster relief at both the federal and state level, and control federal costs of disaster assistance. Congress envisioned that implementation of these new requirements would result in the following key benefits:

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

effective hazard mitigation measures, leveraging additional non-federal resources, and establishing commitments to long-term hazard mitigation efforts.

The DMA2K legislation requires all local, county and tribal governments to develop a hazard mitigation plan for their respective communities to be eligible to receive Hazard Mitigation Grant Program (HMGP) funds. DMA2K requires that each plan must, at minimum, address or include the following general items:

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

Hazard Mitigation Grant Program: In 1988, Congress established the Hazard Mitigation Grant Program (HMGP) by enactment of Section 404 of the Stafford Act. In 2002, regulations pertaining to the HMGP to reflect the Disaster Mitigation Act of 2000 were changed by 44 CFR Part 206, Subpart N. An Interim Final Rule was issued in October 2002, wherein the final compliance date was revised from November 1, 2003 to November 1, 2004. The HMGP continues to be updated with the most recent changes occurring in September 2009. The HMGP assists states and local communities in implementing long-term hazard mitigation measures by providing federal funding following a major disaster declaration. Eligible applicants include state and local agencies, tribal organizations, and certain non-profit organizations. Examples of typical HMGP eligible projects include:

- Property acquisition and relocation projects.
- Structural retrofitting to minimize damages from high winds, earthquake, flood, wildfire, or other natural hazards.
- Elevation of flood-prone structures.
- Vegetative management programs.
- Minor flood control projects that do not duplicate the flood prevention activities of other Federal agencies.
- Localized flood control projects, such as certain ring levees and floodwall systems, that are designed specifically to protect critical facilities.
- Post-disaster building code related activities that support building code officials during the reconstruction process
- Purchasing of land for the development and construct tornado-safe shelters

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

- Planning Grants - allocated funds to be used for hazard mitigation plan development.
- Competitive Grants - distributed funds using a competitive application process wherein all state, local, and tribal governments interested in obtaining grant funds can submit applications to be reviewed and ranked by FEMA using pre-determined criteria.

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

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

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

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

There are three types of grants available under FMA:

- FMA Planning Grants are available to states and communities to prepare Flood Mitigation Plans. NFIP-participating communities with approved Flood Mitigation Plans can apply for FMA Project Grants.
- FMA Project Grants are available to states and NFIP participating communities to implement measures to reduce flood losses. Ten percent of the Project Grant is made available to states.
- Technical Assistance Grants are a part of Project Grants. A percentage of the Project Grants funding is made available to the states for technical assistance. These funds may be used by the state to help administer the program.

Eligible communities may apply for an FMA planning grant. The NFIRA stipulates that to be eligible to receive an FMA grant, a community must have a FEMA-approved mitigation plan and must be participating in the NFIP. Examples of eligible FMA projects include:

- Acquisition of NFIP-insured structures and underlying real property.
- Demolition of NFIP-insured structures on acquired or restricted real property.
- Minor physical flood mitigation projects that do not duplicate the flood-prevention activities of other federal agencies, that lessen the frequency or severity of flooding, and decrease predicted flood damages in local flood areas. These include modification of existing culverts and bridges, installation or modification of floodgates, stabilization of stream banks, and creation of small debris or flood/storm water retention basins in small watersheds. Construction or improvement of major structural flood-control structures such as dikes, levees, dams, seawalls, groins, and jetties, and projects consisting of channel widening or stream alignment are not eligible, as indicated in Section 1366.
- Other activities that bring an NFIP-insured structure into compliance with the authorized statutory floodplain management requirements of 44 CFR Part 60.3.
- Relocation of NFIP-insured structures from acquired or restricted real property to sites not prone to flood hazards.
- Elevation of NFIP-insured residential structures, and elevation or dry flood proofing of NFIP-insured non-residential structures, in accordance with 44 CFR Part 60.3.

1.4 Plan Purpose

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The key purposes of this plan are:

- To involve members of the county, cities, township, public, private, and other agencies to draft and adopt an action plan that serves as the blueprint for future development and preparedness activities across the county.

Commented [RK5]: Updated to reflect 1 township

- To identify the possible risks and hazards that may affect Anoka County through systematic hazard identification and risk assessment process.
- To prioritize loss reduction and emergency preparedness activities for disasters.
- To determine areas within Anoka County that may be vulnerable to various hazards.
- To develop strategies and the best practices to avoid and mitigate the impact of hazards.

1.5 Plan Scope

Commented [REK6]: Reviewed and updated 02-07-19

This Hazard Mitigation Plan will be updated and maintained by Anoka County Emergency Management to continually address hazards determined to be of high and moderate risk through the detailed vulnerability assessment for Anoka County. Other hazards that pose a low or negligible risk will continue to be evaluated for future updates to the Plan, but they may not

be fully addressed until they are determined to be of high or moderate risk. The geographic scope (i.e., the planning area) for the Plan includes all incorporated and unincorporated areas of Anoka County. This includes the following 22 governmental jurisdictions:

Anoka County	City of East Bethel
City of Andover	City of Fridley
City of Anoka	City of Ham Lake
City of Bethel	City of Hilltop
City of Blaine	City of Lexington
City of Nowthen	City of Lino lakes
City of Centerville	Township of Linwood
City of Circle Pines	City of Oak Grove
City of Columbia Heights	City of Ramsey
City of Columbus	City of St. Francis
City of Coon Rapids	City of Spring Lake Park

1.6 Plan Authority

This Hazard Mitigation Plan has been adopted by Anoka County and its incorporated municipal jurisdictions in accordance with the authority and powers granted to counties, cities and towns as defined by the State of Minnesota. Copies of all local resolutions to adopt the Plan are included in the Resolutions and Adoption Section.

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

- Section 322, Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as enacted by Section 104 of the Disaster Mitigation Act of 2000 (P.L. 106-390); and
- FEMA's Interim Final Rule published in the Federal Register on February 26, 2002, at 44 CFR Part 201.

1.7 Plan Outline

Commented [REK7]: Reviewed and updated 02-07-19

Section 1: Introduction provides the overview scope and purpose of the Plan and planning process.

Section 2: Planning Process describes the process used to develop the Anoka County Multi-Jurisdictional All Hazards Mitigation Plan. The description provides a general overview of local hazard mitigation planning as well as the specific procedures used by Anoka County to prepare its Plan. It includes a description of who was involved as members of the planning team and documents the outcomes of meetings. It also demonstrates the opportunities for the public and other stakeholders to participate in the plan development process.

Section 3: Community Profile describes the general makeup of Anoka County and its local jurisdictions, including prevalent geographic, demographic, and economic characteristics.

Building characteristics and land use patterns are presented along with some general historical disaster data. This baseline information provides a snapshot of the countywide planning area and thereby assists Anoka County in recognizing those social, environmental, and economic factors that ultimately play a role in determining community vulnerability to hazards.

Section 4: Hazard Assessment is made up of three subsections: Hazard Identification, Hazard Analysis, and Hazard Vulnerability. Together, these sections serve to identify, analyze, and assess Anoka County's overall risk to hazards. The risk assessment also defines any hazard risks that may uniquely or exclusively affect the individual municipal jurisdictions. The risk assessment builds on available historical data from past hazard occurrences, establishes hazard-by-hazard profiles, and culminates in a hazard risk ranking based on conclusions about the frequency of occurrence, spatial extent, and potential impact of each hazard. FEMA's HAZUS®MR loss estimation methodology was also used in evaluating some known hazard risks by their relative long-term cost in expected damages. The information generated through the risk assessment serves a critical function. As communities seek to determine the most appropriate mitigation actions to pursue and implement, this information enables communities to prioritize and focus their efforts on those hazards of greatest concern and those structures or areas facing the greatest risk.

Commented [RK8]: Review use or options for loss calculations for 2024 update

Section 5: Capabilities, Mitigation, and Maintenance provides' a comprehensive examination of Anoka County and the participating local jurisdictions' capacity to implement meaningful mitigation strategies, identifies existing opportunities to increase and enhance that capability, and details procedures for maintenance and evaluation of the Hazard Mitigation Plan.

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

Mitigation Strategy is made up of two subsections: Mitigation Strategic Goals and Mitigation Actions. Strategic Goals consists of broad, countywide goal statements for each local jurisdiction participating in the planning process to strive for in achieving, as well as a general description of the mitigation tools and techniques available for further consideration. The strategy provides the foundation for identifying and prioritizing mitigation actions. Mitigation Actions are action plans specific to each local jurisdiction, and link proposed mitigation actions for each to locally assigned implementation mechanisms and target implementation dates. This section is designed to make the Plan both strategic, through the identification of long-term goals, and functional, through the identification of short-term and immediate actions that will guide day-to-day decision-making and project implementation.

Plan Maintenance includes the measures Anoka County and its municipal jurisdictions will take to ensure the Plan's continuous long-term implementation. The procedures also include the way the Plan will be regularly evaluated and updated to remain a current and meaningful planning document.

During this plan review process, each jurisdiction actively participated in reviewing and updating the relevant sections for their jurisdiction. The document below demonstrates how the sections of the plan were divided and each jurisdiction's individual contribution to the updated County Wide Hazard Mitigation Plan.

Commented [RK9]: Update Sheet for 2019

Anoka County Hazard Mitigation Plan Tracking

	Hazard Mitigation Plan Contact	Jurisdiction Hazard Mitigation files E-mailed	Hazard Mitigation Plan Statement of Interest received	Descriptions Reviewed and Updated	Reminder E-mail Deadline 03/01/19 sent	Telphone Call or E-mail Reminder	STAPLEE documens sent	Hazard Mitigation Goals Returned	STAPLEE Results Returned	Detailed Capability Survey Sent	Detailed Capability Returned	Complete Adoption Resolution
Anoka County	NA	X	X	X	X	X	X	X	X	X	X	
Anoka County Econ Dvlp	X	X	NA	X	X	X	X	X	X	X	X	NA
Anoka County Emer Mgmt	X	X	NA	X	X	X	X	X	X	X	X	NA
Anoka County Pub Health	X	X	NA	X	X	X	X	X	X	X	X	NA
City of Andover	X	X	X	X	X	X	X	X	X	X	X	
City of Anoka	X	X	X	X	X	X	X	X	X	X	X	
City of Bethel	X	X	X	X	X	X	X	X	X	X	X	
City of Blaine	X	X	X	X	X	X	X	X	X	X	X	
City of Centerville	X	X	X	X	X	X	X	X	X	X	X	
City of Circle Pines	X	X		X	X	X	X	X	X	X	X	
City of Columbia Heights	X	X	X	X	X	X	X	X	X	X	X	
City of Columbus	X	X	X	X	X	X	X	X	X	X	X	
City of Coon Rapids	X	X	X	X	X	X	X	X	X	X	X	
City of East Bethel	X	X		X	X	X	X	X	X	X	X	
City of Fridley	X	X	X	X	X	X	X	X	X	X	X	
City of Ham Lake	X	X	X	X	X	X	X	X	X	X	X	
City of Hilltop	X	X		X	X	X	X	X	X	X	X	
City of Lexington	X	X	X	X	X	X	X	X	X	X	X	
City of Lino lakes	X	X	X	X	X	X	X	X	X	X	X	
City of Nowthen	X	X	4/1/19	X	X	X	X	X	X	X	X	
City of Oak Grove	X	X		X	X	X	X	X	X	X	X	
City of Ramsey	X	X		X	X	X	X	X	X	X	X	
City of Spring Lake Park	X	X	X	X	X	X	X	X	X	X	X	
City of St. Francis	X	X	X	X	X	X	X	X	X	X	X	
Township of Linwood	X	X	X	X	X	X	X	X	X	X	X	

SECTION 2: PLANNING PROCESS

This section of the Plan describes the mitigation planning process undertaken by Anoka County in preparation of the Hazard Mitigation Plan. It consists of eight subsections:

- Overview of Hazard Mitigation Planning
- Preparing the Plan
- The Planning Team
- Community Meetings and Workshops
- Involving the Public
- Involving Stakeholders
- Multi-Jurisdictional Participation
- Review and Incorporation of Existing Plans

2.1 Overview of Hazard Mitigation Planning

Commented [REK10]: Reviewed and updated 02-07-19

Local hazard mitigation planning is the process of organizing community resources, identifying and assessing hazard risks, and determining how to best minimize or manage those risks. This process results in a hazard mitigation plan that identifies specific mitigation actions, each designed to achieve both short-term planning objectives and a long-term community vision. To ensure the functionality of each mitigation action, responsibility is assigned to a specific individual, department, or agency, along with a schedule for action implementation. Plan maintenance procedures are established for the monitoring of implementation progress, and the evaluation and enhancement of the mitigation plan. These plan maintenance procedures ensure that Anoka County's Hazard Mitigation Plan remains a current, dynamic, and effective planning document over time. Mitigation planning offers many benefits, including:

- Preventing loss of life and property;
- Promoting fiscal responsibility and cost savings;
- Facilitate recovery following disasters;
- Reducing future vulnerability through wise development and post-disaster recovery and reconstruction;
- Expediting the receipt of pre- and post-disaster grant funding; and
- Demonstrating a commitment to improve community health and safety.

Commented [RK11]: Updated language - 2019

Typically, mitigation planning has the potential to produce long-term and recurring benefits by breaking the repetitive cycle of disaster loss. A core assumption of hazard mitigation is that pre-disaster investments will significantly reduce the demand for post-disaster assistance by lessening the need for emergency response, repair, recovery, and reconstruction. Mitigation practices will enable residents, businesses, and industries to recover in the wake of a disaster to ensure the community economy is re-established quicker and with less interruption.

The benefits of mitigation planning go beyond reducing hazard vulnerability. Measures such as the acquisition or regulation of land in known hazard areas can help achieve multiple community goals such as preserving open space, maintaining environmental health, and enhancing recreational opportunities. Thus, it is vitally important that any local mitigation planning process be integrated with other local planning efforts, and any proposed mitigation strategies be congruent with other existing community goals or initiatives.

2.2 Preparing the Plan

Commented [REK12]: Reviewed and updated 02-07-19

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

The planning process included eight major steps that were completed during the development of the Plan. These steps are illustrated in Figure 2.1.

Multi-hazard Requirement §201.6(b): An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:

1 An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
2 An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and
3 Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

Multi-hazard Requirement §201.6(c)(1): The plan shall document the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.
FMA Requirement §78.5(a): Description of the planning process and public involvement. Public involvement may include workshops, public meetings, or public hearings.
A. Does the plan provide a narrative description of the process followed to prepare the plan?

Commented [RK13]: Updated section (2019)

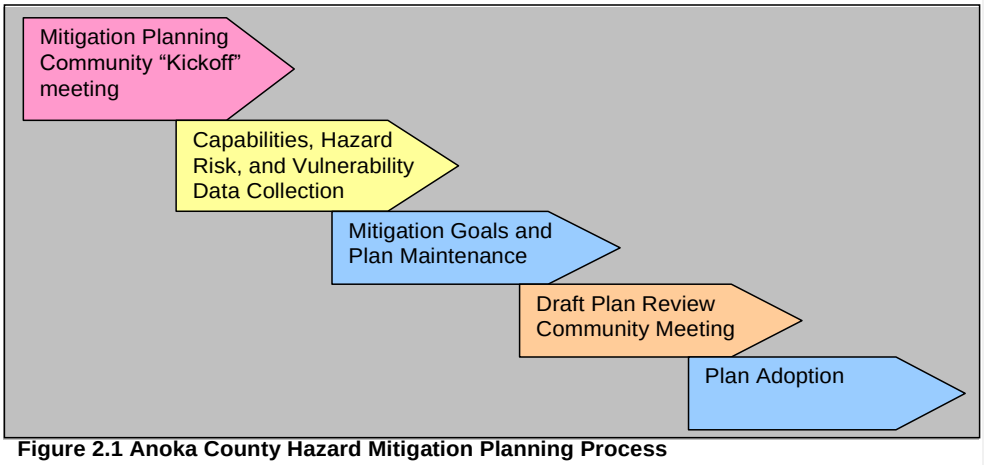

Figure 2.1 Anoka County Hazard Mitigation Planning Process

2.3 The Planning Team

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B. Does the plan indicate who was involved in the planning process? (For example, who led the development at the staff level and were there any external contributors such as contractors? Who participated on the plan committee, provided information, reviewed drafts, etc.?)

A community-based planning team developed the original Plan in cooperation with the Minnesota Homeland Security and Emergency Management Agency (HSEM) and consulting company Excelliant Services created the original Hazard Mitigation Plan. During the review and update process for the current document, a planning team engaged government officials in local meetings and planning workshops to discuss and complete tasks associated with preparing the Plan. This working group coordinated all aspects of the plan development process and became formally recognized as the Anoka County Hazard Mitigation Planning Committee. In addition to regular meetings, committee members routinely communicated and were kept informed through a dedicated e-mail distribution group. Additional participation and input from county residents and other identified stakeholders were sought through the distribution of public notices and the facilitation of public meetings.

A committee was selected participate and complete the comprehensive update for the 2019 version of Anoka County Hazard Mitigation Plan. The Committee consists of participants representing all areas of the county and is responsible for the development of the updated plan. The designated primary and alternate points of contact are the Anoka County Emergency Management Director and the Emergency Management Specialist. These points of contact provided the interface for the Anoka County Emergency Management Department to the Anoka County Hazard Mitigation Planning Committee.

ANOKA CONTY POINT OF CONTACTS		
	Primary	**Alternates**
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City, State, Zip	Anoka, MN 55303	Anoka, MN 55303

The Anoka Countywide Hazard Mitigation Plan Steering Committee's role and responsibility is to provide policy and strategic direction to ensure that the Anoka County Planning Committee continues to fulfill its goals and objectives.

Anoka Countywide Hazard Mitigation Plan Steering Committee		
Ryan Kelzenberg	Emergency Management Coordinator	Anoka County Emergency Management
Terry Stoltzman	Emergency Manager	Anoka County Emergency Management
Joseph Savage	Emergency Management Specialist	Anoka County Emergency Management
Abigail Nesbit	Emergency Management Specialist	Anoka County Emergency Management

An Anoka County Hazard Mitigation Planning Committee was named and consists of representatives to the Anoka County Emergency Management Group. This committee has the function of reviewing and updating mitigation strategies and goals for Anoka County and the individual jurisdictions within Anoka County. The role of the planning committee was to gather data, ensure consistent progress toward project completion and provide oversight in the development of jurisdictional goals and activities.

ANOKA COUNTY PLANNING COMMITTEE			
Member Name/email/Phone	**Representing**	**Role** Decision maker contributor writer member etc.	**Focus** Planning Hazards mitigation etc.
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Commented [REK15]: Updated 02-07-19

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Capt. Jon Urquhart urquhart@coonrapidsmn.gov 763-767-6504	City of Coon Rapids	Contributor	Hazards Mitigation
Mark DuCharme Mark.ducharme@ci.east-bethel.mn.us 763-367-7886	City of East Bethel	Contributor	Hazards Mitigation
Ryan George Ryan.George@fridleymn.gov 763-572-3629	City of Fridley	Contributor	Hazards Mitigation
Don Krueger dkrueger@ci.ham-lake.mn.us 763-434-9555	City of Ham Lake	Contributor	Hazards Mitigation
Ruth Nelsen rnelsen@hilltop.govoffice.com 763-571-2023	City of Hilltop	Contributor	Hazards Mitigation
Pam Olson pam.olson@linwoodtownship.org 651-462-2812	City of Linwood	Contributor	Hazards Mitigation
Curt Hallermann challermann@ci.oak-grove.mn.us 763-404-7000	City of Oak Grove	Contributor	Hazards Mitigation
Matt Kohner mkohner@ci.ramsey.mn.us 763-427-4452	City of Ramsey City of St. Francis	Contributor	Hazards Mitigation
Josh Antoine JAntoine@slpmn.org 763-792-7200	City of Spring Lake Park	Contributor	Hazards Mitigation
Cindy Tranby cindy.tranby@co.anoka.mn.us 763-324-4200	Anoka County Public Health	Contributor	Hazards Mitigation

Todd Schwieger tschwieger@stfrancismn.org 763-235-2330	City of St. Francis	Contributor	Hazards Mitigation
Commander Paul Lenzmeier paul.lenzmeier@co.anoka.mn.us 763-324-5000	Anoka County Sheriff	Contributor	Hazards Mitigation
Sgt. Mike Rumpsa mike.rumpsa@ci.lino-lakes.mn.us 651-982-2309	City of Lino Lakes	Contributor	Hazards Mitigation

2.4 Community Meetings and Workshops

The preparation of the Plan required a series of meetings and workshops for facilitating discussion and data collection efforts with the planning team and local community officials. More importantly, the meetings and workshops prompted continuous input and feedback throughout the drafting stages of the Plan. Below is a summary of the key meetings and community workshops for the Anoka County Hazard Mitigation Planning Committee. Additional meetings were held by the participating jurisdictions to accomplish planning tasks specific to their community, such as specific mitigation actions for inclusion in their Mitigation Action Plan. Public notices and and/or minutes of these meetings have been scanned into this plan and can be found starting on page 273. The table below summarizes the mandatory meetings of the committee and information sessions discussion the Hazard Mitigation Plan.

MANDATORY COMMITTEE AND PUBLIC MEETINGS		
Date	Meeting	Number of Attendees
August 22, 2018	Planning Kickoff Meeting	9
January 24,2018	EM Planning Group	18
Future Dates	Plan Adoption Meeting(s)	

Commented [REK16]: Updated with correct info 2019

The Initial Project Review and Update Kick Off was held with officials from Anoka County and representatives of the Anoka County Emergency Management Work Group on August 8th, 2018. The Project Coordinator Ryan Kelzenberg was introduced to the Emergency Management Work Group and discussed steps needed to complete the review and update of the current Hazard Mitigation Plan. The goal is to have the final review completed and be ready to submit the Hazard Mitigation Plan for adoption in May 2019.

Discussions focused on the overall project approach, in which emphasis was placed on the steps necessary to meet the requirements of building on the existing Hazard Mitigation Plan and work already completed at the state and local level. Additional discussions focused on the specific roles and responsibilities for all parties involved in the planning process. In addition to representatives from each of the participating municipal jurisdictions, it was determined that representatives from fire and law enforcement agencies, private businesses, voluntary agencies, and the public would continue to be invited to participate in the process.

The steps in updating the Hazard Mitigation Plan were discussed, including the need for ongoing coordination throughout the entire planning process and the need to reach out to organizations that may not have been represented in the previous plan update. Specific data was provided, including the Capability Assessment Survey and hazard and mitigation tools used in the previous update. Specific issues including the need to review, analyze, and incorporate existing information that may be helpful to process such as mitigation or hazard-related plans, policies, programs, studies, reports and technical documentation were discussed. Agendas for future meetings were outlined, including the first official public meeting of the Mitigation Plan Planning.

The Mitigation Plan Project Kickoff Public Meeting was held to present the project and its' benefits and requirements to all participating jurisdictions attendees and invited stakeholders. The intent of the first session meeting was to educate participants on the mitigation planning process and to explain DMA2K multi-jurisdictional planning requirements. The meeting began with a detailed presentation of the mitigation planning process. The presentation introduced the concept of hazard mitigation and detailed the mitigation planning process to be followed. Preliminary data collection efforts for the risk and capability assessment tasks associated with the development of the Plan were discussed. Specific data collection needs were explained, including the need for any available local hazard risk data unique to Anoka County.

Following the presentation, Anoka County Emergency Management addressed questions raised by the attendees. These primarily related to the methodologies and data requirements for completing the risk and capability assessments and the types of mitigation actions each jurisdiction should consider for inclusion in their updated Mitigation Action Plans.

A project plan/timeline was presented to focus the Mitigation Plan Planning Committee on the required tasks and timeline to complete the Mitigation Plan.

Data collection efforts were launched through the distribution and explanation of the existing data to each member of the committee to review for their jurisdiction. Each committee member was assigned the task of meeting with appropriate officials from their respective agency or jurisdiction to review and update the information for their jurisdiction.

During the original planning process there was concern was expressed regarding the formal adoption of the plan by each of the jurisdictions at the end of the process. It was explained by Anoka County Emergency Management that each of the committee members shared a role in being ambassadors for mitigation, along with the responsibility of educating elected officials and other stakeholders in their communities. Continued education, awareness, and public involvement efforts will enhance support and consensus on agreeable mitigation action alternatives for Anoka County. During the comprehensive update, Anoka County and the plan participants would continue to use this process during the comprehensive update.

The Anoka County Community Meeting date was published on the Anoka County Website as required for all public meetings. The meeting was attended by representatives of Anoka County Emergency Management though the attendance from businesses and residents of Anoka County fell short of our attendance goal.

ANOKA COUNTY MITIGATION PLAN PROJECT PLAN			
Mitigation Plan Planning			
Task	Action/Description	Responsible	Deliverable
1	Obtain approval for mitigation planning. Present FEMA Mitigation Plan requirements benefits, and deadlines to proper officials.	Emergency Mgmt.	Resolution to proceed
2	Prepare a letter of interest and submit to all eligible jurisdictions.	Emergency Mgmt.	Letter of interest
3	Obtain approval, completed commitment letter with signatures from all jurisdictions.	Emergency Mgmt.	Resolutions to proceed
4	Identify committee members from county municipalities, public, media, business, industry and volunteer groups.	Emergency Mgmt.	Committee contact list
5	Form a committee of key decision makers from all jurisdictions.	Emergency Mgmt.	Committee roster
6	Provide contact information for the project point of contact and alternate.	Emergency Mgmt.	Point of contact data
7	Summarize meetings/minutes and public input.	Project Mgr.	Status Report
Mitigation Plan Kickoff Meeting			
Task	Action/Description	Responsible	Deliverable
1	Discuss meeting requirements with the Planning Committee.	Project Mgr.	Agreement
2	Review all information to be presented at the Project “Kickoff” Meeting.	Project Mgr.	Agreement
3	Schedule appropriate meeting location and acquire meeting materials.	Project Mgr.	Meeting Logistics
4	Discuss data collection methodology, distribute plan templates, and project plan.	Project Mgr.	Data Templates
7	Prepare a summary document of all meetings, project status and comments	Project Mgr.	Status Report
Mitigation Plan Data Collection			
Task	Description	Responsible	Deliverable
1	Provide Jurisdiction Participants the documents that are needed for review and update	Project Mgr.	Plan Sections
2	Review/Edit /update Section 1-Plan Introduction, to reflect Anoka County’s local information.	Project Mgr. EM Group	Edited Section 1
3	Review/Edit/update Section 2-Planning Process, to reflect Anoka County’s local information.	Project Mgr. EM Group	Edited Section 2
4	Review/Edit/Update Section 3-Jurisdiction Profile to reflect Anoka County’s local information.	Project Mgr. EM Group	Edited Section 3
5	Review/Edit/update Section 5- Capabilities Templates.	Project Mgr. EM Group	Edited Capabilities
6	Review/Edit/Update Section 4-Hazard Identification to reflect hazards in Anoka County. Add or delete hazards	Project Mgr. EM Group	Hazard Templates

Commented [REK17]: UPDATED TO CORRECT INFORMATION / RESOLUTIONS 03/27/19

7	Review/Edit/Update Section 4-Hazard Analysis to reflect plans hazards. Collect historical hazard data.	Project Mgr. EM Group	Hazard Templates
8	Review/Edit/update Section 4-Hazard Vulnerabilities to reflect Anoka County Vulnerabilities.	Project Mgr. EM Group	Vulnerabilities Templates
9	Edit/Update Section 4 Hazard Vulnerabilities with Critical Facilities.	Project Mgr. EM Group	Critical Facilities Templates
10	Edit/update Section 4-Hazard Vulnerabilities with hazard inventory and loss information.	Project Mgr. EM Group	Hazard Inventory and Loss templates
11	Develops GIS Maps of jurisdictions, transportation, hazards and critical facilities and provide JPEG.	Anoka County GIS	JPEG GIS Maps
12	Develop and distribute citizen input survey forms to obtain broad based citizen opinion on threats and potential mitigation goals.	Project Mgr. EM Group	Completed surveys; summarized results
Mitigation Workshop Meeting			
Task	Action/Description	Responsible	Deliverable
1	Discuss meeting requirements with Planning Committee.	Project Mgr.	Agreement
2	Review all information to be presented at the Project “Kickoff” Meeting.	Project Mgr.	Agreement
3	Schedule appropriate meeting location and acquire meeting materials.	Project Mgr.	Meeting Logistics
4	Draft Notice of public meeting and publish according to county standards.	Project Mgr.	Published Notice
5	Conduct Public Meeting. Present data collection progress and results.	Project Mgr.	Handouts
6	Review all data, Identify outstanding items and any issues with data collection.	Project Mgr.	Outstanding Item List
7	Develop countywide mission/vision statement, goals and actions/strategies.	EM Group	Documented goals, etc.
8	Assign municipality representatives to develop and submit municipality specific goals objectives and action items.	Project Mgr.	Contact and Task List
9	Develop a project scoring system, priority, financial impact and implementation.	EM Group	Documented scoring system
10	Review the maintenance and measurement process for the mitigation plan.	EM Group	Documented processes
Mitigation Plan Composition			
Task	Action/Description	Responsible	Deliverable
1	Assimilate all resolutions, minutes public notices, etc., scan to a JPEG image and provide to consultant.	Project Mgr.	JPEG Images
2	Assimilate data and documents and compose Mitigation Plan Introduction, planning process and community profiles.	Project Mgr.	Draft Section 1,2,3
3	Assimilate and compose hazard identification, analysis and vulnerabilities.	Project Mgr.	Draft Section 4

4	Assimilate and compose hazard inventory and loss data.	Project Mgr.	Draft Section 4
5	Assimilate mitigation/maintenance documents into the mitigation plan.	Project Mgr.	Draft Section 5
6	Assimilate JPEG images and develop appendices.	Project Mgr.	Draft Appendices
7	Provide draft plan to committee members for review.	Project Mgr.	Draft Mitigation Plan
8	Review all add/change items recommended by the committee and update plan.	Project Mgr.	List changes & updated plan
9	Prepare the Plan Crosswalk.	Project Mgr.	Completed Crosswalk
10	Provide all members of the committee with updated mitigation plan.	Project Mgr.	Committee Approval
Mitigation Plan Approval			
Task	Action/Description	Responsible	Deliverable
1	Submit draft plan to HSEM.	Project Mgr.	Draft plan
2	Receive and review HSEM crosswalk and comments.	Project Mgr.	FEMA written response
3	Review and insert comments from HSEM review.	Project Mgr.	Draft Mitigation Plan
4	Provide Committee with the Mitigation Plan for final revision.	Project Mgr.	Draft Mitigation Plan
5	Submit plan to FEMA for conditional approval.	Project Mgr.	Mitigation Plan
6	Obtain conditional approval for the plan.	Project Mgr.	Official approval
7	Develop Public notice of mitigation plan acceptance by all jurisdictions.	Project Mgr.	Draft public notice
8	Compose adoption language to all jurisdictions.	Project Mgr.	Adoption Memo
9	Provide final full plan to the jurisdictions.	Project Mgr.	Final Mitigation Plan
10	Conduct a public meeting to adopt the plan, Document comments and minutes.	Project Mgr.	Adoption resolutions
11	Provide a formal submittal letter with the adoption resolutions to FEMA.	Project Mgr.	Final Mitigation Plan
12	Submit plan to HSEM and FEMA.	Project Mgr.	Final Mitigation Plan
13	FEMA approves the County All Hazards Mitigation Plan.		Final Mitigation Plan

The initial "Mitigation Methodology Workshop" was held in the form of a 3-hour "Mitigation Strategy Workshop" for the original Hazard Mitigation Plan. The workshop began with a detailed presentation of the data collection and hazard vulnerability assessment progress. As a part of the comprehensive review, the Hazard Mitigation Team reviewed the original information and updated with currently available data to assist in validating the original vulnerabilities. Subsequent reviews were completed based on reviewing the existing hazards and identifying changes that have occurred in the risks for each vulnerability

After completing the general hazard identification and analysis process and based on a Calculated Priority Risk Index (CPRI) and annualized loss estimates, the following were determined to be "high risk" hazards for Anoka County.

1. Flooding
2. Pandemic
3. Thunderstorms
4. Tornadoes
5. Winter Storms
6. Wildfires
7. Hazmat
8. Active Violence
9. Terrorism
10. Urban Fires

The results were based on responses to the Capability Assessment Survey, all jurisdictions in Anoka County have a medium to high capability to implement hazard mitigation actions.

Each participating municipality representative was tasked with developing specific goals, objectives and action items specific to each municipality. These goals, objectives and actions specific to each municipality have been reviewed and modified as necessary from the original goals. In the current plan, the goals are noted with new, ongoing, or completed to represent the change from the Anoka Countywide Hazard Mitigation Plan of 2014.

The Anoka County Multi-Hazard, Multi-Jurisdictional Mitigation Plan Adoption Meetings will be held according to each municipality's adoption process. Each municipality will adopt the plan in a regularly scheduled city or town council meeting. The appropriate Public Notice will be published prior to the meeting. Prior to the adoption meetings, a copy of the plan will be made available to the public in the appropriate public locations. The plan will also be available for public review the day of the adoption in the city or town council office. During the adoption process, comments on the plan will be solicited from the attendees. All comments will be documented in the minutes of the meeting and provided to the Mitigation Planning Committee.

The Anoka County Board of Commissioners will adopt the plan per the county's adoption process and during a regularly scheduled County Board meeting. The appropriate Public Notice will be published prior to the meeting. Prior to the meeting, the plan will be made available to the public in the appropriate Public locations for public review and comments. The plan will also be available to the public the day of the meeting at the Anoka County Government Center. During the adoption process comments on the plan will be solicited from the attendees. All comments will be documented in the minutes of the meeting and provided to the Mitigation Planning Committee.

2.5 Involving the Public

Commented [REK18]: Reviewed and updated 02-07-19

2.5.1 Public Participation During Plan Construction

C. Does the plan indicate how the public was involved?
(Was the public provided an opportunity to comment on the plan during the drafting stage and prior to the plan approval

A fundamental component of Anoka County's community-based mitigation planning process involves public participation. Citizen involvement provides the Emergency Management Group with a greater understanding of local concerns and ensures a higher degree of mitigation success by developing community "buy-in" from those directly affected by the planning decisions of public officials. As citizens become more involved in decisions that affect their life and safety, they are

more likely to gain a greater appreciation of the hazards present in their community and take personal steps to reduce the potential impact. Public awareness is a key component of an overall mitigation strategy aimed at making a home, neighborhood, school, business, or city safer from the potential effects of natural or manmade hazards. Public input was sought using three methods: (1) surveys; (2) open public meetings; and (3) publicizing the availability of the draft hazard mitigation plan at government offices, and an Internet site.

The initial community meeting for the 2019 update was held on August 22th 2018 at the Anoka County Sheriff's Department Community Room and the meeting notification was published by Anoka County. The announcement is included in the References and Acknowledgement section of this document.

A Public Participation Survey was designed to capture additional information from residents of Anoka County. Surveys were provided to citizens who attended public meetings and on several communities' web sites. County and municipal officials distributed additional copies of the survey. Please see the Public Participation Survey Results in Appendix C.

The county-level public meeting will be held during the Mitigation Plan Approval process to present the findings of the risk and capability assessments and to garner public input regarding unique hazard concerns and possible mitigation actions that could be included in the Hazard Mitigation Plan. Attendees were provided an informational handout on mitigation planning. The current mitigation process and progress were discussed. Anoka County Emergency Management will discuss the Public Participation Survey

The meeting will be advertised through the posting of a public meeting notice at county and municipal offices. The notices though the county and city websites, Community Television, and bulletin boards have a widespread audience, which ensured that local officials, residents, businesses, academia, and other private interests in Anoka County were invited to participate in the local mitigation planning process.

The draft Plan will be made available on the Anoka County Emergency Management website https://www.anokacounty.us/1048/Emergency-Management.

2.5.2 Public Opportunity During Plan Review

Members of the community and public were provided with several opportunities to participate in the planning process for the 2019 update. A survey was for the community was created and the link to the survey was published on the Anoka County Emergency Management website and though several of the jurisdiction's websites. The results from the community survey are located in Annex C. The results from the survey were used to assist the planning team with the concerns of the residents of Anoka County during the planning process.

The notice for the Hazard Mitigation Plan Community Meeting was published as required on the Anoka County website and held at 4:00 PM on August 22th, 2018 at the Anoka County Sheriff's Department community meeting room.

2.6 Involving Stakeholders

Commented [REK19]: Survey and public meetings are set - include announcement copy in document - 2019

D. Was there an opportunity for neighboring communities, agencies, businesses, academia, nonprofits, and other interested parties to be involved in the planning process?

A range of stakeholders were invited and encouraged to participate in the development of the Hazard Mitigation Plan. Stakeholder involvement was encouraged through notifications and invitations to select agencies or individuals to participate in the hazard mitigation planning process. These included representatives from Anoka County and each of the incorporated municipalities, EM Group (LEPC), private sector businesses, voluntary agencies, and citizens. In addition to the Emergency Management Group meetings, Anoka County encouraged open and widespread participation in the mitigation planning process through the publication of newspaper notices promoting open public meetings. These media advertisements and survey instruments provided local officials, residents, businesses, academia, and other private interests in Anoka County the opportunity to be involved and offer input throughout the local mitigation planning process.

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

Anoka County Emergency Management reached out to the School Districts and Watershed districts that have a presence in Anoka County regarding the process to update the Hazard Mitigation Plan and the Mississippi Watershed District attend the initial planning meeting.

2.7 Multi-Jurisdictional Participation

Commented [REK20]: Reviewed and corrected 02-07-19

The Anoka County Hazard Mitigation Plan is multi-jurisdictional and includes the participation of Anoka County and its 21 incorporated municipalities. Plan participants are:

- Anoka County
- City of Andover
- City of Anoka
- City of Bethel
- City of Blaine
- City of Nowthen
- City of Centerville
- City of Circle Pines
- City of Columbia Heights
- City of Columbus
- City of Coon Rapids
- City of East Bethel
- City of Fridley
- City of Ham Lake
- City of Hilltop
- City of Lexington
- City of Lino Lakes
- Linwood Township

Multi-hazard Requirement §201.6(a)(3): Multi-jurisdictional plans (e.g., watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process … Statewide plans will not be accepted as multi-jurisdictional plans.
FMA Requirement §78.5(a): Description of the planning process and public involvement. Public involvement may include workshops, public meetings, or public hearings.
A. Does the plan describe **how** each jurisdiction participated in the plan's development

- City of Oak Grove
- City of Ramsey
- City of St. Francis
- City of Spring Lake Park

To satisfy multi-jurisdictional participation requirements, each of the local jurisdictions was required to perform the following tasks:

Commented [RK21]: Updated for 2019

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

Through the completion of these tasks, each municipality will have fully participated with Anoka County in the development of this Plan.

2.8 Review and Incorporation of Existing Plans

Commented [RK22]: Include links to document in sharepoint

E. Does the planning process describe the review and incorporation, if appropriate, of existing plans, studies, reports, and technical information?

An important aspect of the planning process involved the review of existing federal, state, and local plans, studies, reports, and technical information, as well as the ordinances, regulations, and resolutions of each jurisdiction for incorporation into the Anoka County Hazard Mitigation Plan. Plans and documents reviewed by various members of the committee as pertinent to assigned tasks include:

- Jurisdictional ordinances, regulations, and resolutions
  Each Jurisdiction reviewed their documents to ensure that all changes and updates were included in the 2019 update
- Anoka County Emergency Operations Plan (EOP)
  The Anoka County EOP was updated in 2011 from Annexes to Emergency Support Functions. The EOP was reviewed to insure consistency between the EOP and the Countywide Hazard Mitigation Plan
- Anoka County Public Health All Hazards Emergency Response and Recovery Plan
- Anoka County Schools Emergency Response/Crisis Management Plan
- SARA Title II facilities reporting documents and site emergency plans
  These reports were reviewed for any updates and changes and used to create maps for the location of SARA Title II Facilities.
- State of Minnesota Hazard Mitigation Plan

Reviewed to insure hazards and risks to Anoka County were included in the Countywide Hazard Mitigation Plan and goals for Anoka County Jurisdictions compliment the State of Minnesota's goals.

- FEMA Strategic Plan Fiscal Years 2018-2022
  Reviewed FEMA guidance to ensure that the Anoka Countywide Hazard Mitigation Plan compliments the vision in the FEMA Strategic Plan
- National Incident Management System (NIMS)
  Anoka County Continues to use promote and support NIMS. The documents were reviewed to ensure that Anoka County's Mitigation Plan conforms to NIMS requirements.
- U.S. Department of Homeland Security National Planning Frameworks Documents
  The series of documents provide guidance on how the Federal Government will cooperate and assist during incidents and events. These documents were reviewed to ensure that the Countywide Hazard Mitigation Plan compliments and supports the Frameworks.
- FEMA National Flood Insurance: Program Description
- National Weather Service: Operations Present and Future
- FEMA State and Local Mitigation Planning How-to Guides
  - Getting Started
  - Developing the Mitigation Plan
  - Integrating Human-Caused Hazards into Mitigation Planning
  - Bringing the Plan to Life

  This series of documents was reviewed to provide assistance and guidance during the process of updating the Countywide Hazard Mitigation Plan

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

The documents served to acquaint committee members with the many roles of emergency management. Planning guides helped to tie together the phases of mitigation planning for committee members from a broad range of backgrounds outside mitigation and emergency management.

State and federal response and homeland security documents were referenced to ensure Anoka County's goals supported these plans and promoted compliance with requirements. The State of Minnesota Hazard Mitigation Plan formed the basis for identifying and analyzing the natural hazards and manmade hazards that could affect Anoka County and the participating jurisdictions. The Anoka County Emergency Operations Plan provided insight into the jurisdictional response to disasters and was used to develop and validate mitigation goals, objectives, and actions.

SECTION 3: JURISDICTION PROFILES

3.1 Jurisdiction Descriptions

Commented [REK23]: Each county / city / township to returned documents / participated in 2019 update

Anoka County and participating municipalities are comprised of 22 jurisdictions. In this section each participating jurisdiction is described as to geography, community history and any special characteristics.

ANOKA COUNTY JURISDICTIONS	
Anoka County	East Bethel
Andover	Fridley
Anoka	Ham Lake
Bethel	Hilltop
Blaine	Lexington
City of Nowthen	Lino Lakes
Centerville	Linwood Township
Circle Pines	Oak Grove
Columbia Heights	Ramsey
City of Columbus	St. Francis
Coon Rapids	Spring Lake Park

Anoka County

Commented [REK24]: Reviewed and updated 02-09-19

Anoka County is bounded by Isanti County on the north, Chisago and Washington Counties on the east, Ramsey and Hennepin Counties on the south, and Hennepin and Sherburne Counties on the west. It lies on both sides of the Rum River, which enters the county approximately 20 miles north of the City of Anoka. Anoka County has grown from a largely rural area in 1857 to the present-day urban center. This urban center has diversified industrial, commercial, residential, and professional development. It is one of the largest and fastest growing counties in the State of Minnesota. Anoka County, with its county seat in Anoka, encompasses a 423 square mile area and has a population of approximately 330,844 (U.S. Census 2010). The July 2017 estimated population is 351,373 from the U.S. Census.

The history of Anoka County starts in 1849 when the Minnesota territorial legislature organized the counties of Washington, Ramsey and Benton. What is now Anoka County was embraced in both Ramsey and Benton Counties because the Rum River was the dividing line between the two counties.

As early as 1850, fur traders began to settle on the Rum River in the area now known as Ramsey. As more settlers came into the area, this thriving community was given the name Anoka. The name originated from the Indian language, meaning "on both sides."

In 1856, Sherburne County was detached from Benton County. That territory, lying east of Sherburne County and west of the Rum River, was also detached to become a part of Ramsey County. By an act of the legislature, Anoka County was formed from Ramsey County on May 23, 1857. The original eight townships included: Anoka, Watertown (Ramsey), Round Lake (Andover), Bethel, Columbus, St. Francis, Oak Grove and Centerville.

The original boundaries of Anoka County were the same as today except for a small portion of the southeastern tip of the county along the Mississippi River at the south. This strip was a tiny county created from Ramsey County the same day Anoka County was created. This tiny county was given the name of Manomin and occupied only about one-third of a congressional township. It functioned as an organized county until abolished and attached to Anoka County by constitutional amendment November 2, 1869. As an organized township of Anoka County, Manomin kept this name until it was changed to Fridley in 1879.

Anoka County, located minutes from the Twin Cities on the banks of the great Mississippi River, is one of the fastest growing counties in Minnesota. Here you'll find a unique blend of urban amenities in a friendly, small town atmosphere where neighbors still know each other.

With award-winning schools, two major hospitals, world-class recreational facilities, and two post-secondary educational institutions, it's easy to see why so many people are choosing to live and work in Anoka County.

In addition to the Mississippi and Rum Rivers, there are 125 lakes and 20 county or regional parks in Anoka County. Anoka County, the fourth most populous county in Minnesota, is part of the Twin Cities Metropolitan region.

City of Andover
Andover is located 20 miles north of Minneapolis at Latitude 45.23 N and Longitude -93.36 W, has a land area of 34.1 square miles at an elevation of 891 feet. Andover was first organized in 1857 as "Round Lake Township." In 1860 the name was changed to "Grow Township" in honor of Senator Galusha A. Grow of Pennsylvania. At that time, the population was 330 and included the geographical area we know today as Ham Lake. Ham Lake was considered a part of Grow Township until 1871.

In 1972, the Grow Township Board of Supervisors recognized that the town was growing at a rapid rate and felt a village form of government would provide better services to the community. The Board supervisors voted in favor of proceeding with the incorporation process. A new name for the "Andover Village" was chosen because the name Andover had historical interest. The historical interest and name, we believe, came from the Andover "train myth." The myth states that a train tipped over in a swamp, and an eyewitness, relaying the incident, said it "went over and over," thereby naming the city "Andover." However, research reveals that the name Andover first appeared in an article dated March 14, 1899 in the Anoka County Union Newspaper - before train tracks were ever built in the city. The article stated that the Eastern Minnesota line of the Great Northern Railway was in the process of constructing railroad tracks from the Coon Creek Cut-off to the North. The railway announced that new railroad stations with mathematical precision were to be located five miles apart from each other. The new stations

(from Coon Creek to the North, along the new railroad line) were to be named Andover, Cedar, Bethel, Isanti, Cambridge, Stanchfield, Braham, Grasston, Cornell, and Brook Park. On July 4, 1899, the first train passed through the Andover Station.

Andover Village was established in 1972 and then became the City of Andover, a city of the fourth class, in 1974. Today the City of Andover's population exceeds 31,000, classifying it as a third-class city.

Andover's governing body consists of a Mayor and four City Council members. The Andover City Center Complex is located at 1685 Crosstown Boulevard NW (at the intersection of Crosstown Boulevard and Hanson Boulevard) and is home to the City Offices, Public Works Department, Community Center, and the Senior Center. Andover is served by a full-time Police Department through a contract with the Anoka County Sheriff's Department. A professional paid on call Fire Department also serves the community.

Andover is part of two of the finest school districts in the state. St. Francis School District #15 covers the northern section of the City, while Anoka-Hennepin School District #11 serves the south four-fifths of the City. Crooked Lake Elementary, Andover Elementary, Rum River Elementary, Oak View Middle School and Andover High School are all located within the City of Andover and are part of School District #11. A private institution, Meadow Creek Christian School, is also located in the City.

The City of Andover is an exciting place to live, do business, and enjoy the scenic rural atmosphere. With a population exceeding 31,000, Andover is no longer the best-kept secret of Anoka County. Predominantly a residential community, Andover also has abundant parks, trails and recreational areas. The City has more than 500 acres of community and neighborhood parks. Kelsey Round Lake Park is a 136-acre nature area for hiking, skiing and environmental observation. Other recreational facilities include more than 400 acres of the Anoka County Bunker Hills Regional Park (which is home to the Bunker Beach Waterpark), hiking / biking trails, cross-country skiing trails, camping and other outdoor activities. The Rum River Central Regional Park is located immediately north of Andover on County Road 7. The annual Andover Family Fun Fest is held in July.

City of Anoka
Anoka is 20 miles from Minneapolis at Latitude 45.21 N and Longitude –93.39 W, with a land area of 7.13 square miles and an elevation of 870 feet. Two rivers, the Rum and Mississippi, played an integral part in Anoka's settlement. Father Lewis Hennepin first visited this area in 1680 and settlers came to stay in 1844. Prior to the 1800's, the Dakota Indians claimed the area surrounding Anoka, but later the Ojibwa tribes pushed the Dakota westward across the Mississippi. The territory of Anoka then became a neutral ground between the two tribes. The name Anoka was derived from two Indian words, the Dakota word A-NO-KA-TAN-HAN meaning on both sides of the river, and the Ojibwa word ON-O-KAY, meaning working waters.

The first settler in the Anoka area was Joseph Belanger who built a log cabin on the east side of the Rum River near its mouth. The logs were floated down the Rum River to the Mississippi River to the sawmill in St. Anthony. In 1853, the first dam was constructed on the Rum River at its present location and in 1854 the first sawmill began operation. Other saw mills, woodworking plants, and copper shops quickly sprang up along the banks of the Rum River using water as their source of power. For the next twenty years milling was an important industry in Anoka.

After the decline of the sawmills in late 1885, a Board of Trade was organized to encourage other industries to move to Anoka. In 1886, a potato starch factory was built on the west side of the Rum River north of the dam. During this time, before the Red River Valley opened, Anoka was the center of potato production. Also operating at this time was the Anoka Shoe Factory, which employed 80 people and produced 800 pairs of shoes per day. In 1898, a bill was passed by the state legislature to construct a state hospital in Anoka. The hospital is now known as the Anoka-Metro Regional Treatment Center.

In 1856, a ferry was established across the Mississippi river, connecting Anoka with the City of Champlin. After 28 years of operation, the ferry was replaced in 1884 by a steel bridge. The bridge had a turntable in the middle, operated by a hand winch that opened up two channels to allow boats to pass up or down the river. Other transportation in that era was a horse-drawn streetcar system and rail service to St. Paul.

The City of Anoka's development was severely damaged by fire during its early years. Five major fires between 1855 and 1884 impeded the City's development. The worst fire in the downtown area, in 1884, destroyed 86 buildings from the Rum River to Third Avenue. Again, tragedy struck the City in 1939. A tornado swept through the east side of town. Many homes, a church, and the armory were destroyed and three lives were lost.

It is believed that Anoka was the first city in the United States to put on a Halloween celebration. In early 1920, Anoka merchants and other interested citizens joined together in a move to stop Halloween pranks. The idea was to have a big Halloween party for all the children with free candy and lots of entertainment. In October of 1920, Anoka had its first Halloween celebration. The celebration has been held every year since, with the exception of two years during WWII. Anoka considers it the "Halloween Capital of the World" and now has many events during October including football games, costume contests, block parties, Grey Ghost 5k run, and two parades. Situated at the confluence of the Rum and Mississippi Rivers, this historic river city has a bountiful array of recreational and leisure activities to enjoy.

City of Bethel

The city of Bethel is a very small one square mile rectangular shaped rural community in the extreme northern portion of Anoka County. The City of Bethel is located at latitude 45.40 N and longitude 93.26 W and has an elevation of 930 feet. The larger cities of East Bethel and St. Francis surround the city of Bethel. The City of East Bethel is directly east of Bethel and the City of St. Francis is directly west. A quarter mile wide strip of the city of St. Francis separates the City of Bethel from the southern border of Athens Township in Isanti County.

Bethel, a city in St. Francis Township, was first settled in 1856 by Quakers and was organized the next year; it was established as a post office in 1865 at a site known as Bethel Corners, incorporated as a village in 1902 and reincorporated in 1913. Its name is from ancient Palestine, meaning "House of God," and was selected for this township by Moses Twitchell, who settled here as an immigrant from Bethel, Maine.

The city was incorporated over 100 years ago and was built around the Great Northern Railroad tracks which run north from the city of Minneapolis to the southern shore of Lake Superior at the port cities of Duluth, Minnesota and Superior, Wisconsin. The Burlington Northern Santa Fe Railroad currently operates the rail line and is a busy main line running to northern Minnesota and the port cities.

City of Blaine
Blaine is located in the south-central portion of Anoka County, with a small section of the city located in Ramsey County. Its longitude and latitude coordinates are 45.10 N and 93.12 W. Blaine has a land area of 34.04 square miles and an elevation of 902 feet.

Phillip Laddy, a native of Ireland, is recognized as the first settler in Blaine. In 1862, he settled for a short time near the only naturally occurring lake in Blaine. That lake now bears his name, Laddie Lake. In 1865, Blaine welcomed its first permanent resident, Greenberry Chambers, a former slave who moved north from Kentucky, following the Civil War.

In 1877, Blaine separated from Anoka and organized as a township of its own. The first Chairman of the Board of Supervisors, Moses Ripley, came to Minnesota from Maine and persuaded his fellow board members to name the new township in honor of James G. Blaine, a senator and three-time presidential candidate from Maine. Blaine was later incorporated at a city in 1954.

Blaine's growth remained slow until after World War II when starter home developments began to spring up in the southern part of town. Blaine's population went from 1,694 in 1950 to 20,640 in 1970. Blaine has continued to grow and became the largest city in Anoka County in 2017, with a population of 65,359.

Blaine is well known for its sporting facilities. The National Sports Center opened in 1990 and is one of the largest and most diverse sporting complexes in the world. With 52 soccer fields it has the most soccer fields on one campus according to the Guinness Book of World Records. The Schwan's Super Rink has eight sheets of ice in one indoor facility. Minnesota United FC, of Major League Soccer, use the facility for training. The NSC also has an 18-hole golf course and an 18-hole putting course. Cycling, golf, hockey, ultimate disc, soccer, broomball, basketball, football, lacrosse, figure skating, rugby, baseball, softball and volleyball are just some of the sports that have been played at the NSC. The largest youth soccer tournament in the Western Hemisphere is held each July at the NSC, more than 25,000 people visit the campus each day during the USA Cup.

Blaine is also home to Fogerty Arena will two full sheets of ice and the attached Four Seasons Curling Club with six sheets of curling ice.

The TPC Twin Cities also calls Blaine home. Designed by Arnold Palmer with player consultant Tom Lehman the private TPC Twin Cities opened in 2000. The course was home to the 3M Championship, a PGA Tour Champions event, from 2001 until 2018. Starting in 2019 the course became host to the 3M Open a regular stop on the PGA Tour. The 3M Open brings 125,000 people to Blaine each year during the tournament.

City of Centerville
Centerville is located in the eastern part of Anoka County at Latitude 45.16 N and Longitude – 93.05 W and an elevation of 899 feet. The city has a total area of 1,597 acres (2.2 square miles.) Located between the shores of Peltier Lake and Centerville Lake. The two lakes are used as a water supply for the city of St. Paul in drought situations. It is a suburb of Minneapolis/St. Paul and is located 20 minutes from St. Paul. Centerville is totally surrounded by the city of Lino Lakes.

Centerville settled in 1850-52, was organized in 1857 and incorporated on September 27, 1910. Its village of this name, thence given to the township, was platted in the spring of 1854, having a

central situation between the Mississippi and St. Croix Rivers. The settlers in the village and vicinity were mostly French, and this came to be known as the French settlement, while numerous German settlers in the western part of the township caused that to be called the German settlement. The post office was named Columbus, 1856-63, and then Centreville, 1863-93, before its current spelling, and was discontinued in 1905. Charles Peltier built the first sawmill in the county here in 1854. In 1971, a number of streets were renamed to reflect its history.

Centerville honors its history and heritage. Settled in 1800's as a French settlement and stayed mostly French until WW2. This was the main rest stop between Stillwater and Anoka in the earliest days of the Minnesota territory. Has had significant growth in the last 15 years and is close to being fully developed.

Centerville's rich French-Canadian heritage is celebrated at the annual summer celebration called Fete des Lacs, which is French for Festival of Lakes. Residents and visitors gather at festival activities all over town to eat, dance, watch a parade, play softball and watch fireworks on Earth Day.

City of Circle Pines

The city of Circle Pines is located in the southeastern portion of Anoka County at Latitude 45.13 N and Longitude 93.15 W and an elevation of 889 feet. The city has a land area of 1.8 square miles and is a suburban community. The city is bordered by Lino Lakes on the east, Blaine on the north, and Lexington to the west. The city is 15 miles north of Minneapolis/St. Paul. With fields of oaks and elms, the rural appearance can be deceiving – homes and businesses are fairly closely spaced.

In May of 1946, a cooperative village of 1,203 acres was announced "to unite the habitation benefits of a functional and contemporary community with the economic advantages of a consumer's cooperative." Each home would front a park or a walkway. There would be adult education, nurseries, educational and recreational activities; and the commercial facilities and services would be owned cooperatively, as would the municipal utilities.

The people who settled into Circle Pines in the late 1940's honed a "cooperative lifestyle." A group of people joined together to form a company to provide for their own needs rather than buying what is needed from private enterprise. The idea was that if you bought a house in Circle Pines, you would have a stake in the businesses that serve the community.

The symbol for cooperatives was a pine tree with a circle around it. Thus, the name Circle Pines was born. After only three years, the cooperative lifestyle was abandoned, in part because of problems in securing financing and rifts among leaders.

On April 8, 1950, the area, former territory in Blaine and Centerville townships, was incorporated as a village. In 1974, Circle Pines received city status.

City of Columbia Heights

Commented [REK25]: Columbia Heights updated with returned information

The City of Columbia Heights is located at the Southern tip of Anoka County on the northern border of the City of Minneapolis (Hennepin County). Ramsey County borders on the East, with the City of Fridley (Anoka County) on the West border. The city is 3.4 square miles in size with a Latitude of 45.04 N and Longitude of –93.26 W and an elevation of 922 feet. Columbia Heights is a hilly community as the Mississippi River is only 1/4 mile west of town limits.

The Village of Columbia Heights was formed on March 14, 1898 when it separated from Fridley Township. With 1696 acres, 100 citizens and 20 houses, paths became roads, traffic patterns emerged, and a city began. On July 21, 1921 the Charter of the City of Columbia Heights was adopted and the city was formed. City parks of Prestemon, Gauvitte and McKenna were all named for members of this first city council. Ava Ostrander, first woman elected to the council in 1924 also has a park named for her.

Columbia Heights is an older community with structures dating back to the early 1900's. Approximately 2/3 of the community was built right after WWII between the early 1950's thru the mid 1960's. 86% of our community is residential with the other 14% as commercial or industrial etc. Many buildings in the "downtown" area are 50 to 80 years old.

The City of Hilltop located in the center of our community is entirely surrounded by Columbia Heights. Columbia Heights population from the 2010 census was 19,496, which is down approximately 3,000 from its high in the 1970's but up almost 1000 from 2000.

The city is a fully developed, urban community that is beginning to see areas of redevelopment. By the time parks were considered, most of the high ground was taken, leaving low-lying areas for parks. These areas were filled in and parks developed.

Huset Park was the first Columbia Heights Park and was originally called City Park. It was renamed for a Lutheran minister, Elmer Huset of First Lutheran Church and City Manager for a time. The Jefferson pavilion building was constructed in 1959 on the eastern portion of Huset Park.

Columbia School was built in 1894 at 41st and Central. In 1911, the south portion of the school was built. This building was razed in 1967. Oakwood School was built in 1915 and closed as a public school in 1974. It is now the home of Oak Hill Baptist Church. Silver Lake School built in 1922, closed in 1981 and became the new home of First Lutheran Church. In December of 1926, Columbia Heights High School on 41st Ave between Jackson and Van Buren became the first high school in Anoka County. It became the Columbia Junior High School in 1961 and in 1981 it was sold to the Northwestern Electronics Institute and operated as a technical college until NEI merged with Dunwoody in 2002. The City purchased the property and tore the structure down. The site became the new home of the Police and Fire Departments when the new Public Safety building opened in 2009.

The property surrounding Silver Lake was mostly privately owned and had a privately-run beach. In 1920, when a man drowned in the lake, the lake was dynamited in an attempt to find the body. This destroyed many of the natural springs, and water levels dropped greatly. A pipe was laid to the lake from the Minneapolis reservoir since it was felt this was too valuable a resource to allow it to become a swamp. Apparently, some of the springs have reactivated and with storm run-off, the lake levels have remained adequate without additional pumping of water into it.

City of Columbus

The City of Columbus is located in east central Anoka County in the northerly portion of the Twin Cities metropolitan area. The city is 48 square miles with an elevation of 919 feet at Latitude 45.26 N and Longitude –93.07 W. Wetlands and open water bodies dominate the landscape, as they constitute nearly two-thirds of the city. Some of this area is located within State owned Wildlife Management Areas (WMA), including the Carlos Avery WMA and Lamprey Pass WMA, which make up over one-third of the city. Rural residential uses comprise around

7,033 acres of land, including 1,683 acres of wetland and floodplain. Over 2,330 acres of land, which are encumbered by neither wetlands nor floodplain, remain vacant or agricultural use.

Both Native Americans and the European settlers that followed influence the history of Columbus. Human settlement of areas within Columbus can be traced back to the presence of the Hopewell Tribe of Native Americans. Archeologists believe that the Hopewell Tribe established extensive trading with tribes over the entire continent. Burial mounds are located around Howard Lake in the Lamprey Pass Wildlife Management Area. Three large mounds were discovered in 1889; and it was not until 1977 that an additional three smaller mounds were discovered. Each of these areas are designated and protected as historic sites by the Minnesota Historical Society. In addition, the Minnesota Historical Society believes that remnants of Native American settlements may exist along Kettle River Boulevard northeast of Howard Lake and along Rice Creek. The city supports archeological research prior to or in conjunction with any excavation or building in these areas. The Township of Columbus was platted in 1856 and a Town organization was formed in 1857. Early settlers sought to develop a village center on the St. Paul-Kettle River Road, one of the earliest stage lines to be developed in the State. This site, known as “Boehm’s Corner,” contained a sawmill and hotel. Efforts to encourage the development of a village center met with no success. The Township lost a bid in the mid-1860s for the Anoka County seat and it was passed over as a potential route for the St. Paul-Duluth Railroad. The village center never materialized, and by 1879, the Township abandoned efforts to establish a village at that site.

An Administrative Law Judge ordered the incorporation of Columbus in the summer of 2006 following a citizens’ petition and an effort by the Town Board in evaluating the pros and cons of incorporation and finding it in the best interest of the community. The City officially became a city on September 21, 2006.

City of Coon Rapids
The City of Coon Rapids is a second-ring suburb northwest of Minneapolis, located in suburban Anoka County, Minnesota. The city is approximately 22.7 square miles with an elevation of 863 feet at Latitude 45.17 N and Longitude 93.31 W. It is bordered by the Mississippi River and the city of Anoka to the west; the city of Andover to the north; the city of Blaine to the east; and the city of Fridley to the south. Coon Rapids is the most populous city in Anoka County.

When the Federal Government surveyed the area in 1847, it found a well-traveled road running through Anoka County. The road was laid out in 1835 for military use and may be the oldest road in this part of the country. In 1843, trade was established from St. Paul to Pembina in the Red River Valley by Norman W. Kittson and the road then became part of the famous Red River Ox Cart Trail. The trail closely followed the present East River Road/Coon Rapids Boulevard alignment.

Agriculture was the first industry in the Coon Creek area, with farms ranging in size from 90 to 600 acres. In 1881, Dr. D. C. Dunham organized the first brickyard, which was located near the old City Hall site and was known as the Anoka Pressed Brick and Terra Cotta Company. It represented the first non-agricultural industry in Coon Rapids. A legacy left by that brick industry is still visible today and is known as the "Clay Hole."

In the summer of 1898, the Great Northern Development Company proposed to build a dam below the Coon Creek Rapids with a power generating plant on the east side of the river. The actual construction did not start until 1912. Within one year, a small city had sprung up on the shores of the Mississippi River. Streets were laid out and roughly graded. The City’s population

grew to over one thousand with laborers and engineers working on the dam. The dam was built by the Mississippi Power Company and was operating by 1914. Northern States Power Company ran the dam until 1969. The Hennepin County Park Board acquired property and it serves as Coon Rapids Dam Regional Park today.

With the dam, Anoka Township took on a new name - Coon Creek Rapids that over the years was shortened to Coon Rapids. In July 1948, an election was held in an attempt to incorporate the Township of Anoka as a village. The idea was initially defeated but eventually passed successfully in October of 1952. In keeping with the progressive nature of the community, the voters went to the polls in November of 1957 and changed the form of village government to the Council/Manager plan. Two years later, in June of 1959, the Village of Coon Rapids became the City of Coon Rapids.

The city is predominantly a residential community, with some commercial shopping districts and light industry. It is accessible by three major highways and two rail lines.

City of East Bethel

The City of East Bethel is a rural community that is known as the Northern Gateway to the Twin Cities. The city is located at the northern edge of Anoka County and the Minneapolis/St. Paul metropolitan area at Latitude 45.33 N and Longitude 93.21 W, with an elevation of 902 feet. The north side of the city is bordered by Athens Township in Isanti County. On its remaining three sides, it is surrounded by other Anoka County Communities. Linwood Township and a small portion of the City of Columbus border it on the east. The City of Ham Lake borders it on the south. On the west it is bordered by the cities of Oak Grove, St. Francis, and Bethel. East Bethel is approximately 25 miles directly north of the City of Minneapolis. Geographically, the City of East Bethel is one of the largest cities in Minnesota encompassing approximately 48 square miles. The landscape of the community is a gentle undulating plain with vast acres of lakes, parks, open space, and wetlands. This natural environment is often noted as the most important feature and attraction to residents of the community.

The City of East Bethel was originally home to the Chippewa Nation. Europeans first settled the area in the 1850s. Settlers originated primarily from Sweden, Norway, England, Ireland, and New Brunswick. Bethel Township was organized in 1858, the same year that Minnesota became a state. The township included all of what is now Linwood Township until 1871, when Linwood Township was organized. The unusually large size of the township originated with lobbying efforts of early Minnesota settlers. Early roads followed native trails or paths. Desiring a better and more direct route to the major market destination of Minneapolis, local residents of Bethel worked with the residents of other townships to the south to obtain a real road. Central Avenue was created in 1900-1901. It later became State Highway 65. This road was graded in 1923-24, blacktopped in 1931, widened in 1951, paved in 1952, and became a divided highway in 1969-70.

East Bethel started the process to become a village on May 8, 1957. In a township election, voters approved the change to a village by 232 to 161, but four residents took the matter to court and the incorporation was declared invalid. The matter came before the 1956 Minnesota Legislature. Only one legislator voted against the bill to allow East Bethel to incorporate as a Village. East Bethel became a legal municipality by action of their Town Council on April 27, 1959. The population at the time was 1,286.

Some of the most interesting history of East Bethel involves gangster activity. The Ma Barker gang lived in a house near Cedar Creek on Highway 65 for some time. They left Bethel

Township just before the FBI discovered their hideout. Some local residents also claim that John Dillinger hid out in a cabin on the south shore of Coon Lake for one winter.

City of Fridley

The City of Fridley is located in southern Anoka County, approximately 9 miles north of Minneapolis/St. Paul. Fridley shares borders with Spring Lake Park, Coon Rapids, Mounds View, New Brighton, Columbia Heights and Minneapolis. On its western border is the Mississippi River. The City of Fridley is 10.2 square miles in size. Fridley is located at Latitude: 45.09 N, Longitude: 93.26 W in Anoka County, with an elevation of 850 feet.

Father Louis Hennepin, a Franciscan Monk, and two companions became the first men of European descent to come through Anoka County. What is now Fridley was included in an area that was made part of the province of Quebec. In 1783, the "Treaty of Peace" fixed the United States-Canadian border. In 1803 Fridley was included in the Louisiana Purchase and successively became part of the Northwest Territory, Illinois Territory in 1809, Michigan Territory in 1818, Wisconsin Territory in 1836, and once more unorganized territory in 1848.

The Red River Ox Cart Trail passes through Fridley, on what would someday become East River Road, on its way to Pembina, North Dakota. Furs came south and all sorts of supplies came north, from flour to pianos.

John Banfill was the area's first settler in 1847, building a two-story house on the Mississippi River near the mouth of the Rice Creek. In 1851, John Banfill, a territorial senator and Minnesota's first State Auditor, platted the town of Manomin, opened a general store, and erected a sawmill on Rice Creek. The legislature approved $10,000 to improve the trail on the east side of the Mississippi River, to become the first territorial road, from Point Douglas to St. Paul, then to Minneapolis, Anoka and Fort Ripley. It is now known as East River Road.

In 1851, Abram M. Fridley, for whom the city was named, settled in Manomin. In1870, Manomin County was annexed by Anoka County and Manomin was granted township status. In 1879, the name was changed to Fridley by act of the Minnesota State Legislature, of which Abraham Fridley was a member. In 1949, Fridley was incorporated as a village. The first Mayor was Carl Hartman who also served as the first police chief and fire chief. In 1857, Manomin County was separated from Ramsey County, becoming the smallest county in the United States with only 18 sections.

In 1957, the Village of Fridley became a Home Rule Charter City. About the same time, Fridley experienced an industrial boom. By 1960, Fridley's population swelled to 15,182 residents.

On May 6, 1965, Fridley was literally devastated by three tornadoes. One of every four homes was destroyed or damaged. Under the leadership of Mayor Nee and countless other people, the city was rebuilt and again became a prosperous community.

In 1974, Fridley celebrated its Silver Anniversary (25 years), which later in 1975 was dubbed '49er Days, this event became an annual city celebration.

City of Ham Lake

The City of Ham Lake is a thirty-six square mile (23,040 acres) suburb approximately 20 miles north of Minneapolis/St. Paul, located in the middle of Anoka County, with Latitude of 45.25 N and Longitude of 93.20 W and an elevation of 915 feet.

Commented [REK26]: Ham Lake updated with returned information

The earliest record of settlers in Ham Lake dates back to 1855, when a group of men settled in the southern part of the area. A year later, they started a town just southwest of the lake shaped like a ham. The town was named Glen Cary, a Scottish name meaning "beautiful valley." The original houses were burned in a prairie fire in 1857, and the settlers moved away.

Ham Lake Township, settled in 1857, was attached to Grow Township until 1871 when it was separately organized. It had been previously called Glengarry, a name from Scotland, which its Swedish settlers found difficult to pronounce. The county commissioners therefore named the new township Ham Lake from its lake in sections 16 and 17, which had acquired this name on account of its form. Ham Lake, a city in Ham Lake Township, was incorporated November 13, 1973.

In 1880, the census found the population to be 253. In 1903, the first telephone service was available for $6 a year. In the late 1930's, the Rural Electrification provided power to the farm families...to have electric lights by turning a switch was a wonder.

In the beginning, there was no mail delivery, but it could be picked up in Anoka. One farmer picked up mail for others so often that his farm became the first post office. The mailing address bore the farmer's name of Jesperson, Minnesota. As recently as 1984, Ham Lake residents were served by four different post offices. In 1985 the U.S. Postal Service consolidated service to Ham Lake through the Anoka Post Office.

In the early 1920's there was no bus service and the closest railroad station was in Cedar. Central Avenue (Highway 65) was only a wagon trail through a lot of swampland and sand. Through the years, the road was widened, graded and graveled, and finally hard-surfaced. The additional lanes were added in 1954.

City of Hilltop

Hilltop is located at Latitude 45.05 N and Longitude 93.25 W in Anoka County, Minnesota, has a land area of .1 square miles and an elevation of 1015 feet. The City of Hilltop is a small community located in the southern portion of Anoka County, Minnesota. Hilltop is located entirely within the City of Columbia Heights, a first-ring suburb located immediately to the northeast of Minneapolis, Minnesota. The city is surrounded on all four sides by the City of Columbia Heights. Hilltop's northern, eastern, southern and western borders are, respectively, 49th Avenue, State Highway 65, 45th Avenue and Monroe Street.

Dairy farmers and a horse stable/riding academy previously used Land in Hilltop. A small community of "trailer camps" developed in the 1940's. Owners of the camps organized members of the community accomplished incorporation as a city in 1956.

Hilltop is a predominantly residential community with a population of 766. Hilltop is a low-income community. Hilltop is fully developed and as such, no significant growth in population, number of households or business is projected.

In addition to being completely surrounded by one other city, Hilltop's signature is manufactured housing, which accounts for 63% of the housing stock. There are also apartments, condominiums and site-built homes.

Hilltop's modest commercial areas are comprised entirely of small retail and business establishments including, but not limited to the following: drug stores, liquor store, restaurants,

car sales, insurance sales, dental offices, barber shops/salons, flooring store, exercise studio, tobacco store, hardware store, electronics store, and a grocery store.

City of Lexington

Commented [RK27]: OK for 2019

Lexington is located at Latitude 45.13 N and Longitude 93.17 W in Anoka County, Minnesota and has a land area of .7 square miles with an elevation of 909 feet. The City of Lexington is geographically one of the smallest communities in Anoka County. It covers only 440 acres and is located in south central Anoka County. The city of Blaine surrounds Lexington on three sides, the north, the south and the west. The city of Circle Pines borders the east side of Lexington.

Lexington was originally an agricultural area beginning about 1855 in south ½ sections 26 and north ½ 35 of what was then Blaine Township (T. 31, R. 23) and not developed at that time. The first development in the community started in the 1940's. The community was officially incorporated as the City of Lexington May 12, 1950 with a population of 569.

City of Lino Lakes

Commented [RK28]: City updates applied - 2019

Lino Lakes is located in the southeast corner of Anoka County, Minnesota, has an elevation of 889 feet and covers an area of 33 square miles on the north side of the Twin Cities in Anoka County at Latitude 45. 17 N and Longitude 93.10 W. The pristine 5500 - acre Rice Creek Chain of Lakes Regional Park Reserve is situated within the heart of the city, guaranteeing the area will maintain its natural settings and habitats for wildlife for years to come.

When the first settlers arrived in the area, Native Americans had already been making their home in the area where Reshanau, Baldwin, Rice and Marshan Lakes cluster. The Dakota Indians found this to be a land of plenty with wild rice and an abundance of small game. Today, several Indian burial grounds are still located in the area.

White hunters and trappers began coming to this area from both Canada and the eastern states around 1850. Those who settled on the west side of the lake had names like Ramsden, Speiser and Wenzel. Families including the Cardinals, LaMottes, Houles and Dupres settled the east side of the lake. Many of their descendants still live in the area today.

The first unit of local government in the area was the township of Centerville. It was organized August 11, 1857 and encompassed an area of 36 square miles. The population was less than 300 persons and organized into three loosely knit communities known as the "German settlement" west of the lakes, the "Swede settlement" south of the lakes, and the "French settlement" east of the lakes.

In the 1950s neighboring villages started annexing land away from Centerville Township. To protect the boundaries and allow for the financing of public improvements, the residents of the township voted to incorporate into a village. Several names were suggested for the new village, and most contained the word "lakes." Although the origin of the word "Lino" is unknown, a Lino post office operated for about 10 years in the late 1800s. The town board decided to name the new village "Lino Lakes."

On May 11, 1955, the new Village of Lino Lakes was incorporated. The village covered the original Centerville Township, with the exception of the Village of Centerville. At incorporation, the new village was comprised of 21,000 acres of land, and 1,800 citizens. In 1972, the State Legislature passed a law changing all Minnesota villages to cities, hence Lino Lakes' current status.

Linwood Township

Linwood Township at Latitude 45.37 N and Longitude 93.08 W is a thirty-six square mile community in the northeast corner of Anoka County, and has an elevation of 892 feet. Linwood Township is the last remaining township in Anoka County.

Commented [JS29]: Added this sentence

Linwood Township first settled in 1855 and organized in 1871, received its name from Linwood Lake, the largest and most attractive one in a series or chain of ten or more lakes extending from northeast to southwest through this township and onward to Ham Lake. The name doubtless refers to the Lin tree or linden. Our American species (*Tilia Americana)*, usually called basswood, is abundant here and is common or frequent through nearly all this state. The township had a post office between 1865-1903, in section 8, as well as a number of small businesses, a general store, and a Methodist church.

A series of lakes, tributary in its northern part to the Sunrise River and at the south to Coon Creek, lies in Linwood, Bethel, and Ham Lake Townships. This series includes from northeast to southwest Typo Lake and Martin Lake; Island Lake, named for its island; Linwood Lake, giving its name to the township; Boot Lake, named from its outline; Rice Lake, having wild rice; Coon Lake and Little Coon Lake, named, like the creek, for raccoons, formerly much hunted here; and Lake Netta and Ham Lake, the latter, as before noted, being named from its form and giving name also to its township.

Carlos Avery Wildlife Management Area is located in the southern and eastern areas of the township. There are three major lakes located in the Township. Linwood has been a community consisting of family farms and cabins located around the three major lakes. The farmland is in the process of being developed to residential homes and the cabins around the lakes have been converted to permanent homes.

City of Nowthen

Commented [.30]: Updated 9-27-11

The City of Nowthen is located in the northwest corner of Anoka County, Minnesota at Latitude 45.33 N and Longitude 93.44 W and an elevation of 925 feet. The city has a total area of 35.2 miles. Of this total, 33.8 miles is land and 1.4 miles water. The total area is 3.95% water. There are 11 lakes in Nowthen, with Twin Lake being the largest. As of 2010, Nowthen had a total of 19,760 acres as rural residential agricultural use, 795 acres of Commercial/Industrial, 335 acres of Public/Quasi Public, 153 acres of parks and 1,486 acres of water/wetlands/other. Active farming operations exist throughout Nowthen. Continuation of these agricultural activities represents an important land use within the City consistent with the heritage and desired character of the community.

Nowthen, formerly Burns Township was established in 1869. Originally Burns Township was a part of the City of St. Francis. The first election in the township was held in 1869 and the first church was built in 1878. On July 8, 2008 Burns Township incorporated into the City of Nowthen. The City of Nowthen has consisted of family owned farms and large parcels of land for many years. Within the last few years, a lot of the farmland has been developed into residential homes. Some of the larger land parcels are still be used for agricultural operations. In 1870 the population in Nowthen was 340 and as of the 2010 census, the city had a total population of 4,443.

Nowthen has three different school districts covering our community (St. Francis District #15, Anoka District #11 and Elk River District #728 and also three different post offices (zip codes) for our City.

City of Oak Grove

Commented [REK31]: Updated 10-8-11

The City of Oak Grove is a community in the northwestern quadrant of Anoka County at Latitude 45.34 N and Longitude 93.33 W. It has a land area of 33.7 square miles and an elevation of 915 feet. Its 22,700 acres are bounded by the City of Andover, City of Nowthen, City of East Bethel, and City of St. Francis. The principal water features within the City include the Rum River, Cedar Creek, Seelye Brook, and Lake George. Oak Grove was primarily a farming community but has evolved into an ex-urban bedroom community.

Oak Grove Township settled in 1855 and was organized in 1857. "The name is derived from the profuse growth of oak trees, which are about equally distributed over the township" (History of the Upper Mississippi Valley, p. 285). Oak Grove, a village in section 18, located on the Rum River, was first settled in 1854, had a post office between 1857-1901, and was incorporated in 1993.

The heart of the City of Oak Grove began at the enclave of Cedar. In 1880, Oak Grove was home to 305 people. The amenity of Lake George attracted seasonal and some year-round residents as well. From those early years until 1950, the population had limited growth. After 1950, Oak Grove's population has steadily grown.

Oak Grove is a residential community with a rural environment. A major east/west and north/south Anoka County Road passes through the City making it close to additional services and cities.

There are several small home businesses in Oak Grove, which make it a good place to live and work. The Rum River Tree Farm is an example of a business located in Oak Grove.

City of Ramsey

Commented [REK32]: Updated 10-8-11

The City of Ramsey is located in western Anoka County, approximately 30 miles north of Minneapolis/St Paul at Latitude 45.26 N and Longitude 93.44 W and an elevation of 879 feet. Ramsey has a land area of 28.8 square miles and shares its borders with Anoka, Oak Grove, City of Nowthen and Elk River. On its southern border is the Mississippi River and to the East, Rum River. The City of Ramsey is 29 square miles in size. Ramsey is a suburban city with an estimated population of 26,668.

The first settlement in Ramsey began because of trading along the banks of the Mississippi. Many settlers came here on a steamboat called "The Governor Ramsey" named after our first territorial governor. This is how the city acquired the name.

Only a few of the first houses and structures built in Ramsey remain today. The most notable structure of historic significance is identified on the National Register of Historic Places, the Old Ramsey Town Hall, located west of Highway 47 just north of County Road 116. This structure was built during the 19th century and was originally used as a schoolhouse. A significant effort has been made to preserve and maintain this building The Township of Ramsey was first organized in 1857 as Watertown Township later to become Ramsey Township in the fall of 1858. The name "Dover" township was also used sometime between Watertown and Ramsey. Ramsey was named after Governor Ramsey, who aside from having a steamboat named after him, was the first territorial governor of Minnesota. In November of 1974, Ramsey Township was incorporated as a city.

Ramsey is a bedroom community, with a mixture of farms, single-family homes on large parcels of land and single-family homes on urban sized lots ranging from starter homes to executive style homes. Senior housing apartments are also available, as well as numerous styles of town homes. The city's business district is growing with numerous light industrial companies in our three business parks.

Along with the abundant tree canopy, natural waterways give shape and identity to the city. The Rum River, with its canopy of flood plain forest, has become an ideal location for many new upper scale homes. Ramsey citizens also have access to the river at the two parks located along its banks, Rum River Central County Park and River's Bend City Park. The Rum River is also regionally significant as a State Canoe Route and is protected through its designation as a Wild and Scenic River under the Minnesota Wild and Scenic Rivers Act.

US Highway 10 (an alternate State Great River Road), and the railroad separate most of Ramsey from the Mississippi River. Except for the flat terrace along Highway 10, the presence of the Mississippi River is not obvious. The Wayside Rest State Park (Daytonport), an undeveloped Mississippi West County Park, and a planned (and partially built) River Corridor Trail are Ramsey's links to the mighty river. The stretch of the Mississippi River through Ramsey is within the Critical Area Corridor for the Mississippi River and is part of the Mississippi National River & Recreation Area (MNRRA). This stretch of the Mississippi River is also designated as "recreational" under the Wild and Scenic Rivers Act. The Wayside Rest State Park has facilities for camping, drinking water, and canoe launching along the Mississippi River.

Surrounded by many wetlands, Trott Brook creates a large natural corridor across the northern part of Ramsey, stretching from the western border east to the Rum River. While Trott Brook has been ditched to relieve residents of water problems, it remains relatively undeveloped along its banks. Other ditches create waterway corridors through northern Ramsey connecting a series of wetlands that drain east into the Rum River. These ditches form the backbone of the sub-watersheds in Ramsey.

The city boasts a growing business district. Within this district, there are three business parks, Energy Park, Business Park 1995 and Gateway Park. Since 2007, 225,000 square feet of industrial space has been added. We are proud of our commitment to attract economically and environmentally sound commercial development. The City staff and City Council are working hard to give order and control over future growth to continually provide employment opportunities to the citizens and provide for the future with a steady tax base. The city is proud to have Connexus Energy as the lead employer. Looking ahead, the city is working toward a retail and commercial area that includes restaurants, shopping, entertainment and employment opportunities. Ramsey is served by two school districts, Elk River #278, and Anoka-Hennepin #11. Anoka-Hennepin students have exceeded the state average on the Minnesota Basic Standards in math, reading, and writing. Scores of Anoka-Hennepin students on college entrance exams are well above the national average in all areas tested.

The City of Ramsey is home to major employers including Life Fitness/500, Vision Ease/400, Connexus Energy/230, Anderson & Dahlen/160, ALTRON, Inc/104, Command Tooling/84, ACE Solid Waste/80, Zero Zone Refrigeration/59, Wendells/50, Heritage Millwork/45, Airgas North Central/42, and RJM/Gen Paper Products/40. Additionally, the City of Ramsey employs 68 full time staff.

City of St. Francis

St. Francis is a city located in the northwest corner of Anoka County, Minnesota at Latitude 45.38 N and Longitude 93.35 W, with an elevation of 922 feet. The city has a total area of 60.91 square kilometers. Of this total, the amount of surface water is .0577 square kilometers. The population in St. Francis was 7218 as of the 2010 census.

Once referred to as Otona and established in 1855, St. Francis has seen a transition from being a small sawmill town of old to a center for several state-of-the-art operations. Dwight Woodbury started a sawmill in 1885 at the "new town." Ezra Randall and Armsby Fowler filed claims and became known as the first settler of St. Francis. Throughout the last couple of years, a lot of land has been developed into residential homes. Some of the larger parcels are still being used to agricultural operations and the city has grown with many retail businesses.

Within St. Francis there are commercial retail businesses consisting of County Market grocery store, Dollar General, Quick Trip, Anoka Hennepin Federal Credit Union, Village Bank, St. Francis Physical Therapy, Verizon, St. Francis Eye care, various restaurants, Pond's Golf Course, American Legion, Anytime Fitness, chiropractic offices and other retailers. Northland Screw Products and Temperature Specialists have flourished in the city business climate.

The Rum River County Park in St. Francis consists of 80 acres for camping, sightseeing and fishing including paved limestone aggregated biking/hiking trails. St. Francis has an annual Pioneer Days Festival that is a major attraction as well.

City of Spring Lake Park

Commented [REK33]: Updated 2019

The City of Spring Lake Park is located in Anoka County and Ramsey County at Latitude 45.10 N and Longitude 93.23 W, with an elevation of 915. Spring Lake Park is located in the Northern Minneapolis/St. Paul Metro Area. The City of Fridley to the south, the City of Blaine to the North, and the City of Coon Rapids to its west and the City of Mounds View to the east border Spring Lake Park. The City of Spring Lake Park is predominately a bedroom community with some light industry.

The City of Spring Lake Park is home to approximately 6,450 residents and occupies slightly less than three square miles of Anoka County. Spring Lake Park is as close to a demographic image of the State of Minnesota as you're likely going to find. Browse the latest data from the 2010 census and you'll see Minnesota's own Mini-Me. Spring Lake Park stands out as a veritable cross-section of the state.

The city is largely made up of tree-lined streets with block after block of tidy ramblers, many built in the suburban rush of the 1950's and 1960's. There's no room for exclusive grated subdivisions and there is no wrong side of the tracks. Spring Lake Park has some commercial and industrial development along Minnesota Highway 65, Minnesota Highway 47 and County Road 10 but has no downtown, no post office, no big shopping center, no library or hospital, though all are close in neighboring communities.

From the late 1930's to the early 1950's, the area called Spring Lake Park was an area bounded to the west by the Mississippi River, north to the farm area of Blaine Township, east to the Turtle Lake area and south to Columbia Heights, in other words, the Spring lake Park area encompassed all of Fridley Township, part of Blaine and Mounds View.

Spring Lake Park got its name from one of Bronson-Erickson Real Estate salesmen. Due to a leakage from the St. Paul Water Work's Water Main, between Wood Lake and Osborne Road, (Spring Lake), the salesman thought it to be a spring fed lake and called it "Spring Lake."

A few pioneer citizens resided in the area, most of them owning large lots with cows and horses. Others were farming, but after World War II, when the American suburban expansion began developing, residential area and business places grew by "leaps and bounds."

In the early 1950's the Village of Fridley incorporated almost the entire southern part of Fridley Township. The north part of the township and parts of Mounds View and Blaine tried to incorporate by means of a referendum, but it failed. The Village of Fridley tried to annex the remainder of the township. It also failed. In December of 1953, the northern part of the township and a small part of Mounds View Township (that portion of Ramsey County) incorporated by a referendum, the portion of Ramsey was included because the fire department was located there and it bore the name Spring Lake Park. The first election of village officers was held in January 1954. At the time of incorporation, the population was approximately 960, with an incorporated area of 1,280 acres.

Spring Lake Park is noted not only locally but also throughout the State of Minnesota and possibly elsewhere as the City with the red, white and blue water towers. The City of Spring Lake Park had a city celebration that began in 1972 with many activities scheduled around the beach at Spring Lake. The city celebration ceased in 1974. In 1975, the City Council commissioned a group of community residents to rejuvenate the community celebration for the Bicentennial in 1976. The commission worked very hard and raised enough funds to have the water tower painted after "Old Glory" with stars and stripes in red, white and blue. After painting the water tower, the committee decided to use it as a theme for the community celebration. Since that time, the celebration has been referred to as "Tower Days."

3.1.1 Jurisdiction Environment-Geography and Climate (2019)

Anoka County Location				Area	Elevation
				SQ. Miles	Feet
Latitude 45.25 N, Longitude 93.25 W				446	889
June Average Temperature		January Average Temperature		Average Precipitation	
High	Low	High	Low	Rain Inches	Snowfall Inches
78	55	22	2	31.9	54.9
Prevailing Winds			Average number of days below 0 Deg F		
Northwest @ 8.2 MPH			28		

Commented [REK34]: Updated with current info 02-11-19

3.2 Jurisdiction Population and Demographics

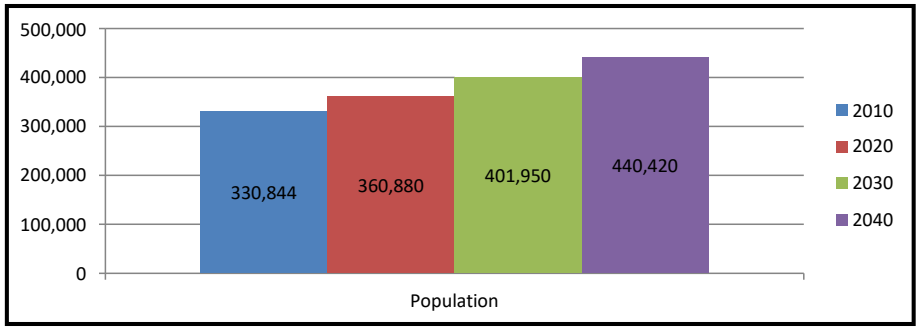
3.2.1 Population

Anoka County is the fourth largest county in the state of Minnesota by population. From 1990 to 2000, Anoka County grew almost twice as fast as the rest of Minnesota, the county's population increased by over 20% and the number of households increased by almost 30%. Anoka County is one of 87 counties in Minnesota. The estimated population in 2017 was 351,373 from the U.S. Census Bureau. This was an increase of 6.2% from the 2010 census.

METROPOLITAN COUNCIL POPULATION FORECASTS Thrive MSP 2040				
	2010	2020	2030	2040
Total	330,844	360,880	401,950	440,420
Change		30,036	41,070	38,470
Percent Change		9.07%	11.38%	9.57%

Commented [REK35]: Updated with new projections 03/22/19

Commented [RK36]: Thrive MSP 2040 https://metrocouncil.org/Data-and-Maps/Data/Census,-Forecasts,-Estimates-NEW/Council-Forecasts.aspx



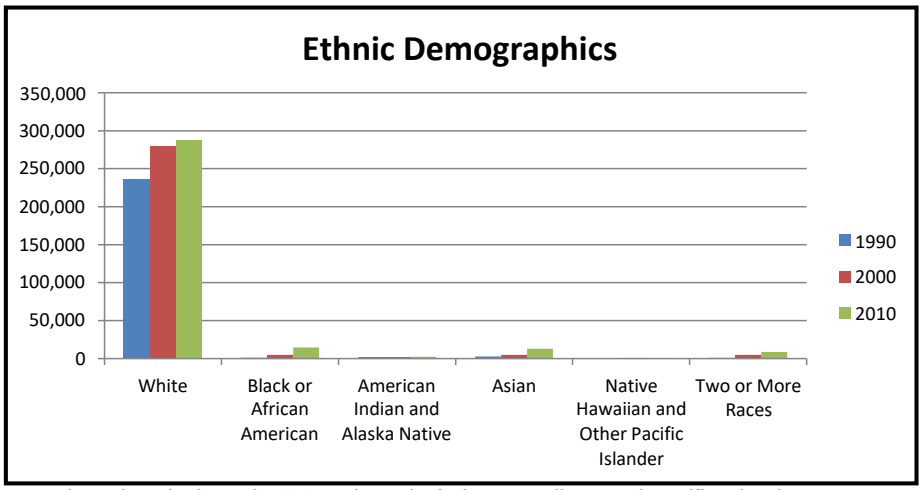
Thrive MSP 2040				
City or Township	2010	2020	2030	2040
Andover	30,598	34,000	38,200	41,900
Anoka	17,142	18,700	20,000	21,200
Bethel	466	480	520	550
Blaine (pt.)	57,186	66,300	76,700	87,300
Centerville	3,792	3,840	3,930	4,060
Circle Pines	4,918	5,000	5,200	5,300
Columbia Heights	19,496	20,500	21,800	23,100
Columbus	3,914	4,220	4,950	5,500
Coon Rapids	61,476	64,800	68,400	72,100
East Bethel	11,626	12,400	15,400	18,400
Fridley *	27,208	29,300	31,600	32,500
Ham Lake	15,296	16,200	17,700	18,700
Hilltop	744	840	960	1,090
Lexington	2,049	2,100	2,270	2,430
Lino Lakes	20,216	22,800	26,900	31,100
Linwood Township	5,123	5,100	4,930	4,820
Nowthen	4,443	4,590	5,100	5,500
Oak Grove	8,031	8,600	9,500	10,400
Ramsey **	23,668	26,400	30,700	34,700
St. Francis	7,218	8,200	10,400	12,600
Spring Lake Park (pt.)*	6,234	6,510	6,790	7,170
Anoka County Total	**330,844**	**360,880**	**401,950**	**440,420**

(pt.) denotes part of a city; remainder of city is in neighboring county
** = Forecast revised by Council action in 2018

3.2.2 Age, Race and Ethnic Demographics

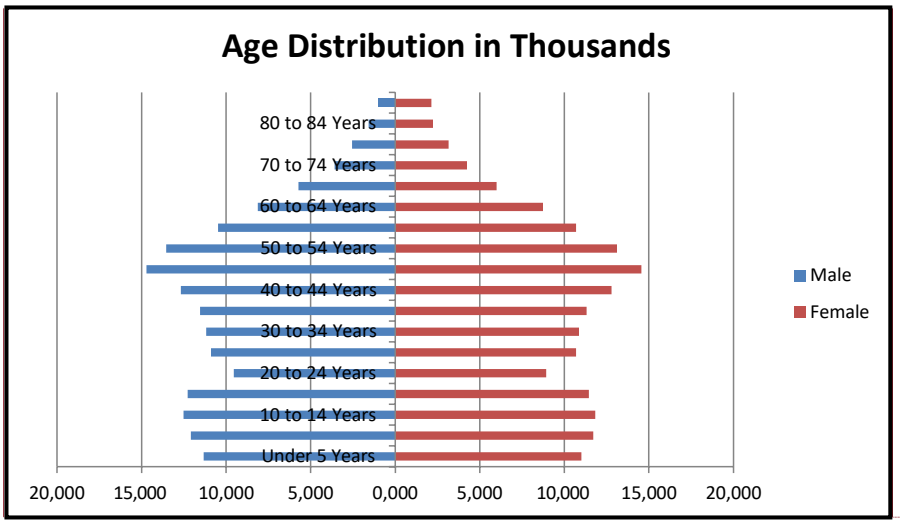
Commented [REK37]: Updated with 2010 census data
Next update will be 2020 census data

Ethnic Demographics: On the 2000 Census questionnaire, race and Hispanic ethnicity are listed as separate questions. A person of Hispanic ethnicity is anyone who identifies with that social group, and so can be of any race. This can make data on race and ethnicity difficult to interpret. Race data is also difficult to compare from Census to Census because categories have changed over time. For example, the 2000 Census was the first to offer the category "Native Hawaiian or Other Pacific Islander," and those people could have responded in a number of different ways in previous years. The 2000 Census also marked the first time that respondents were allowed to select more than one racial category. On earlier Censuses, multiracial individuals were asked to choose a single racial category or respond as "Some Other Race."



* Non-Hispanic only, in and 1990 "Asians" includes Hawaiians and Pacific Islanders.

Age Distribution: When drawn as a "population pyramid," age distribution can hint at patterns of growth. A top-heavy pyramid suggests negative population growth that might be due to a number of factors, including high death rates, low birth rates, and increased emigration from the area. A bottom-heavy pyramid, suggests high birthrates, falling or stable death rates, and the potential for rapid population growth. Most areas fall somewhere between these two extremes and have a population pyramid that resembles a square, indicating slow and sustained growth with the birth rate exceeding the death rate, though not by a great margin. In 2010, the median age in Anoka County was 7.1 years. 26 percent of the population were under 18 years and 9.7 percent were 65 years and older. The age distribution of Anoka County is depicted below. The 2000 and 2010 U.S. Census is used as the basis for all responses.



Commented [.38]: Updated with 2010 census

Andover: The Andover total population is 30,598 and is 15,524 (50.7%) male and 15,074 (49.3%) female with the Median resident age of 37.3 years.

Commented [REK39]: Completed 7-18-11

Commented [REK40]: Use DP 1, QT P1, QT P3, QT P4

The races makeup is White Non-Hispanic (94%), Asian (2.2%), Two or more races (1.9%), Hispanic (2.0%), American Indian (0.3%) and Black (1.7%).

Ancestries include German (36.5%), Norwegian (17.5%), Swedish (13.6%), Irish (12.9%), Polish (8.4%) and English (6.4%).

Anoka Anoka's population was 17,142, Males: 8,533 (49.7%), Females: 8,609 (50.2%) with a Median resident age of 37.6 years.

Commented [REK41]: Completed 7-18-11

Races in Anoka are White Non-Hispanic (89.8%), Black (4.7%), Hispanic (4.2%), Two or more races (3.0%), American Indian (1.0%) and Other race (1.6%).

Ancestries are German (33.0%), Norwegian (17.1%), Swedish (12.8%), Irish (11.3%), English (6.1%) and Polish (5.8%).

Bethel: Bethel Population is approximately 466, Males: 254 (54.5%), Females: 212 (45.5%), with a Median resident age of 34.3 years.

Commented [REK42]: Completed 7-18-11

The races makeup is White Non-Hispanic (97.6%), Black (0.9%), Hispanic (2.1%), Asian (0.4%), Some other race (0.9%)

Ancestries are German (29.6%), Swedish (13.3%), Irish (13.3%), Norwegian (11.5%), Italian (7.4%) and French (5.6%).

Blaine: Blaine's population is 57,186 and consists of, Males: 28.742 (450.26%), Females: 28,444 (49.74%), with a Median resident age of 36.3 years.

Commented [REK43]: Complete 7-19-11

Races in Blaine are White Non-Hispanic (83.96%), Two or more races (1.7%), Hispanic (2.89%), American Indian (0.63%), Black (2.25%), Other race (3.87%), and Other Asian (6.49%).

Ancestries are German (38.3%), Norwegian (17.6%), Irish (12.6%), Swedish (12.5%), Polish (6.6%) and English (5.9%).

City of Nowthen: City of Nowthen's population is 4,443 people and consists of, Males: 2,314 (52.1%), Females: 2,129 (47.9%), with a Median resident age of 39.9 years.

Commented [REK44]: Complete 7-19-11

Races in the City of Nowthen are White Non-Hispanic (96.5%), Hispanic (1.0%) Two or more races (0.9%), American Indian (0.5%), Black (0.9%), Asian (1.2%) and Other race (0.1%).

Ancestries are German (40.6%), Norwegian (19.8%), Swedish (13.2%), Irish (9.4%), Polish (6.4%), English (6.3%), French (4.8%) and Czech (4.3%).

Centerville: Centerville's population is 3,792, Males: 1,927 (50.8%), Females: 1,865 (49.2%), with a Median resident age of 35.8 years.

Commented [REK45]: Complete 7-19-11

Races in Centerville are White Non-Hispanic (94.7%), Black (0.3%). Asian (2.7%), Two or more races (1.8%), Hispanic (1.6%) and American Indian (0.4%).

Ancestries are German (46.7%), Irish (17.6%), Norwegian (13.0%), Swedish (11.2%), Italian (7.1%) and French (5.8%).

Circle Pines: Circle Pines population is 4,918, Males: 2,412 (49.8%), Females: 2,506 (50.2%), with a Median resident age of 40.5 years.

Commented [REK46]: Complete 7-19-11

Races in Circle Pines are White Non-Hispanic (92.6%), Black (1.8%) Two or more races (2.1%), American Indian (0.4%), Hispanic (2.0%) and Asian (3.3%)

Ancestries are German (44.8%), Norwegian (18.3%), Irish (16.3%), Swedish (13.9%), English (8.4%) and Polish (7.8%).

Columbia Heights: Columbia Heights population is 19,496, Males: 9,458 (48.5%), Females: 10,038 (51.5%), with a Median resident age: 36.9 years.

Commented [REK47]: Complete 7-19-11

Races in Columbia Heights are White Non-Hispanic (73.7%), Black (13.3%), Hispanic (11.9%), American Indian (1.5%), Two or more races (4.3%), Other race (6.3%), and Asian (4.8%).

Ancestries are German (30.3%), Norwegian (16.3%), Irish (12.4%), Swedish (12.1%), Polish (11.3%) and English (5.8%).

City of Columbus: City of Columbus population is 3,914, Males: 2,030 (51.8 %), Females: 1,884 (48.1%), with a Median resident age of 45.3.

Commented [.48]: Completed 7-20-11

Races in City of Columbus are White Non-Hispanic (97.6%), Two or More Races (1.0%), American Indian (0.6%), Hispanic (1.5%), Asian (0.6%), Black (0.7%) and Other race (0.2%).

Ancestries are German (40.9%), Swedish (14.6%), Norwegian (11.9%), Irish (9.7%), English (7.1%), French (6.5%) and Polish (5.1%).

Coon Rapids: Coon Rapids population is 61,476, Males: 29,742 (48.4%), Females: 31,734 (51.6%), with a Median resident age of 36.9 years.

Commented [.49]: Complete 7-20-11

Races in Coon Rapids are White Non-Hispanic (87.2%), Black (5.5%), Two or more races (2.8%), Hispanic (3.2%), American Indian (0.7%) and Other race (1.2%).

Ancestries: German (36.4%), Norwegian (18.1%), Swedish (13.0%), Irish (12.4%), Polish (7.1%) and English (6.6%).

East Bethel: East Bethel population is 11,626, Males: 6,067 (52.2%), Females: 5,559 (47.8%) with a Median resident age of 38.6 years.

Commented [.50]: Completed 7-20-11

Races in East Bethel are White Non-Hispanic (98.8%), Black (0.4%), Two or more races (1.2%), American Indian (0.5%) and Hispanic (1.0%).

Ancestries are German (37.1%), Norwegian (16.9%), Swedish (15.1%), Irish (10.9%), Polish (9.4%) and United States (6.9%).

Fridley: Fridley population is 27,208, Males: 13,474 (49.5%), Females: 13,734 (50.5%), with a Median resident age of 37.1 years.

Commented [.51]: Completed 7-20-11

Races in Fridley are White Non-Hispanic (77.8%), Black (11.5%), Two or more races (4.2%), Hispanic (2.2%), American Indian (1.2%), Other race (1.1%), and Asian (4.9%).

Ancestries are German (32.0%), Norwegian (16.1%), Swedish (12.6%), Irish (11.1%), Polish (9.2%) and English (6.0%).

Ham Lake: Ham Lake population is 15,296, Males: 7,815 (50.1%), Females: 7,481 (48.9%), with a Median resident age of 40.1 years.

Commented [.52]: Completed 7-20-11

Races in Ham Lake are White Non-Hispanic (95.4%), Two or more races (1.3%), Hispanic (1.1%), American Indian (0.4%) and Black (0.7%).

Ancestries are German (37.5%), Norwegian (20.4%), Swedish (16.1%), Irish (13.5%), Polish (8.3%) and French (5.1%).

Hilltop: Hilltop population is 744, Males: 396 (50.8%), Females: 348 (49.2%), with a median resident age of 42.7 years.

Commented [.53]: Completed 7-20-11

Races in Hilltop are White Non-Hispanic (75.9%), Black (11.3%), Hispanic (15.3%), American Indian (1.6%), Two or more races (6.6%), Asian (2.7%), and Other race (6.9%).

Ancestries are German (22.5%), Norwegian (15.8%), Irish (9.0%), Polish (7.6%), Swedish (7.6%) and English (5.4%).

Lexington: Lexington population is 2,049, Males: 1,166 (52.0%), Females: 983 (48.0%) with a median resident age of 34.6 years.

Commented [.54]: Complete 7-20-11

Races in Lexington are White Non-Hispanic (90.7%), Hispanic (5.4%), Two or more races (2.5%), American Indian (1.1%), Black (2.7%) and Other race (2.6%).

Ancestries are German (37.4%), Norwegian (14.5%), Irish (13.3%), Swedish (9.8%), Polish (7.6%) and English (6.5%).

Lino Lakes: Lino Lakes population is 20,216, Males: 10,880 (53.8%), Females: 9,336 (46.2%), with a Median resident age of 37.2 years.

Commented [.55]: Completed 7-20-11

Races in Lino Lakes are White Non-Hispanic (91.2%), Black (2.7%), Hispanic (1.7%), Two or more races (1.6%), American Indian (0.7%) and Other races (0.3).

Ancestries are German (43.0%), Norwegian (16.2%), Irish (14.0%), Swedish (11.3%), English (7.1%) and French (6.2%).

Linwood Township: Linwood Township population is 5,123, Males: 2,667 (52.1%), Females: 2,456 (47.9%), with a Median resident age of 47.7 years.

Commented [.56]: Completed 7-20-11

Races in Linwood Township are White Non-Hispanic (98.8%), Two or more races (1.3%), Hispanic (1.4%), American Indian (0.4%), Black (0.4%), Asian (0.8%), American Indian (0.6%) and Some other race (0.1%).

Ancestries are German (35.6%), Swedish (12.6%), Norwegian (12.2%), Irish (11.4%), American (6.6%), Italian (5.1%), English (5.0%), French (4.6%) and Polish (4.6%).

Oak Grove: Oak Groves Population is 8,031, Males: 4,197 (52.3%), Females: 3,834 (47.7%), with a Median resident age of 40 years.

Commented [.57]: Completed 7-20-11

Races in Oak Grove are White Non-Hispanic (96.2%), American Indian (0.3%), Two or more races (1.3%), Hispanic (1.1%), Asian (1.9%) and Black (0.5%).

Ancestries are German (41.5%), Swedish (20.9%), Norwegian (20.6%), Irish (14.1%), Polish (7.6%), English (4.9%).

Ramsey: Ramsey population is 23,668, Males: 11,905 (50.3%), Females: 11,763 (49.7%), with a Median resident age of 34.9 years.

Commented [.58]: Completed 7-20-11

Races in Ramsey are White Non-Hispanic (97.2%), Black (2.8%), Hispanic (2.2%), Two or more races (1.1%) and American Indian (0.4%).

Ancestries are German (40.7%), Norwegian (19.4%), Swedish (13.0%), Irish (12.1%), Polish (9.1%), English (6.3%).

St. Francis: St. Francis population is 7,218, Males: 3,571 (49.5%), Females: 3,647 (50.5%), with a Median resident age of 31.5 years.

Commented [.59]: Completed 7-20-11

Races in St. Francis are White/Non-Hispanic (96.2%), Two or more races (2.0%), American Indian (0.4%), Hispanic (1.3%), Black (0.6), and Asian (0.8%).

Ancestries are German (35.8%), Norwegian (14.5%), Irish (12.1%), Swedish (8.0%), English (6.3%) and Polish (5.4%).

Spring Lake Park: Spring Lake Park population is 6,234, Males: 3,044 (47.9%), Females: 3,190 (52.1%), with a Median resident age of 41.4 years.

Commented [.60]: Complete 7-20-11

Races in Spring Lake Park are White Non-Hispanic (86.4%), Hispanic (3.4%), Other race (2.0%), Two or more races (3..7%), Black (3.9%), American Indian (0.9%), Asian (5.0%)

Ancestries are German (33.2%), Norwegian (17.1%), Swedish (12.8%), Irish (12.3%), Polish (8.7%) and English (5.7%).

* American Indian includes both American Indian and Alaska Native.

3.3 Jurisdiction Economics, Earnings and Employment

Commented [REK61]: Reviewed and updated

3.3.1 Economics

Anoka County is one of 87 counties in Minnesota. It is part of the Minneapolis-St. Paul-Bloomington, MN-WI (MSA). The 2009 population of the MSA reached a population of 3.9 Million according to the 2017 Census estimates. Anoka is the fourth largest county in Minnesota.

Anoka County Retail Sales					
	2012	2013	2014	2015	2016
441 RETL -VEHICLES, PARTS	$503,065,828	$552,269,483	$602,984,883	$718,215,807	$746,335,358
442 RETL -FURNITURE STORES	$116,409,730	$141,243,274	$152,924,947	$154,679,012	$158,478,634
443 RETL -ELECTRONICS	$70,977,061	$68,685,337	$70,588,798	$76,206,602	$79,833,225
444 RETL -BUILDING MATERIAL	$335,694,042	$371,352,397	$393,285,701	$433,686,255	$416,078,450
445 RETL -FOOD BEVERAGE STORE	$721,969,455	$710,135,739	$686,099,776	$695,669,789	$694,904,098
446 RETL -HEALTH, PERSONAL	$192,924,283	$190,210,751	$191,384,389	$346,682,554	$369,720,085
447 RETL -GASOLINE STATIONS	$612,649,876	$604,901,135	$606,057,912	$503,306,519	$476,680,813
448 RETL -CLOTHING, ACCESSORY	$180,876,069	$173,882,772	$178,850,801	$195,571,759	$186,956,109
451 RETL -LEISURE GOODS	$115,194,852	$114,920,388	$106,447,996	$109,364,838	$107,810,247
452 RETL -GENERAL MERCHANDISE	$779,508,864	$786,571,710	$807,537,908	$832,100,356	$778,906,126
453 RETL -MISC STORE RETAILER	$129,753,118	$132,437,217	$130,759,219	$139,427,755	$149,154,617
454 RETL -NONSTORE RETAILERS	$198,553,964	$191,684,354	$176,216,247	$135,756,153	$136,816,480
Total Retail Sales	$3,957,577,142	$4,038,294,557	$4,103,138,577	$4,340,667,399	$4,301,674,242
Source: Minnesota Department of Revenue – Sales & Use Revenue by County					

Commented [R62]: Source for Retail Sales Data Minnesota Dept Revenue

https://www.revenue.state.mn.us/research_stats/Pages/Sales-and-Use-Tax-Statistics-and-Annual-Reports.aspx

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MIDWEST CITIES CLASS B/C CONSUMER PRICE INDEX NOT SEASONALLY ADJUSTED													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2013	140.78	142.24	142.77	142.67	143.16	143.68	142.92	143.05	143.53	143.08	142.51	142.20	142.72
2014	142.80	143.72	144.90	145.47	145.79	146.49	146.16	145.90	146.31	145.42	144.56	143.54	145.09
2015	142.52	143.18	144.02	143.98	144.58	145.61	145.36	145.10	144.81	144.74	143.89	143.10	144.24
2016	143.22	143.33	144.41	144.97	145.49	146.35	145.72	145.93	146.13	146.12	145.48	145.56	145.23
2017	146.59	146.82	146.89	147.39	147.22	147.12	147.09	147.61	148.02	147.94	147.82	147.19	147.31
2018	148.25	148.64	148.92	149.51	150.22	150.34	150.32	150.34	150.49	150.65	149.87	149.12	149.72

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http://data.bls.gov/pdq/querytool.jsp?survey=cu

http://bls.gov/data/

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3.3.2 Earnings

Per capita personal income
In 2017 Anoka County had a per capita personal income (PCPI) of $48,687. This PCPI was 89 percent of the state average of $54,359, and 94 percent of the national average of $51,631. In 2003 Anoka County had a per capita personal income (PCPI) of $32,620. This PCPI ranked 8th in the state and was 96 percent of the state average of $34,031, and 104 percent of the national average of $31,472.

ANOKA COUNTY AVERAGE WAGE						
	2013	2014	2015	2016	2017	2018
Average Wage	46,280	47,782	50,020	50,365	51,733	52,052

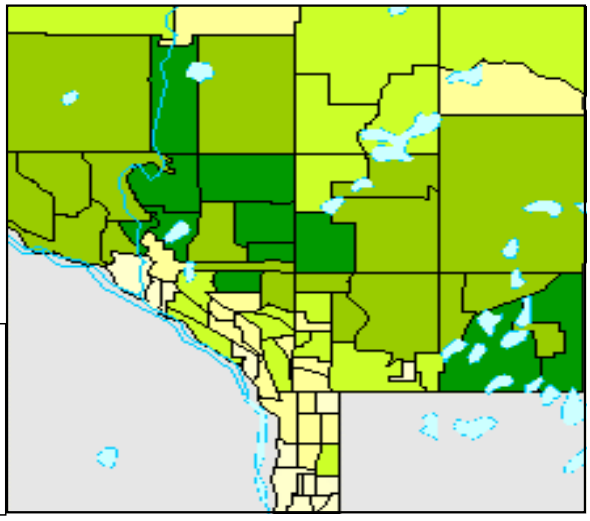
Earnings by place of work
Earnings of persons employed in Anoka County increased from $5,645,600,000 in 2002 to $9,221,533.00 in 2017

MEDIAN INCOME 2010 Census			
Andover	$76,241	East Bethel	$57,880
Anoka	$42,659	Fridley	$48,372
Bethel	$45,125	Ham Lake	$67,750
Blaine	$74,271	Hilltop	$26,528
City of Nowthen	$63,819	Lexington	$41,618
Centerville	$63,696	Lino Lakes	$75,708
Circle Pines	$60,469	Linwood Township	$58,596
Columbia Heights	$40,562	Oak Grove	$70.169
City of Columbus	$67,500	Ramsey	$68,988
Coon Rapids	$55,550	St. Francis	$51,982
		Spring Lake Park	$46,646

3.3.3 Employment

Employment and employers: Anoka County residents are well educated and take pride in their work and community. Businesses, attracted by affordable land, are building and expanding in Anoka County.

Major corporations like Medtronic, Aveda, United Defense, Hoffman Engineering, Onan, and Federal Cartridge have found homes in Anoka County. In fact, Medtronic, the world's leading medical technology company, recently



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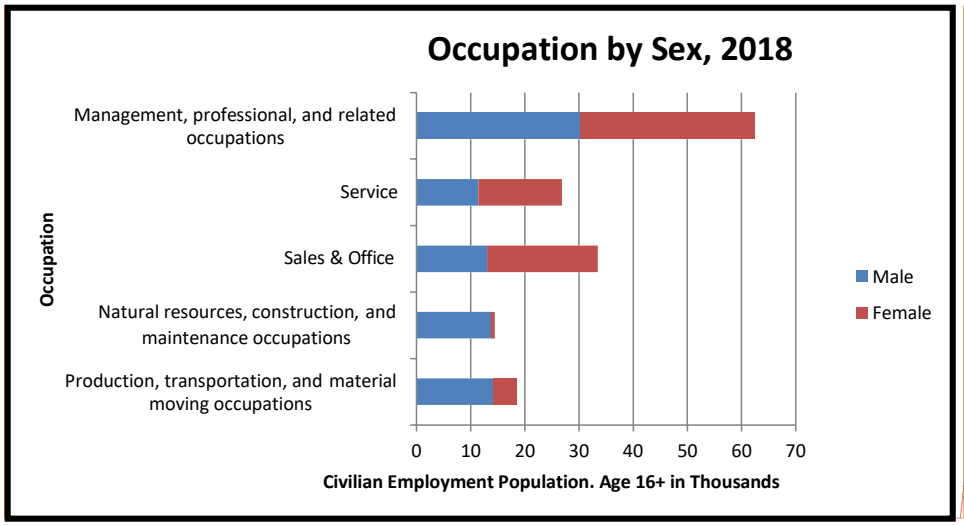
Commented [RK65]: https://www.bls.gov/cew/datatoc.htm

Commented [RK66]: http://www.stats.indiana.edu/bea/simple/naics/ee_n.html

built its global headquarters in Anoka County. In 2000, almost two-thirds of Anoka County workers were employed in sales, office, and management, professional and related occupations.



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Metropolitan Council Employment Forecasts				
Thrive MSP 2040				
City or Township	2010	2020	2030	2040
Andover	4,669	5,400	5,800	6,200
Anoka	12,840	13,800	14,200	14,400
Bethel	86	130	150	180
Blaine (pt.)	19,668	24,800	27,300	29,900
Centerville	409	540	560	590
Circle Pines	790	900	950	1,000
Columbia Heights	3,484	4,280	4,440	4,600
Columbus	1,172	1,500	1,670	1,800
Coon Rapids	23,260	27,100	28,900	30,900
East Bethel	1,123	1,700	1,950	2,200
Fridley *	21,333	23,700	24,900	26,100
Ham Lake	2,931	3,700	4,010	4,300
Hilltop	314	460	480	500
Lexington	467	600	630	640

Commented [RK69]: Updated Met Council Thrive MSP 2040

Lino Lakes	3,313	4,700	5,300	6,000
Linwood Township	219	330	390	430
Nowthen	318	500	590	680
Oak Grove	741	920	980	1,000
Ramsey **	4,779	6,700	7,500	8,100
St. Francis	1,537	2,200	2,550	2,900
Spring Lake Park (pt.)*	2,934	3,200	3,350	3,500
Anoka County Total	106,387	127,160	136,600	145,920

Andover Industries providing employment: Manufacturing (20.0%), Educational, health and social services (17.7%), Retail trade (13.6%).

Anoka Industries providing employment: Manufacturing (20.1%), Educational, health and social services (18.4%), Retail trade (12.8%).

Bethel Industries providing employment: Manufacturing (31.6%), Construction (12.1%), Educational, health and social services (10.5%).

Blaine Industries providing employment: Manufacturing (22.8%), Educational, health and social services (16.1%), Retail trade (11.7%).

City of Nowthen has limited employment opportunities available. The average commute time for Burns workers is 32 minutes, compared with 26 minutes nationwide.

Centerville Industries providing employment: Educational, health and social services (20.9%), Manufacturing (19.3%), Retail trade (10.7%).

Circle Pines Industries providing employment: Manufacturing (21.1%), Educational, health and social services (15.5%), Retail trade (13.1%).

Columbia Heights Industries providing employment: Educational, health and social services (17.8%), Manufacturing (17.6%), Retail trade (13.0%), Professional, scientific, management, administrative and waste management services (10.3%).

City of Columbus employment consists of: Entertainment and Retail-100. Various smaller employers (approx. 40) to include: auto sales, contractor shops, recreational vehicle sales, office, manufacturing employing less than 30 employees.

Coon Rapids Industries providing employment: Manufacturing (20.0%), Educational, health and social services (18.8%), Retail trade (13.6%).

East Bethel Industries providing employment: Manufacturing (22.1%), Educational, health and social services (15.2%), Construction (11.5%), Retail trade (11.2%).

Fridley Industries providing employment: Manufacturing (20.5%), Educational, health and social services (16.8%), Retail trade (13.2%).

Ham Lake Industries providing employment: Manufacturing (21.1%), Educational, health and social services (15.2%), Retail trade (11.9%), Construction (11.8%).

Hilltop Industries providing employment: Educational, health and social services (19.3%), Manufacturing (18.3%), Arts, entertainment, recreation, accommodation and food services (12.6%), Retail trade (12.1%).

Lexington Industries providing employment: Manufacturing (22.0%), Retail trade (14.1%), Educational, health and social services (14.0%), Construction (10.8%).

Lino Lakes Industries providing employment: Manufacturing (20.6%), Educational, health and social services (18.8%), Professional, scientific, management, administrative and waste management services (11.6%), Retail trade (10.4%).

Linwood Township Industries is limited to a few small businesses. These consist of automotive repair, convenience store, landscaping and homebuilders. There are no major businesses in Linwood Township.

Oak Grove Industries providing employment: Manufacturing (20.5%), Educational, health and social services (17.9%), Construction (13.8%), Retail trade (13.4%).

Ramsey Industries providing employment: Manufacturing (21.6%), Educational, health and social services (20.0%), Retail trade (10.5%).

St. Francis Industries providing employment: Manufacturing (22.9%), Educational, health and social services (18.9%), Construction (15.3%).

Spring Lake Park Industries providing employment: Manufacturing (20.3%), Educational, health and social services (16.3%), Retail trade (12.7%).

ANOKA COUNTY UNEMPLOYEMENT													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
2010	9.10	9.00	9.00	8.00	7.40	7.70	7.60	7.80	7.60	7.20	7.30	7.40	7.93
2011	8.00	7.80	7.70	6.90	6.80	7.20	7.50	6.60	6.30	5.80	5.60	5.9	6.35
2012	6.40	6.70	6.70	5.50	5.40	6.00	6.10	5.80	5.50	5.20	5.00	5.50	5.82
2013	6.30	5.90	5.60	5.10	4.80	5.30	5.10	4.90	4.50	4.20	4.10	4.50	5.03
2014	5.30	5.30	5.20	4.20	3.90	4.30	4.10	3.90	3.60	3.10	3.30	3.70	4.16
2015	4.40	4.30	4.20	3.50	3.50	3.80	3.60	3.40	3.10	3.00	2.90	3.40	3.59
2016	4.20	4.20	4.20	3.50	3.10	3.90	3.70	3.80	3.60	3.40	3.20	3.80	3.72
2017	4.40	4.20	3.90	3.30	3.10	3.40	3.30	3.40	2.90	2.40	2.60	3.20	3.34
2018	3.60	3.60	3.50	2.90	2.40	2.80	2.70	2.50	2.30	2.20	2.10	2.90	2.79

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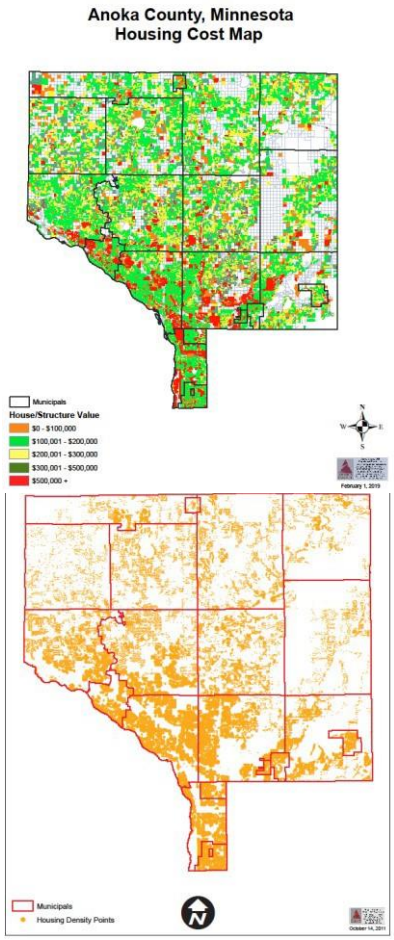
Updated 02-11-19

3.4 Jurisdiction Housing

Commented [REK71]: HO76 Data

Anoka County experienced substantial population and household growth during the 1990s as development continued to push northward across the County. Areas of the largest household growth during the 1990s were Coon Rapids, Ramsey, Andover, Blaine, and Lino Lakes. These communities had an ample supply of land within the Metropolitan Urban Service Area (MUSA) boundary. Beyond these communities to the north, the County is largely urban-rural with zoning restrictions that limit residential development to primarily large-lot single-family homes.

Median House Value 2010 Census	
Andover	$158,400
Anoka	$119,000
Bethel	$102,900
Blaine (pt.)	$125,600
City of Nowthen	$157,500
Centerville	$142,400
Circle Pines	$116,300
Columbia Heights	$103,000
City of Columbus	$154,600
Coon Rapids	$124,600
East Bethel	$138,300
Fridley	$120,300
Ham Lake	$150,300
Hilltop	$55,000
Lexington	$104,100
Lino Lakes	$162,700
Linwood Township	$135,200
Oak Grove	$151,100
Ramsey	$143,500
St. Francis	$128,500
Spring Lake Park (pt.)	$120,000



The current MUSA boundary constrains the development of higher housing densities in most of the County. The greatest amount of housing development is occurring in areas with land serviced by municipal sewer and water. Very little multifamily housing will be built in communities in the northern portion of the County, which is not serviced by municipal sewer and water.

Land outside the MUSA is being consumed at a rapid pace by the development of housing at lower densities. For example, with an average single-family lot size of 2.5 acres (a typical lot size in the township), the amount of land to develop 100 homes would be about 300 acres (including land for streets), compared to about 33 acres for an average single-family lot size of 12,000 square feet. Thus, the more rural sub markets are consuming land at a pace similar to the more urban sub markets that are adding a much greater amount of housing.

Metropolitan Council Household Forecasts				
Thrive MSP 2040				
City or Township	2010	2020	2030	2040
Andover	9,811	11,400	13,500	15,400
Anoka	7,060	7,900	8,400	8,900
Bethel	174	190	220	230
Blaine (pt.)	21,077	25,100	29,200	33,300
City of Nowthen	1,315	1,400	1,450	1,500
Centerville	2,006	2,100	2,160	2,200
Circle Pines	7,926	8,400	8,900	9,300
Columbia Heights	1,416	1,600	1,930	2,200
City of Columbus	23,532	25,500	27,500	29,300
Coon Rapids	4,060	4,700	6,000	7,400
East Bethel	11,110	12,200	13,300	13,600
Fridley	5,171	5,800	6,600	7,100
Ham Lake	380	450	500	550
Hilltop	787	820	880	950
Lexington	6,174	7,300	9,000	10,600
Lino Lakes	1,884	2,000	2,000	2,000
Linwood Township	1,450	1,600	1,860	2,100
Oak Grove	2,744	3,100	3,600	4,100
Ramsey	8,033	9,400	11,300	13,000
St. Francis	2,520	3,100	4,100	5,100
Spring Lake Park (pt.)	2,597	2,800	2,900	3,100
Anoka County total	121,227	136,860	155,300	171,930

Commented [RK72]: https://metrocouncil.org/Data-and-Maps/Publications-And-Resources/Files-and-reports/Detailed-Regional-Forecast-Tables-(June-2017).aspx

ANOKA COUNTY												
SINGLE FAMILY NEW HOUSE CONSTRUCTION BUILDING PERMITS							MULTI FAMILY NEW CONSTRUCTION BUILDING PERMITS					
	2013	2014	2015	2016	2017	2018	2013	2014	2015	2016	2017	2018
Jurisdiction	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty
Andover												
Anoka	8	20	18	18	40	35	0	0	0	0	0	16
Bethel												
Blaine (pt.)	314	286	301	320	326	259	59	102	234	261	35	192
Centerville												
Circle Pines	0	0	0	0	0	0	0	0	0	0	0	0
Columbia Heights	9	11	9	11	6	7	0	0	0	148	0	0
Columbus	5	8	6	12	18	19	0	0	0	0	0	0
Coon Rapids	15	13	43	17	32	21	669	0	0	0	0	0
East Bethel												
Fridley	9	7	5	6	0	14	0	98	0	104	0	68
Ham Lake	54	53	52	67	61	66	0	0	0	0	0	0
Hilltop	0	0	0	0	0	0	0	0	0	0	0	0
Lexington	0	3	5	1	0	0	0	0	0	0	0	2
Lino Lakes	30	22	47	100	133	160						
Linwood Twp.	27	13	16	9	13	10	0	0	0	0	0	0
Nowthen												
Oak Grove												
Ramsey	236	66	292	103	151	313						
St. Francis	12	14	26	38	71	41	0	0	0	0	0	0
Spring Lake Park	2	0	0	0	1	1	0	0	0	0	194	4

Commented [RK73]: Updated for permits

	POPULATION				HOUSEHOLDS				EMPLOYMENT			
	2010	2020	2030	2040	2010	2020	2030	2040	2010	2020	2030	2040
Andover*	30,598	34,000	38,200	41,900	9,811	11,400	13,500	15,400	4,669	5,400	5,800	6,200
Anoka	17,142	18,700	20,000	21,200	7,060	7,900	8,400	8,900	12,840	13,800	14,200	14,400
Bethel*	466	480	520	550	174	190	220	230	86	130	150	180
Blaine (pt.)*	57,186	66,300	76,700	87,300	21,077	25,100	29,200	33,300	19,668	24,800	27,300	29,900
Centerville*	3,792	3,840	3,930	4,060	1,315	1,400	1,450	1,500	409	540	560	590
Circle Pines	4,918	5,000	5,200	5,300	2,006	2,100	2,160	2,200	790	900	950	1,000
Columbia Heights	19,496	20,500	21,800	23,100	7,926	8,400	8,900	9,300	3,484	4,280	4,440	4,600
Columbus*	3,914	4,220	4,950	5,500	1,416	1,600	1,930	2,200	1,172	1,500	1,670	1,800
Coon Rapids	61,476	64,800	68,400	72,100	23,532	25,500	27,500	29,300	23,260	27,100	28,900	30,900
East Bethel*	11,626	12,400	15,400	18,400	4,060	4,700	6,000	7,400	1,123	1,700	1,950	2,200
Fridley*	27,208	29,300	31,600	32,500	11,110	12,200	13,300	13,600	21,333	23,700	24,900	26,100
Ham Lake*	15,296	16,200	17,700	18,700	5,171	5,800	6,600	7,100	2,931	3,700	4,010	4,300
Hilltop**	744	840	960	1,090	380	450	500	550	314	460	480	500
Lexington	2,049	2,100	2,270	2,430	787	820	880	950	467	600	630	640
Lino Lakes*	20,216	22,800	26,900	31,100	6,174	7,300	9,000	10,600	3,313	4,700	5,300	6,000
Linwood Twp.	5,123	5,100	4,930	4,820	1,884	2,000	2,000	2,000	219	330	390	430
Nowthen	4,443	4,590	5,100	5,500	1,450	1,600	1,860	2,100	318	500	590	680
Oak Grove*	8,031	8,600	9,500	10,400	2,744	3,100	3,600	4,100	741	920	980	1,000
Ramsey**	23,668	26,400	30,700	34,700	8,033	9,400	11,300	13,000	4,779	6,700	7,500	8,100
St. Francis	7,218	8,200	10,400	12,600	2,520	3,100	4,100	5,100	1,537	2,200	2,550	2,900
Spring Lake Park (pt.)	6,234	6,510	6,790	7,170	2,597	2,800	2,900	3,100	2,934	3,200	3,350	3,500
Anoka County Total	**330,844**	**360,880**	**401,950**	**440,420**	**121,227**	**136,860**	**155,300**	**171,930**	**106,387**	**127,160**	**136,600**	**145,920**

3.5 Jurisdiction Infrastructure

Anoka County
No matter your interest, there's a lot to do in Anoka County! Whether hiking or canoeing, horseback riding or playing golf, swimming or listening to music, shopping or going to restaurants, Anoka County offers something for every member of the family.

The National Sports Center (NSC) in Blaine has the largest soccer complex in the world, as well as world-class hockey, cycling, track and field, and an impressive new youth golf facility. The USA Cup, one of soccer's premier events, is held each year at the NSC. This and other events bring more than one million visitors to the NSC and Anoka County each year. The NSC provides unique sports opportunities and its success has generated hundreds of jobs.

Anoka County has more than 20 parks spread over 9,000 acres of land. In addition, there are 12 golf courses in the county, including the TPC of the Twin Cities, home of the PGA 3M Championship.

Andover

Commented [RK74]: Updated for 2019

Andover Village was established in 1972 and then became the City of Andover, a city of the 4th class, in 1974. Today the City of Andover's population exceeds 30,000, classifying it as a 2nd class city.

The Andover City Center Complex is located at the intersection of Crosstown Boulevard and Hanson Boulevard and is home to the city offices, Public Works Department, Water Treatment Plant, Community Center / YMCA and the Senior Center. Andover is served by a full-time Police Department through a contract with the Anoka County Sheriff's Department. A professional paid on call volunteer Fire Department also serves the community.

New Businesses
Commercial activities in Andover have increased with construction of a number of new businesses throughout the city. The city is currently marketing several parcels in Andover Station north, a commercial / retail area located north of Bunker Lake Boulevard and west of Hanson Boulevard. Site development inquiries and economic development opportunities should be directed to the Community Development Director at 763-767-5140.

School Districts
Andover is part of 2 of the finest school districts in the state. St. Francis School District 15 covers the northern section of the city, while Anoka-Hennepin School District 11 serves the south 4/5 of the city. Crooked Lake Elementary, Andover Elementary, Rum River Elementary, Oak View Middle School and Andover High School are all located within the City of Andover and are part of School District 11. Legacy Christian Academy
is also located in the city.

Local Amenities
On average, 50 new homes are constructed each year, with a wide variety of lot sizes, architectural styles and price ranges. The city has more than 400 acres of community and neighborhood parks. Kelsey Round Lake Park is a 136-acre nature area for hiking, skiing and environmental observation. Other recreational facilities include more than 400 acres of the Anoka County Bunker Hills Regional Park (which is home to the Bunker Beach Waterpark), Bunker Hills Golf Course, hiking / biking trails, cross-country skiing trails, camping and other

outdoor activities. The Rum River Central Regional Park is located immediately north of Andover on County Road 7.

Andover's governing body consists of a Mayor and 4 City Council members. Council meetings are held on the 1st and 3rd Tuesdays of each month. Residents may address the council at any regularly scheduled meeting. The council appoints members to several commissions that provide recommendations and information to the City Council on a variety of issues.

Anoka
The Burlington Northern Santa Fe Railroad dissects the city. US TH 10 and State Highways 169 and 47, which connect commuter traffic from Minneapolis to northern and northwestern suburbs, also split the city. The city has transit service provided by the Metropolitan Transit Commission and the Anoka County Traveler. A heavy-rail commuter rail line is planned for the near future to connect Minneapolis with the northwest suburbs.

The city has one high school, two middle schools, and four elementary schools and two early childhood/pre-schools with the Anoka-Hennepin School District #11. In addition, there are five private schools (Grades 1–up); several private pre-school/kindergartens; and Anoka-Hennepin Technical College. There are two nursing homes and assisted living facilities. There is one major clinic, Riverway Clinic and several medical professional office facilities. The city is serviced by Mercy Hospital located less than one-half mile to the east of Anoka in Coon Rapids.

Anoka City Municipal Power provides electricity. CenterPoint Energy of Minneapolis provides natural gas service. The City of Anoka Public Utilities provides water and sewer services. Telephone services are provided by Century Link Communications. The Minneapolis Star Tribune and St. Paul Pioneer Press provide daily newspaper coverage and the Anoka County Union is a weekly newspaper. Quad-City Cable TV is the local community cable television provider.

Over 500 businesses are located in Anoka, ranging from in-home offices to major international corporations. The major employers in the City include: Federal Cartridge Corporation, Hoffman Enclosures, Inc., Lakeland Tool & Engineering Company, Mate Precision Tooling, Copper Sales, and Rural Community Insurance Services. In addition, the Anoka Metro Regional Treatment Center, Anoka-Hennepin District #11 schools, along with the City of Anoka and County of Anoka, offer many job opportunities. There are over 15,500 jobs in the city. Throughout its history, Anoka has been strongly involved in promoting economic development.

Commented [RK75]: City of Anoka 2030 Comprehensive Plan

https://www.ci.anoka.mn.us/vertical/sites/%7B213A9A90-C8E1-49AA-AC02-51D3C4882D33%7D/uploads/City_of_Anoka_2030_Comprehensive_Plan.pdf

Bethel
The City of Bethel has several small manufacturing and industrial business; however, it is primarily a residential community with limited retail options. Residents travel to the surrounding communities for the majority of their retail services. Independent School District 15 covers all of the City of Bethel. The Sandhill Center for the Arts School is located in the City of Bethel.

There are no hospitals, clinics or care facilities within the City of Bethel. Currently the City of Bethel has its own Fire Department, but contracts with the Anoka County Sheriff's Office. Connexus Energy handles utilities for electric power along with a small portion of the community having natural gas by Center Point Energy. A large portion of the community uses propane gas. Century Link provides the telephone service.

Blaine

Commented [RK76]: Reviewed for 2019

The City of Blaine has eleven industrial parks, competitive land costs, a strong labor pool, and excellent freeway and highway access. With the development of Interstate 35-W, State Highway 65, and State Highway 10, Blaine's accessibility to the Twin Cities was greatly improved. Because of this, Blaine has become a very attractive location for business and residential development. Blaine has attracted many new corporate residents, such as the Aveda Corporation, Bermo, Dayton Rogers Manufacturing, Infinite Campus, ParaMetrics, General Pattern, and Carley Foundry - Blaine is also home to the National Sports Center, an Olympic class training facility, as well as home to a Tournament Players Club golf course. Transportation infrastructure includes Blaine Airport, Interstate 35W, State Highway 10, and State Highway 65.

Blaine has a strong and growing industrial and commercial business sector. Blaine is home to nearly 1800 businesses. The city has a Federal Post Office, a State National Sports Center and Anoka County Human Service Center, two libraries and a county license bureau. Utilities include four water towers, one water reservoir, three water treatment plant, two power transfer stations, seventeen wells, two natural gas odorizing station, natural gas pipelines, bulk fuel transfer pipelines, city sewer and water, household hazardous waste collection site and five solid waste transfer stations.

The city has a City Hall/Police Department building, a senior center, four fire stations, five senior apartment buildings, a public works facility and twelve schools. Three school districts cover the City of Blaine. They are Independent School District #11, #12 and #16. There are six large childcare centers and three large medical clinics. The closest hospital is located five miles from the city border in the City of Fridley.

Recreation includes a private golf course, the TPC of the Twin Cities and over 62 parks and 81 miles of trails. Blaine is host to two large national spectator events. The USA Cup and the 3M Championships. These events draw several hundred thousand spectators each year.

City of Nowthen

Commented [RK77]: Updated – 2019

City of Nowthen has 55 miles of roads with 26 miles being gravel and 29 miles of blacktop. Burns has a heavily traveled county road (Anoka County Road #22) running east and west through the community and running north and south is Anoka County Road #5. Three different school districts (Independent School District # 11, # 15 & # 728) cover City of Nowthen. There are no hospitals, clinics or care facilities within City of Nowthen. Currently City of Nowthen is contracted with Ramsey Fire Department and Oak Grove Fire Department for fire protection. City of Nowthen is covered by the Anoka County Sheriff's Office on a 911 emergency basis.

Connexus Energy handles utilities for City of Nowthen for electric power along with a small portion of the community having natural gas by Center Point Energy. A large portion of the community uses propane gas. Century Link provides telephone service.

The City of Nowthen is located in the northwest corner of Anoka County. With the cities of Elk River, Ramsey, Oak Grove and St. Francis surrounding Nowthen we are joining the fast-growing communities of Northern Anoka County. With County Road 22 (Viking Blvd.) running completely through our community (east and west), and Highway 47 running north and south through Nowthen, we are easily accessible from all directions. Major retail shops and stores are just a few minutes away in Elk River and Ramsey.

According to the 2010 Local Population Counts and Census, Nowthen is estimated to have 4,443 residents and 1,494 households. Household size averaged 3.10 persons per household.

Currently there are twenty-two (22) residential developments constructed within Nowthen along with two (2) commercial parks. Within the commercial developments we already have restaurants, garden nursery, cabinet shop, mini storage business and bank.

Centerville

Commented [RK78]: Updated – 2019

Centerville city properties have city sewer and only 100 properties do not have city water service. Natural gas and electric service are available throughout the city. Centennial School District #12 covers the city, with one elementary school within the city limits. A new city hall was opened in 1993. Centennial Lakes Police Department provides police protection for the community. Centennial Fire Department provides fire and rescue services for the city. City government is a mayor/city council structure, with a City Administrator.

Centerville is located in southeastern Anoka County, which is part of the Twin Cities Metropolitan Area. The City is surrounded by the City of Lino Lakes and lies between two major interstate highways: I-35E and I-35W. Because Centerville is at the intersection of Interstate 35E and Anoka County Road 14, there is excellent freeway access. Easy freeway access near the industrial park and commercial district is the number one reason why businesses locate in Centerville. We are also only 10 miles South of Forest Lake on either 35E or Highway 61 and we are 2.5 miles west of Hugo on County Road 14.

The county seat is in the City of Anoka, 20 miles west of Centerville, located on the Mississippi River in the southwestern part of the county. The County has relatively level topography, with the northern part of the County having a more rural character and the southern part consisting of developing and fully developed suburban areas.

Circle Pines

Many citizens for commuting into the metropolitan area use Park and Ride systems. No medical facilities exist within the city. Mayor and City Council with City Administrator is the general form of government. Centennial School District #12 covers the entire city with one of the elementary schools located within the city limits.

Circle Pines is the only suburban city in Minnesota that operates its own natural gas distribution company. The city is in close proximity to a major growth area in its neighboring city of Blaine; a heavily used sports center complex, a TPC golf course. One third of the city land area is devoted to parks and open spaces.

Businesses in Circle Pines are mostly retail and are located on the west side of the city (near Lake Drive and Lexington Ave). Another retail center is in the center of the city, along Lake Drive.

Columbia Heights

Columbia Heights has State Highways 65 and 47 running north/south. Most commercial property lies along these two heavily traveled roads. Metro Transit provides many routes of bus service with a small bus transfer hub building in the city. Amoco Oil has one large underground pipe that runs along our northern border for approximately ½ mile. One of the Minneapolis water treatment facilities is located in Columbia Heights. There are two 48-inch water mains, which run from this treatment plant to Minneapolis through the city. This plant provides a significant amount of the water used by Minneapolis and some surrounding suburbs including Columbia Heights.

Columbia Heights School District #13 covers the city. The city has two elementary schools, one middle school, and one high school, a private catholic grade school, an alternative school and a charter school. There is one medical clinic, many dental offices, childcare facilities and a large nursing home complex. Due to the elderly population of CH, Crestview Nursing Home has grown into a very large complex. Beside the nursing home, it includes a 75-unit independent living apartment building, and two large assisted living buildings all connected together. They also have another assisted living building off campus, which includes a locked memory care unit.

Columbia Heights provides public water and sewer service. Water is purchased from the City of Minneapolis. The city also has a complete storm water drainage system. Telephone service is provided by Century Link Communications with many residential consumers using the cable phone service provided by the city cable company, Comcast. CenterPoint Energy provides natural gas service. Xcel Energy provides electrical service.

Columbia Heights has 16 parks of varying sizes and amenities. Anoka County has one park within the City. Huset Park, where most of the athletic fields are located, has new athletic fields, walking paths and a splash pad. The City has three wading pools in its park system.

Commented [RK79]: Updated - 2019

The City has a small area that has been prone to surface flooding that has caused significant backups of the sewer system into homes. Along with a plan to assist homeowners with the cost of installing a valve on their main sewer lines in their homes to shut off future sewer backups, the city has made repairs and upgrades to the storm water and sewer system in the area to minimize possible future flooding/backups.

City of Columbus

Commented [RK80]: Updated 2019

There are two primary commercial areas within Columbus which account for 6% of the total city area. The first is a two (2) mile long corridor along the southerly portions of Lake Drive north of Lino Lakes. The second commercial area (3 square miles) surrounds a portion of Interstates 35W, 35E, and 35 and is designated in Columbus as the I-35 Corridor. There are approximately 535 gross acres and 406 net acres of developed commercial and industrial uses within the Lake Drive and the I-35 corridor. Business development along Lake Drive has historically allowed a mix of commercial and industrial land uses. The Lake Drive commercial/industrial area is currently served with private sewer and water systems.

The entire I-35 Corridor is located within the designated Metro area MUSA district. Municipal services are planned for the entire district and will be completed in phases. The first three phases are completed with only the southeastern portion of the Freeway District not serviced with water and sewer mains in 2019. Columbus is the home of the Running Aces harness track, the City's largest business, a regional entertainment facility located close to the I-35 interchange and situated among other planned higher intensity commercial retail uses.

Columbus conducted an informal survey of 72 businesses in the City in the spring of 2008. A response by 55 businesses (75%) revealed a current total of 1,094 full time jobs and 283 seasonal part-time positions. At Running Aces opening in 2008, they anticipated adding at least 350-400 full and part-time jobs to the numbers stated above.

In 2018, the nine (9) major and leading employers within the City represents 796 full-time and approximately 200 seasonal / part-time jobs.

City of Columbus

Running Aces Harness Park Entertainment	550
Westmor Fluid Solutions Industrial/Retail	150
Ziegler Inc. Heavy Equipment Sales & Service	60
Forest Lake Contracting Construction	55
North Pine Aggregate Mining & Excavation	50
EJM Pipe Services Construction-Horizontal Boring	50
Waldoch Crafts & Customs, Inc. Industrial/Retail	36
Coates Trailers Recreational Vehicle Sales & Service	25
Century Fence Commercial Fence Installation	20

Total Jobs: **796 full time / approx. 200 seasonal/part-time**

The City of Columbus has a statutory form of government with a Mayor and four (4) City Council members. Independent School District #831 covers all of Columbus. There is one elementary school within Columbus.

Coon Rapids

Commented [RK81]: Reviewed for 2019

Coon Rapids is dissected by the Burlington Northern Sante Fe railroad, which has a double-set of tracks leading from Minneapolis to points west and a single-set of tracks that connect Minneapolis with the Duluth, MN - Superior, WI area. The city has a well-traveled freeway system that includes US TH 10 and MN TH 610, connecting commuter traffic from Minneapolis to north and northwest suburbs. The city has transit service provided by the Metropolitan Transit Commission and the Anoka County Traveler. There are two major Park-N-Ride locations. The Northstar Rail commuter rail line runs from Big Lake, Minnesota, to Minneapolis with a rail station in Coon Rapids.

The city has several commercial districts with both large and small retail establishments, including Target, Wal-Mart, JC Penney, and Kohl's. There are manufacturing and light industrial business including Honeywell, RMS Inc., John Roberts Printing, and Ryerson Metals.

Coon Rapids offers numerous neighborhood and regional parks, a municipal golf course, indoor ice arenas, outdoor ice rinks, softball and baseball fields, tennis courts, hiking and biking trails, swimming pools, and a major shopping development for everyone to enjoy.

The city has thirteen (13) public schools: 3 high schools, 2 middle schools, and 8 elementary schools (K-5). In addition, there are three (3) private schools (K-8), and Anoka-Ramsey Community College. There are five (7) established childcare facilities, and six (6) nursing homes and assisted living facilities. The city is serviced by Mercy Hospital and two medical clinics, as well as several medical professional office facilities.

Electricity is provided by three sources: Connexus Energy of Ramsey, Xcel Energy of Minneapolis, and Anoka (City) Municipal Power. CenterPoint Energy of Minneapolis provides natural gas service. Water and sewer services are provided by the City of Coon Rapids public utilities. Century Link Communications and Comcast Cable Television provide telephone services. The Minneapolis Star Tribune and Saint Paul Dispatch & Pioneer Press provide daily

newspaper coverage, and the Anoka County Union Herald is a weekly paper. Comcast Cable of St. Paul and CenturyLink is the local cable television provider.

East Bethel

Commented [RK82]: Reviewed for 2019

The City of East Bethel has a city administrator form of government. A city council of five members, a mayor and four council members represent the electorate and guide city affairs. Day to day operations is under the direction of the city administrator and other key city staff members. The city is currently in the process of updating its comprehensive plan and planning for the future of the community.

The current transportation system in East Bethel is a network of local streets, county highways and a state highway. State Highway 65 runs the length of the community from north to south a total of 8 miles. It is a major state highway that provides access to the northern suburbs to and from the core City of Minneapolis, approximately 25 miles directly south of East Bethel. It also holds the concentration of retail and commercial development for East Bethel. Viking Boulevard (Anoka County Road 22) is the city's main east/west road. There are a total of 36.7 miles of county roads and County State Aid Highways in East Bethel. These roads along with Minnesota State Highway 65 provide the transportation backbone for East Bethel.

The City of East Bethel contracts with the Anoka County Sheriff's Office for its law enforcement services. In 2005 the city completed installation of 15 state of the art weather warning sirens that provide community wide coverage. The 35 members of the East Bethel Volunteer Fire Department, which operates out of three fire stations, provide fire protection.

The educational needs of the community are provided by two school districts. St. Francis School District #15 covers the majority of East Bethel. The southeastern corner of the city is covered by Forest Lake School District #831. District #15 junior high and senior high students attend school in St. Francis, while District #831 students attend schools in Forest Lake. East Bethel does have two elementary schools in the community. These schools are part of District #15. The two schools, East Bethel Community School and Cedar Creek Elementary School share 160 acres of land.

The Anoka County Traveler, sponsored by Anoka County, provides pre-scheduled door-to-door transportation in northern Anoka County, including the City of East Bethel. There are no major medical facilities in East Bethel. Commercial development in East Bethel has been concentrated along the Highway 65 corridor. The commercial activity that dominates Highway 65 is primarily service commercial and public/institutional uses. Connexus Energy provides electrical service. Reliant Energy or Excel Energy provides gas service. Century Link or Frontier provides hard-wired telephone service. US Cable provides Cable TV service. Four private companies provide garbage service to the community.

Fridley

The City of Fridley is conveniently located in the Twin Cities Metropolitan Region approximately 5 miles north of downtown Minneapolis and 10 miles northwest of downtown St. Paul.

Interstate 694 runs east/west in the southern area of the city. Two State Highways run through the City of Fridley, State Hwy 65 and State Hwy 47, as well as numerous county roads and municipal state aid roadways. Burlington Northern Santa Fe Rail Yard is located in the southern part of Fridley and the railroad runs north/south throughout the city.

The City of Fridley is served by four school districts, which include 4 public elementary schools, Woodcrest Elementary, Stevenson Elementary, Hayes Elementary, and North Park Elementary. There is also the Fridley Middle School, Fridley High School, Fridley Area Learning Center (ALC) and Metro Heights Academy (which is part of District 916). In addition to the public schools, there are several private schools located within the city. Al-Amal is a private Islamic school. Woodcrest Baptist School and Totino Grace High School also privately serve residents of Fridley and the surrounding communities. Mercy Hospital – Unity Campus and numerous other medical clinics are located in Fridley and provide medical services to its residents. Connexus Energy and Xcel Energy provide the areas electrical needs and CenterPoint Energy provides natural gas service.

Commented [JS83]: Changed from FLIP and added Metro Heights Academy.

Commented [JS84]: Changed from Unity Hospital

Fridley has a strong park system offering areas for active and passive recreation. The existing park system consists of land owned by the city, four different school districts, as well as Anoka County, provide residents over 727 acres of park and open space areas and miles of paved trails. Springbrook Nature Center, Innsbruck Nature Center, as well as the Anoka County owned Riverfront Park, Locke Lake Regional Park, and Islands of Peace Park on the Mississippi River provide large open spaces for residents to picnic, hike, and fish.

Ham Lake

Commented [RK85]: Reviewed for 2019

There are two schools McKinley Elementary (K-5 school) and the DaVinci Academy of Arts & Sciences (K-8). There are two childcare facilities, two chiropractic clinics, a mental health clinic, and two dental facilities. As a part of the public health program, the City provides (through Anoka County) a low-cost program for well testing.

CenterPoint and Xcel Energy provide natural gas. Connexus Energy provides electricity and Comcast provides cable. There are four cellular phone towers in the City at this time.

All homes/businesses have their own private wells and on-site sewer systems, except for Flamingo Terrace Mobile Home Park, which has one shared system.

Police protection is provided by contract with the Anoka County Sheriff's Office and the Ham Lake Fire Department consisting of approximately 37 members provides fire protection. The Fire Department currently has two stations, with plans for a third. At its completion, all residents will be within a five-mile radius of a fire station, thereby meeting ISO requirements.

The City's Emergency Operations Plan was in the process of being updated in 2019. An addition to Fire Station 1 as well as remodeling to the existing building was completed in 2011. The addition includes a training room that will also serve as the Emergency Operations Center for the City of Ham Lake.

Lexington

Commented [RK86]: Lexington advised current - 2019

The City of Lexington is nearly fully developed, with residential uses constituting a majority of the area. Lake Drive (CSAH 23), where most of the commercial activity of the city is located, divides the city from the northeast to the southwest. Retail uses dominate commercial areas, although there are automobile service uses, restaurants, storage facilities, professional offices, and other commercial use as well. Two public transit operators serve the City of Lexington.

The City of Lexington owns and operates Lexington Memorial Park. It is nearly 20 acres in size and supports two tennis courts, five ball fields, a hockey rink, a skating rink and a warming house. There are also two neighborhood playgrounds in the city.

The City of Lexington is located entirely within the Centennial Independent School District #12. Mayor and City Council with City Administrator is the general form of government. Police protection is provided by the Centennial Lakes Police Department though a joint powers agreement between the cities of Centerville, Circle Pines and Lexington. The Lexington Paid-on-Call Fire Department provides fire protection for the city.

Lino Lakes

Commented [RK87]: Updated for 2019

Lino Lakes contains the 5500-acre Rice Creek Chain of Lakes Regional Park Reserve including 13 lakes and several seasonal wetlands. Within the City there are 555 acres of public semipublic lands, State Correctional Facility, Anoka County Detention Center, and 829 acres of open space and conservation areas. This includes a 5500-acre Regional Park, and churches, schools, city offices, public works facility and two fire stations. Within the City, there are nearly 203 acres of public parks. Due to the amount of wetlands, approximately one-third of the City will not be developed.

Two State Highways run through the City of Lino Lakes, Highway 35E and Highway 35W. Lino Lakes has five schools, Pines School, Blue Heron Elementary, Lino Lakes Elementary, Rice Lake Elementary and Centennial Middle School. Additionally, there is Abiding Branches Corporation ABC Pre- School, Grow on Daycare and Pat-a-Cake Daycare. Fairview-Lino Lakes Clinic and North Suburban Clinic serve as the local clinics. Connexus Energy and Xcel Energy provide the area's power (electricity) needs. Lino Lakes is a Charter City, with a City Administrator and a five-person Council.

Within the City of Lino Lakes there is a county public golf course, Chomonix. Lino Lakes has two private airport facilities, the Hansen Sea Plane Base and the Lino Lakes Airpark.
The City of Lino Lakes continues to see growth in its industrial and commercial. The availability of vacant land, municipal utilities, and freeway access each are strong amenities that will allow Lino Lakes to compete for future economic development. New development has occurred with the extension of sanitary sewer and municipal water.

Between 1991 and 2004, the City has added 995,000 square feet of industrial space and between 1996 and 2004, 425,000 square feet in commercial/retail space. The Lino Lakes Town Center once completed will add nearly 250,000 square feet in new commercial/retail space.

Linwood

Commented [JS88]: Previous language:

Linwood has two majoreast/west Anoka County highways passing through the Township. There are some small businesses located in the township. These consist of automotive repair, convenience store, landscaping and homebuilders. There are no major businesses located in the township. Linwood Township has five elected Town Supervisors, one elected Treasurer and one elected Town Clerk.The educational needs of the community are provided by two school districts. St. Francis Independent School District #15 covers a very small portion of the township. The majority of Linwood Township is covered by Forest Lake School District #831 of which Linwood Elementary is located in the township. Police protection is provided by the Anoka County Sheriff's Office. The volunteer Linwood Fire Department provides fire protection. Linwood Township has no centralized sewer or water, and there are no existing plans for it at the present time.The Township of Linwood has 260 acres of public land. These areas include churches, schools, township offices, fire station, public works, and township parks. The Martin-Island-Linwood Lakes Regional Anoka County Park is located in Linwood Township as well, and is 700 Acres in size. Carlos Avery Wildlife Management Area is also located in Linwood and is 5760 acres in size.

Linwood has two major east/west Anoka County highways passing through the township. The small businesses located in the township consist of an automotive repair shop, convenience store, mini-storage, car lot, residential contractor, as well as many home-based businesses. There are no major businesses located in the township. Linwood Township has five elected Town Supervisors, an appointed Treasurer and an appointed Clerk.

The educational needs of the community are provided by two school districts. The majority of Linwood Township is covered by Forest Lake School District #831 of which Linwood Elementary is located in the township. St. Francis Independent School District #15 covers a very small portion of the township. Police protection is provided by the Anoka County Sheriff's Office. The Linwood Fire Department provides fire protection and first responder services to its residents. The township is served by only individual private septic systems and wells, with no plans for providing centralized sewer or water services.

The Township of Linwood has 260 acres of public land. These areas include churches, schools, township offices, senior/community center, fire station, public works, recycling center and 15 parks. The Martin-Island-Linwood Lakes Regional Anoka County Park is located in Linwood Township, and is 700 acres in size. Carlos Avery Wildlife Management Area is also located in Linwood and is 5,760 acres in size.

Oak Grove

Commented [RK89]: Reviewed and updated 2019

Anoka County State Aid Highways (CSAH) provides the main transportation routes through the City. There are no state highways in Oak Grove except for about 1-¼ miles of Highway 47 in the extreme northwest corner of the City along the St. Francis border. The Burlington Northern Santa Fe (BNSF) railroad line runs the length of the city from north to south. It continues south into the Minneapolis / St. Paul metropolitan and intersects with the Northstar Corridor. The BNSF rail line is used for a commuter rail line and a station has been constructed near Viking Boulevard (CSAH 22). One bridge spans the Rum River.

There are several small retail and home businesses in Oak Grove. The Rum River Tree Farm is a business located in Oak Grove.

The Anoka County Sheriff's Office provides police protection on a contract basis. The volunteer On-Call Oak Grove Fire Department provides fire protection. The educational needs of the community are provided by two school districts. They are Independent School District #15, which covers the majority of the city, with the Lifelong Learning Center located within the city limits and Anoka-Hennepin School District #11, which covers a small portion of the southwestern part of the city. Connexus Energy provides electricity, Center Point Energy provides gas, Comcast provides cable TV and Centurylink and Comcast provide telephone service for the community as well as internet service. Mayor and City Council with City Administrator is the general form of government.

Lots are primarily acreage lots served by private wells and onsite septic systems. There are two exception areas served by public water systems and/or wastewater collector systems. One area is Lake George, served by a city sewer/wastewater facility. The westerly side of Lake George includes a redevelopment area with a 52-unit senior apartment building and 14 single-family lots, which is serviced by the city sewer facility and the West Lake George Public Well water system. A second area is the new Ponds 18-hole golf course and housing development with 206 urban size single-family lots and 18 townhouse lots. The City of St. Francis provides the drinking water and wastewater is handled by a wetland treatment system.

Ramsey

Commented [RK90]: Updated for 2019

Ramsey Infrastructure includes two State Highways Highway 10 and Highway 47. Burlington Northern Santa Fe Railroad runs east/west through the city, which sits along the "Northstar" corridor. The Ramsey Police Department provides police protection to the city and the paid-on-call Ramsey Fire Department provides fire protection. The educational needs of the community are provided by two school districts. They are Anoka-Hennepin School District #11 and Elk River School District #728. Ramsey has two schools from District #11, Ramsey Elementary and PACT Charter. Additionally, there is Lord of Life Preschool, and Children's World Daycare. Ramsey Medical Clinic, which built a new facility in 2011 as a local clinic. Connexus Energy and City of Anoka provides the area's electricity needs. Century Link or Comcast Cable provides telephone service and Center Point Energy provides gas to most of the residents. Some of the more rural residents use propane for gas. Part of the city has city sewer and water, while the remaining residents and business have wells and septic systems. Ramsey is a Charter City, with a City Administrator and a seven-person Council.

The City has 266 acres of public land within the City. These areas include churches, schools, city offices, public work facilities, and fire stations. Within the City, there is nearly 1000 acres of public parks. The larger City-owned parks are Elmcrest Park (95 acres), Central Park (41.3 acres), Rivers Bend Park (47.3 acres), Peltzer Park (32 acres). In addition, Anoka County has two regional parks within the City of Ramsey. They are Mississippi West Regional Park (204 acres) and Rum River Central Park (308.8 acres). The State of Minnesota operates a wayside rest along Highway 10 that is 18 acres in size.

Within the City of Ramsey, there are two public golf courses, Rum River Hills, along Highway 47, and Northfork, along Highway 10. The Boy Scouts own 160 acres of land along Highway 47 and the Rum River that they use for camping and other scout activities. Approximately 1500 acres within the City of Ramsey receive the agricultural property tax classification by the Anoka County Assessors Office. While the City of Ramsey has an abundance of trees, there are no publicly managed forestlands. There are several private business tree nurseries located within the City of Ramsey.

The City of Ramsey's growth, like most slowed considerably in the past couple of years. The Ramsey Town Center now renamed the COR continues to work to bring in new projects. In 2012 a luxury apartment project brought in over 200 units adjacent to the parking ramp near city hall. The City of Ramsey will continue to be a market for light industrial and retail areas.

There are many planned infrastructure projects planned for the future. In regard to transportation, projects include conversion of U.S. Highway 10 to a limited access freeway, a new bridge crossing over the Mississippi River, the relocation of State Highway 169 through Ramsey, and the improvement and widening of County and State aid roads. For utilities, the City will be extending sewer and water trunk lines north of the existing service area to facilitate residential development. The City will also be constructing several new city wells, another water tower, and a water treatment plant within the next 5 years.

St. Francis

Commented [RK91]: Reviewed and updated for 2019

St. Francis Infrastructure includes 77.8 miles of roads with 67.4 miles being blacktop and 10.6 miles being gravel. St. Francis has a major highway (State Highway 47) running north and south through the community and running east and west is Anoka County Road 28. Anoka County Road 24 runs east and west with Anoka County Roads 7 and 9 running north and south into the City of St Francis. The City of St. Francis consists of a City Administrator and a Council of five individuals.

Independent School District #15 covers St. Francis. The city is home to four of the schools for the district. They are: St. Francis High School, St. Francis Middle High School, St. Francis Intermediate School, St. Francis Elementary School and St. Francis Learning Center & Vocational Center.

Currently St. Francis has a fire department with paid on call fire fighters for fire protection. The police department has twelve sworn officers to cover 911 emergency calls and is also assisted by the Anoka County Sheriff's Office in need of emergency. Connexus Energy handles utilities for St. Francis for electric power along with natural gas supplied by CenterPoint Energy. Century Link provides telephone service. Cable service is currently available through Midcontinent.

Spring Lake Park

Commented [REK92]: Reviewed 07/29/11

Spring Lake Park has two State Highways: they are Highway 47 and Highway 65 that run north and south. Anoka County Road 10 runs east and west through the northern portion of Spring Lake Park. Spring Lake Park District #16 covers the City of Spring Lake Park and has its district offices within the city limits. Spring Lake Park High School/ Lighthouse School are located centrally in Spring Lake Park near Hwy 65 and 81st Ave Ne. Park Terrace Elementary is also located in the city near 83rd Ave and Terrace Rd. The City is also home to an early child hood development school.

Commented [JS93]: Updated 4/8/19

The City has 186 acres of public land within the City. These areas include churches, schools, city offices, public work facilities, and fire stations. Within the City, there is 39 acres of public parks. Spring Lake Park does not have a wide range of commercial businesses. Commercial businesses in the city either attempt to capture pass-by traffic along Highway 65, County Road 10 and University Avenue, or they are destination businesses. Light industrial businesses are located east of Highway 65.

The City of Spring Lake Park has no medical facilities, but neighboring communities Fridley and Coon Rapids do. Xcel Energy provides area electricity and Center Point Energy provides area gas. The city provides the sewer and water systems. The City of Spring Lake Park consists of a City Administrator, Mayor and four Council members.

Commented [JS94]: Updated 4/8/19

Infrastructure Chart

ANOKA COUNTY EDUCATION/HEALTH CARE							
54 ECSE – 5		11 K – 12		13 Middle (6-8)		42 High (9-12)	
EC-PK	Enrollment	K-5	Enrollment	6-8	Enrollment	9-12	Enrollment
Students	1702	Students	23942	Students	12809	Students	18127
Private Schools		College/University		Technical		Child Care	
Number		Number	Enrollment	Number	Enrollment	Family	Center
12		2	9,000	1	4,000	479	103
Hospitals		Clinics		Nursing / Long term care and Assisted Living Facilities		275 Public and Private Educational Facilities	
Number	Beds	Number					
1	490	21		8			

ANOKA COUNTY TRANSPORTATION					
General Aviation		Commercial Aviation		Highways	
Location	Blaine	Location	Bloomington	Interstate	35W, 35E, 694
Runway Length	4,855 & 5000	Distance	45 Miles	U.S.	10, 169
Runway surface	Asphalt	Daily flights	1195	State	47, 65, 242, 610
Communications	Control Tower	Airlines	Aer Lingus, Air Canada, Air Choice One, Air France, Alaska Airlines, America Airlines, Boutique Air, Delta, Frontier, KLM, Spirit, United, Condor, Icelandair, JetBlue, Southwest, and Sun Country	Local	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 20, 21, 22, 23, 24, 26, 28, 31, 32, 35, 36, 49, 51, 52, 60, 61, 68, 78, 83, 116, 132
Lighting	Beacon, VOR/DME	Repairs	Signature Flight Support, Honeywell and MSP Jet Center		
Fuel	Jet A, JP4, JP5, Gasoline	Railroad		Common Carriers	
Bus Service		Burlington Northern Santa Fe		ABF Freight Systems	
Greyhound		Amtrak		Manning Transfer	
MTC (Metro Transit Company)		Soo Line - Canadian Pacific		Old Dominion	
Anoka County Traveler		Minnesota Commercial Railway		Dawes Transport	
Jefferson Bus Lines		Union Pacific		Distribution Alternative	
				Murphy Warehouse	
				USF Holland	

ANOKA COUNTY COMMUNICATIONS AND UTILITIES			
Telephone	Newspaper	Radio	TV/Cable/Satellite
Century Link	Minneapolis Star Tribune	WCCO 830 AM	KTCA channel 2
Comcast	St. Paul Pioneer Press	KSTP 1500AM 94.5 FM	WCCO channel 4

Commented [REK95]: Updated 03-03-19
Research Source
http://licensinglookup.dhs.state.mn.us

https://www.schooldigger.com/go/MN/county/Anoka/search.aspx

http://w20.education.state.mn.us/MdeOrgView/districts/index

Verizon	ABC Newspapers	KTIS 900 AM 98.5 FM	KSTP channel 5
AT&T	Anoka County Shopper	KTLK 1130 AM	KMSP channel 9
Sprint	ECM Publishers, Inc	KNOW 91.1 FM	KARE channel 11
T-Mobile		KMNB 102.9 FM	KTCI channel 17
		KDWB 101.3 FM	WUCW channel 23
		KQRS 92.5 FM	WFTC channel 29
		KQQL 107.9 FM	KSTC channel 45
		KSJN 99.5 FM	US Cable
		WTMY 107.1 FM	Comcast Cable
		KTCZ 97.1 FM	Dish Network
		KFXN 100.3 FM	Midcontinent
		WXPT 104.1 FM	Direct TV
			CenturyLink
Electricity	Gas	Water	Sewage/Landfill
Xcel Energy	Xcel Energy	Community Public Utilities	Municipal Sewer Systems
Connexus Energy	Northern States Power	Minneapolis Water Works	
Anoka Municipal Power	CenterPoint Energy	Municipal Water Systems	
Centennial Utilities	Centennial Utilities	Centennial Utilities	

SECTION 4: HAZARD IDENTIFICATION AND RISK ASSESSMENT

Commented [REK96]: Section 4 through 4.4 reviewed and updated

4.1 Overview

Anoka County and its communities are vulnerable to a wide array of natural and manmade hazards that threaten life and property. The Hazard Identification section provides background information for these hazards from a broad perspective. It is important that all of these hazards be initially considered for relevance in advancing through the hazard mitigation planning process. Subsequent sections of the Plan—the Hazard Analysis and the Vulnerability Assessment—address the hazards of specific concern to Anoka County in greater detail from a localized perspective.

Multi-hazard Requirement §201.6(c)(2)(i): [The risk assessment shall include a] description of the type of all natural hazards that can affect the jurisdiction.
A. Does the plan include a description of the types of all natural hazards that affect the jurisdiction? If the hazard identification omits (without explanation) any hazards commonly recognized as threats to the jurisdiction, this part of the plan cannot receive a Satisfactory score. Consult with the State Hazard Mitigation Officer to identify applicable hazards that may occur in the planning area.

4.2 Hazard Identification

The Anoka County Hazard Mitigation Planning Committee re-considered and re-evaluated all hazards in terms of their potential risk to Anoka County and participating municipalities that were included in the 2013 plan. The State of Minnesota Hazard Mitigation Plan identifies Blizzards and Ice Storms individually. For the purpose of this mitigation plan those hazards are combined under Winter Weather. In addition, Lightning, Windstorm and Hailstorm were individually identified. As those hazards are almost always encountered during thunderstorms, they are combined under the Thunderstorm category. Infectious disease is a category that was re-categorized under Epidemics/Pandemics, which also includes Vectors. Water contamination is categorized under public utilities and radiological is categorized under Hazardous Materials.

Depicted in the table below is a comprehensive, listing of specific hazards that are identified by FEMA, the State of Minnesota Hazard Mitigation Plan and Anoka County as hazards that may potentially threaten Anoka County and its municipalities. It is followed by brief definitions or descriptions of each hazard.

During the current update for the Hazard Mitigation Plan, the Manmade Hazard of Illegal Methamphetamine Labs was reviewed. During the previous five years there have been no reported Illegal Methamphetamine Labs found in Anoka County. This item has been replaced with Active Violence / Active Shooter due to the increased number of incidents occurring across the United States and in increase in awareness of Active Violence / Active Shooter events and the need to have response plans in place for these types of incidents.

Commented [RK97]: Included reason that Illegal Methamphetamine Labs were removed and Active Violence / Active Shooter included in Manmade Hazards.

Summary of Natural and Manmade Hazard Threats to Minnesota Communities			
Natural Hazards		Manmade Hazards	
	Earthquake		Attack - Conventional/Nuclear
	Flooding/Flash Flooding		Civil Disturbance/Strikes/Workplace Violence
	Landslides/Mudslides		Dam Failure
	Land Subsidence Sinkholes Caves Mines		Hazardous Material Incidents
	Pandemics/Vectors		Fixed Facilities
	Severe Weather		Radiological Facilities
	Drought		Transportation
	Extreme Temperatures		Hostage Situation
	Thunderstorm/Hail/High Winds/Lightning		Active Violence / Active Shooter
	Tornadoes		Terrorism CBRNE-Cyber
	Tropical Storms/Hurricanes		Transportation Accident
	Winter Storm		Urban Fire
	Wildfire		Utility Power/Water Contamination

4.2.1 Natural Hazards

4.2.1.1 Earthquake

An earthquake is a naturally induced shaking of the ground, caused fractures and sliding of rock within the Earth's crust. Earthquake magnitude is determined by the dimensions of the rupturing fracture (fault) and the amount of displacement that takes place. The larger the fault surface and displacement, the greater the energy produced. This energy produces shaking and a variety of seismic waves that radiate throughout the Earth. Earthquake magnitude is measured using the Richter Scale Table (referenced at 4.3.1.1) and earthquake intensity (how strong an earthquake was felt at a given site) is measured using the Modified Mercalli Intensity Scale.

Most property damage and earthquake-related deaths are caused by the failure and collapse of structures due to ground shaking. The level of damage depends upon the amplitude and duration of the shaking, which are directly related to the earthquake size, distance from the fault, site, and regional geology. Other damaging earthquake effects include landslides and liquefaction. Earthquakes can affect hundreds of thousands of square miles, cause damage to property measured in the tens of billions of dollars, loss of life and injury to hundreds of thousands of persons and disrupt the social and economic functioning of the affected area.

4.2.1.2 Flooding

Flooding is an overflowing of water onto normally dry land and is one of the most significant and costly of natural disasters. Three principle types of floods are riverine floods, flash floods, and dam break floods.

Riverine floods result from precipitation over large areas and occur in river systems whose tributaries may drain large geographic areas.
Flash floods usually result from a torrential rain on a relatively small drainage area and produce localized floods of great volume and short duration.

Areal floods Areal Flood Warning is issued for flooding that occurs more gradually, normally from prolonged and persistent moderate to heavy rainfall.

Commented [RK98]: Added Areal Floods to reflect current flooding potential

Dam break floods are usually the result of intense rainfall producing flooding larger than dam design, faulty design, construction, or operational inadequacies.

4.2.1.3 Landslides/Mudslides

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

Slumps usually damage utilities within or below the slide mass, but seldom cause a threat to life. Flows, in addition to the above hazards can flow around well-built structures, preserving them but causing damage from water and mud.

Translational slides can be the most catastrophic. In addition to presenting a hazard to structures and utilities, they can cause damage and death both far from and only slightly below the source.

The hazards associated with landslides are as diverse as the types of failure. Falls may damage roads or buildings at the base of a steep slope, injure climbers, or remain on a road as a hazard to transportation.

In addition to the direct hazards of a landslide moving out from under or onto structures or utilities, there is a major indirect hazard. Large slides generally do not stop moving until they reach the bottom of a valley where they block streams, usually resulting in flooding and damage to the system ecology (e.g. sediment).

4.2.1.4 Land Subsidence

Subsidence is the formation of depressions, cracks, and sinkholes in the earth's surface, which normally occurs over many days to a few years.

Karst topography develops when beds of relatively soft limestone and dolomite are present. The diluted organic acids present in water percolates downward and dissolves these formations. In such places, rock is honeycombed with cracks, fissures and potentially sizable caverns, which can collapse.

In some areas, natural drainage occurs primarily below ground rather than surface streams. These underground passages are commonly connected to the surface by funnel-shaped depressions called sinkholes. The formation of these sinkholes often leads to ground subsidence or collapse. This results from the settlement of collapse of overlying materials into solution openings beneath the surface, such as caves or enlarged joints. Sinkhole development is usually a slow process; however, they may occur suddenly, without warning.

Abandoned mines, mineshafts, and tunnels sometimes give way. Incidence of subsidence is always a danger to property, dams, factories, and utility lines, but when sudden failures occur, they can also threaten lives.

4.2.1.5 Infectious Diseases/Vectors

Pandemics occur when disease affects large numbers of the population worldwide. Epidemics occur when large numbers are affected in a more localized area such as a city, region, state, or nation. Pandemics have occurred three times in the world's human population.

The 1918-1919 Spanish Flu caused the highest number of deaths. India had 16 million deaths. The U.S. had 675,000 deaths. Worldwide, the estimated fatalities were 20 million to 50 million. The 1957-58 Asian Flu was identified in February 1957 in China. By June, it entered the U.S. Globally it caused a million deaths. In the U.S., 70,000 persons died. It was a Type A virus. The 1968-69 Hong Kong Flu caused four million deaths worldwide and 34,000 deaths in the U.S. It was a Type A virus.

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

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

Influenza viruses are constantly evolving. The viruses undergo minor and major modifications through antigentic drift and antigentic shift. *Antigentic drift* is the mechanism responsible for creating small changes in the genetic composition of the virus. Antigentic drift occurs in Type A and B influenza. *Antigentic shift* describes significant changes in the genetic structure of the virus. It occurs only in type "A" when two different virus strains are simultaneously present in a host or after transmission of viruses from different hosts. The two viruses swap genetic material creating a "new" virus never before seen. The ability to jump species, the constant changes in the generic makeup of the influenza virus, the potential for vaccine loss, and the rapid spread of Flu viruses are some of the reasons influenza is always a threat to the world's population.

Commented [RK99]: Added H1N1 history

In October of 2009 three inmates at the county jail and three deputies contracting the flu virus. The response included vaccinating personnel within the Anoka County Sheriff's Office in additional to setting up community H1N1 vaccine clinics.

Avian flu was first discovered in Canada. It is estimated that 50% of wild ducks in Canada carry various forms of the flu. Highly infectious forms are destructive to domestic poultry causing a rise in food costs. Three strains of avian influenza viruses are known to jump the species barrier from birds to non-human animals to humans: A(H9n2), A(H7N7) and A(H5N1). A(H5N1) is the most lethal, causing death in 68% of humans infected with it. Coughing or sneezing, victims spew infectious droplets at a rate of 150 feet per second. Shaking hands or contact with contaminated public washrooms and doorknobs can spread the disease very quickly.

Scientists expect that an Avian H5 Flu virus, which has swept through chickens and other poultry in Asia, will change genetically into a flu that can be transmitted to humans. It has emerged as a highly pathogenic strain of influenza virus that is affecting the entire western

component of Asia. The CDC is preparing for a possible pandemic. Humans have no immunity to this new avian flu.

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

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

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

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

Emerging Pathogens: Severe Acute Respiratory Syndrome (SARS) started in China in late 2002. The World Health Organization reported 29 countries were affected by the end of July 2003. There were 8,500 cumulative cases and 774 deaths. Health care workers accounted for 1,707 cases. In the United States, 29 cases were confirmed. SARS is closely associated with influenza and is of major concern to all public health officials.

Commented [RK100]: Mercy Hospital Unity Campus – Initial Assessment for Emerging Pathogens (EBOLA)

The Unity Campus of Mercy Hospital has been identified as one of four locations that would provide care for suspected Ebola cases in Minnesota. The plan provides the best opportunity to treat Ebola patients and ensures the state's Level I trauma centers can continue to serve the region's trauma care needs. In addition, the state would be in consultation with the Centers for Disease Control and Prevention (CDC) about whether a patient should be transferred to one of the four federal biocontainment facilities.

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

Animal and Vector-Based Hazards: One of the "new" or "emerging" series of threats to communities is vector-based threats - bacteria, insects, and animals, that pose a direct or indirect hazard to humans, their food supply, or the economy. Although many people don't consider Foot and Mouth Disease to be a "threat," an outbreak of the disease in Europe caused widespread concern over the safety of the meat supply, as well as the possibility of resulting infection of humans. Federal, state and local officials, including the emergency services community, have plans and procedures for handling incidents involving these threats.

4.2.1.6 Severe Weather - Drought

Drought occurs when water supplies cannot meet established demands. Severe drought conditions endanger livestock and crops and significantly reduce surface and ground water supplies, increasing the potential risk for wildfires, and causing significant economic loss. Drought may not be constant or predictable and does not begin or end on any schedule. Long-term droughts last for periods of two to ten years. Droughts are classified as the following types:

- Meteorological drought is defined by the level of "dryness" when compared to an average, or normal, amount of precipitation over a given period of time.
- Agricultural drought relates characteristics of drought to specific agricultural-related impacts. Emphasis is placed on factors such as soil water deficits, water needs based on differing stages of crop development, and water reservoir levels.
- Hydrological drought is directly related to the effect of precipitation shortfalls on surface and groundwater supplies. Changes in land use can alter the hydrologic characteristics of a basin.
- Socio-economic drought is the result of water shortages that limit the ability to supply water-dependent products in the marketplace.

4.2.1.7 Severe Weather - Extreme Temperature

Extreme heat is defined as temperatures that hover ten degrees or more above the average high temperature for the region and last for several weeks. Health risks from extreme heat include heat cramps, heat fainting, heat exhaustion and heat stroke. According to the National Weather Service, heat is the leading weather-related killer in the United States and has killed more people than lightning, tornadoes, floods, and hurricanes combined in the last 10 years. The effects of extreme heat are:

Heat Stroke: Body's inability to control its temperature. Temperature will rise rapidly. Sweating does not occur. This can cause permanent disability. Highest risk populations include outdoor laborers, elderly, children, and people with poor health.

Heat Exhaustion: Occurs when there is an excessive loss of water and salt released in sweat. Those at highest risk include the elderly, people with high blood pressure, outdoor laborers, and those exercising outdoors.

Heat Syncope: Results in a sudden loss of consciousness, which generally returns when the person lies down. There is little or no permanent harm as a result of heat syncope. This disorder is usually associated with people who are not properly acclimated to the weather.

Heat Cramps: Occurs as a result of a mild fluid and electrolyte imbalance and generally ceases to be a problem after becoming accustomed to the heat. This occurs in people who exercise outdoors when they are not used to the activity.

4.2.1.8 Severe Weather - Thunderstorms

Thunderstorms are formed from a combination of moisture, rapidly rising warm air, and a force capable of lifting air (such as a sea breeze, a warm and cold front, or a mountain).

Thunderstorms may occur singly, in clusters, or in lines. Some of the most severe weather occurs when a single thunderstorm affects one location for an extended time.

Straight-line winds can exceed 100 miles per hour and are responsible for most thunderstorm damage. One type of straight-line wind, the downburst, can cause damage equivalent to a tornado. Thunderstorms are associated with tornadoes and heavy rains that lead to floods.

All thunderstorms contain lightning, which is an electrical discharge that results from the buildup of positive and negative charges. When the buildup becomes strong enough, lightning appears as a "bolt." This flash of light usually occurs within the clouds or between the clouds and the ground. A bolt of lightning reaches a temperature approaching 50,000° F in a split second. In the United States, 27 citizens are killed each year by lightning on average. Lightning's electrical charge and intense heat electrocutes on contact, splits trees and ignites fires.

Commented [RK101]: https://www.weather.gov/safety/lightning-fatalities

10-year average 2019 update

Hail is produced by many strong thunderstorms and is a product of the updrafts and downdrafts that develop inside the clouds of a thunderstorm where super cooled water droplets exist. The transformation of droplets to ice requires a temperature below 32° F, and a catalyst in the form of tiny particles of solid matter, or freezing nuclei. Hail can be smaller than a pea or as large as softballs and can be destructive to property, crops, livestock, and people.

4.2.1.9 Severe Weather - Tornados

Tornados are violent windstorms characterized by a twisting, funnel-shaped cloud. A tornado is spawned by a thunderstorm or hurricane and produced when cool air overrides a layer of warm air, forcing the warm air to rise rapidly. A funnel does not need to reach to the ground for a tornado to be present. A debris cloud beneath a thunderstorm is all that is needed to confirm the presence of a tornado. The damage from a tornado is a result of the high wind velocity and wind-blown debris. Tornados can occur at any time of the year; however, the season is generally March through August. Over 80% of all tornadoes strike between noon and midnight.

The most violent tornadoes are capable of tremendous destruction with wind speeds of 250 mph or more. Damage paths can be in excess of 1 mile wide and 50 miles long. Even with advances in meteorology, adequate warning time for tornadoes is short or sometimes not possible.

The intensity, path length, and width of tornadoes are rated according to a scale developed by T. Theodore Fujita and Allen D. Pearson. The Fujita-Pearson Tornado Scale is presented below. Tornadoes classified as EF0-EF1 are considered weak, those classified as EF2-EF3 are considered strong, while those classified as EF4-EF5 are considered violent.

Enhanced Fujita Tornado Scale Description Table

EF-Scale	Damage	Winds (mph)	Description
EF-0	Light	65-85	Chimney damage, tree branches broken
EF-1	Moderate	86-110	Mobile homes overturned
EF-2	Considerable	111-135	Considerable damage, trees downed, mobile homes demolished
EF-3	Severe	136-165	Roofs/walls torn down, trains and cars overturned
EF-4	Devastating	166-200	Well-constructed walls leveled
EF-5	Incredible	200 +	Homes lifted off foundation and carried considerable distances

4.2.1.10 Severe Weather - Tropical Storm/Hurricane

A hurricane is a tropical storm with winds that have reached a constant speed of 74 miles per hour or more. Hurricane winds blow in a large spiral around a relative calm center known as the "eye." The "eye" is generally 20 to 30 miles wide, and the storm may extend outward 400 miles. As a hurricane approaches, the skies will begin to darken and winds will grow in strength. As a hurricane nears land, it can bring torrential rains, high winds, and storm surges. A single hurricane can last for more than 2 weeks over open waters and can run a path across the entire length of the eastern seaboard. August and September are peak months during the hurricane season that lasts from June 1 through November 30.

The center, or eye, of a hurricane is relatively calm. The most violent activity takes place in the area immediately around the eye, called the eye wall. At the top of the eye wall (about 50,000 feet), most of the air is propelled outward, increasing the air's upward motion. Some of the air, however, moves inward and sinks into the eye, creating a cloud-free area.

Tropical cyclones are classified as follows:

Tropical Depression An organized system of clouds and thunderstorms with a defined circulation and maximum sustained winds of 38 mph (33 knots) or less.

Tropical Storm An organized system of strong thunderstorms with a defined circulation and maximum sustained winds of 39 to 73 mph (34-63 knots).

Hurricane An intense tropical weather system with a well-defined circulation and maximum sustained winds of 74 mph (64 knots) or higher. Hurricanes are called "typhoons" in the western Pacific, while similar storms in the Indian Ocean are called "cyclones."

4.2.1.11 Severe Weather - Winter Storms

Winter storms produce an array of hazardous weather conditions including heavy snow, blizzards, freezing rain, ice pellets, and extreme cold. The extreme cold associated with winter storms is a deceptive killer as it indirectly causes injury and death resulting from exhaustion and overexertion, asphyxiation, hypothermia, and frostbite from wind chill.

Extreme ice and snow events are the most potentially disruptive to society, for they can bring down trees and power lines and lead to roof collapse. All forms of severe winter weather can make travel treacherous. Severe winter storms are extra-tropical cyclones (storms that form outside of the warm tropics) fueled by strong temperature gradients and an active upper-level jet stream.

4.2.1.12 Wildfires

Wildfires are uncontrolled burning of grasslands, brush, or woodlands. According to FEMA, people start over four out of five forest fires. Negligent human behavior such as irresponsible smoking or not extinguishing campfires is the cause of many fires. The other primary causes of forest fires are lightning and arson.

There are three different classes of wild-land fires. A surface fire is the most common type and burns along the floor of a forest, moving slowly and killing or damaging trees. A ground fire is usually started by lightning and burns on or below the forest floor. Crown fires spread rapidly by wind and move quickly by jumping along the tops of trees. Wild-land fires are usually signaled by dense smoke that fills the area for miles around.

The potential for wildfire depends upon surface fuel characteristics, recent climate conditions, current meteorological conditions, and fire behavior. Hot, dry summers and dry vegetation increase susceptibility to fire in the fall, a particularly dangerous time of year for wildfire.

Wild-land fires are wildfires in an area where development is essentially nonexistent except for roads, railroads, power-lines, and similar facilities. Urban wild-land interface fires are wildfires in a geographical area where structures and other human development meet or intermingle with wild-land or vegetative fuels.

4.2.2 Manmade Hazards

4.2.2.1 Attack

An "enemy attack" is considered an attack of one sovereign government against another as a declared or undeclared act of war. Although the chances of a strike on the U.S. have greatly diminished, several countries throughout the world have developed nuclear capability. In addition, the possibility exists that a terrorist organization might acquire nuclear weapons. There are four primary potential effects experienced as the result of a nuclear bomb.

Overpressure: is when a nuclear weapon explodes in the atmosphere, a blast or shock wave is created that initially moves at speeds higher than the speed of sound.
INR/EMP: Initial nuclear radiation (INR) is radiation in the first minute after detonation and is hazardous to unprotected people within about 1.5 miles. Electromagnetic radiation pulse (EMP) is conversion of nuclear energy into electromagnetic frequency and occurs when a nuclear weapon is detonated outside of earth's atmosphere. EMP disrupts electrical and electronic equipment across entire continents. The equipment is unusable until repaired.
Fire Risk: The combined effects of blast overpressure damage and the thermal pulse or fireball can ignite combustible materials, causing sustained fires. Primary fires are those ignited directly by the thermal pulse. Secondary fires are generated by damage and destruction from blast overpressures and result from the disruption of furnaces and gas and electric lines.
Fallout risk: A nuclear explosion near the ground makes a big crater. Earth from the crater is changed from solids into hot gas and fine dust. This hot gas and dust, together with vaporized materials, form a giant fireball that rises rapidly and becomes the top part of the nuclear mushroom cloud. The heavier particles of earth become the stem of the mushroom cloud. The earth in the stem and in the mushroom cloud becomes radioactive. The top of the mushroom is a cloud of fine particles. The heavier, larger particles settle close to the point of explosion, the small particles float several hundred miles in the wind. The first 24 hours is the most dangerous period as the initial fallout is highly radioactive. The delayed fallout particles lose much of their radioactivity and reaches earth in rain or snow over periods ranging from days to years.

The three kinds of dangerous radiation in fallout are alpha, beta and gamma. Gamma radiation penetrates the body, causing damage to organs, blood and bones. Large doses of gamma radiation can cause sickness or death. Small doses incurred over a long period of time may not have an immediate effect but may cause various forms of illness later in life. Genetic damage in subsequent generations may also result. Alpha radiation is stopped by the outer skin layers and does not usually present an external hazard. However, if contaminated air, food, or water enters the body in sufficient quantity, considerable internal damage can occur. Beta radiation is more penetrating and may cause burns where fallout particles have deposited on the skin.

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

4.2.2.2 Civil Disturbance/Strikes/Workplace Violence

Civil disorder is defined as any incident intended to disrupt community affairs and threaten the public safety. Civil disorders include: riots mob or strike violence, and any demonstration resulting in police intervention and arrests.

Workplace Violence is defined as employees who are exposed to the use of harassment, intimidation, physical force, or the abuse of power or authority, where the intent is to control by causing pain, fear or hurt.

4.2.2.3 Dam/Levee Failure

A dam/levee is a barrier constructed across a watercourse for the purpose of storage, control, or diversion of water. Dams generally fall into the following categories

Earth Dams make up the vast majority of dams and are safe if they are properly constructed and maintained.
Concrete Gravity Dams are designed to resist sliding and shaped to resist overturning.
Arch Concrete Dams are used to narrow sites and have strong abutments.
Gravity Arch Concrete Dams are a conservative design of the Arch.
Buttress Concrete Dams have a strong foundation and are resistant to sliding, overturning and overflowing.
Stone Masonry Dams are constructed of stone or block with masonry joints.

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

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

4.2.2.4 Hazardous Materials Incident

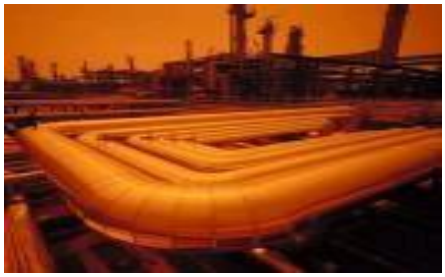
Hazardous materials are chemical substances, when, released or misused, pose a threat to the environment or health. These chemicals are used in industry, agriculture, medicine, research, and consumer goods. Hazardous materials come in the form of explosives, flammable and combustible substances, poisons, and radioactive materials. These substances are most often released as a result of transportation or industrial accidents.

Hazardous materials in various forms can cause death, serious injury, long-lasting health effects, and damage to buildings, homes, and other property. Many products containing hazardous chemicals are used and stored in homes. Varying quantities of hazardous materials are manufactured, used, or stored at an estimated 4.5 million facilities in the United States--from major industrial plants to local dry-cleaning establishments or gardening supply stores. Hazardous materials are transported by highway, railway, waterway, and pipeline daily, so any area is considered vulnerable to an accident.

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

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

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



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

4.2.2.5 Hostage Situation

A hostage situation is one in which people are held against their will and negotiations take place for their release. The situation may range from a simple domestic or isolated criminal act to an attempt to impose will on a national or international scale to intimidate or coerce a government to further a political, social, or religious objective.

4.2.2.6 Active Violence

Active Violence includes an active shooter/ hostile intruder who is actively engaged in killing or attempting to kill people in a confined and populated area by any means including but not limited to firearms (most frequently used), bladed weapons, vehicles, or any tool that in the circumstance in which it is used constitutes deadly physical force.

4.2.2.7 Terrorism

The Federal Bureau of Investigation (FBI) defines terrorism as "the unlawful use of force against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in the furtherance of political or social objectives." Events typically would be expected in urban areas near public gatherings, government facilities, or highly visible areas, but no one area is less likely to be a target than any other.

Terrorism is the use of force or violence against people or property for the purposes of intimidation, coercion, or ransom. Terrorists use threats to create fear among the public, to convince citizens that governments are powerless to prevent terrorism, and to get publicity. Most terrorist incidents have involved small extremist groups who use terrorism to achieve a designated objective. Local, state and federal law enforcement officials monitor suspected terrorist groups and try to prevent or protect against a potential attack. Additionally, the U. S. Government works with other countries to limit support for terrorism.

The FBI categorizes terrorism in the United States primarily as one of two types - domestic terrorism or international terrorism.

- Domestic terrorism involves groups or individuals whose terrorist activities are directed at elements of our government or population without foreign direction.
- International terrorism involves groups or individuals whose terrorist activities are foreign-based and/or directed by countries or groups outside the U. S., or whose activities transcend national boundaries.

Terrorist events in this country have included the 1993 bombing of the World Trade Center in New York, the U. S. Capitol, Mobil Oil's corporate headquarters in New York City, and the bombing of the Alfred P. Murrah federal building in Oklahoma City. More recently, the World Trade Center Buildings and the Pentagon were the targets of a well-planned terrorist attack involving the use of commercial aircraft as flying bombs.

A terrorist attack can take several forms, depending on the technical means available to the terrorist, the nature of the political issue motivating the attack, and the points of weakness of the terrorist's target. Bombings are the most frequently used method in the U. S. Other possibilities include an attack at transportation facilities, utility systems or other public services, or an incident involving chemical or biological agents.

Chemical & biological weapons: There are four major categories under which the chemical agents may be classified:

- Blister agents are intended to incapacitate, rather than kill. These agents were used extensively during World War I. Their use by a terrorist group largely depends on the group's objectives and moral views. If the intent of an attack were to injure numerous people and overload the area's medical facilities without causing many deaths, then a blister agent would be the best choice.
- Choking agents were the agents most used during WW I. With the advent of nerve agents, they have lost much of their usefulness. These substances are intended to cause death and are convenient and readily available to terrorists.
- Blood agents are cyanide-based compounds. Unsuited for use on multitudes of people, the primary use would be the assassination of targeted individuals.
- Nerve agents are the most recently developed chemical weapons. Originally developed by German scientists 1930's as insecticides, nerve agents were used as chemical weapons by the Nazi military. Hundreds of times more lethal than blister, choking, or blood agents, nerve agents have been stockpiled as the primary chemical weapon. These chemicals are the most useful to terrorists due to the small quantity needed to inflict a substantial amount of damage. Fortunately, these chemicals are more difficult to obtain.

Several nations have developed biological agents to use in warfare. Such agents are selected or adapted from bacteria, fungi, viruses, or toxins that cause various diseases in humans, animals, or food crops. Currently, the development of biological agents as weapons has kept pace with our ever-evolving day-to-day technology. Despite the widespread ban, international diplomatic efforts have not been entirely effective in preventing the enhancement and proliferation of offensive biological warfare programs.

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

In 1998, the United States received a wake-up call to the national security dimensions of the threat. Eventually dubbed "Solar Sunrise," this incident found U.S. military systems under electronic assault, with computer systems in the United Arab Emirates the apparent source.

Unclassified logistics, administrative, and accounting systems essential to the management and deployment of military forces were penetrated at a time that military action was being considered against Iraq. The timing of the attacks raised U.S. suspicion that this was the first wave of a major cyber-attack by a hostile nation.

It was eventually learned that two California teenagers under the guidance and direction of a sophisticated Israeli hacker, himself a teenager, had orchestrated the attacks using hacker tools readily available on the Internet.

Another event illustrated the threat to the global economy no less starkly. Early in February 2000, computer servers hosting several of the largest commercial web sites on the Internet were flooded with connection requests, which clogged systems and consumed server capacity. Ultimately, these distributed denial-of-service attacks paralyzed large parts of the Internet. Only through close cooperation between U.S. and Canadian law enforcement investigators was it discovered that a Canadian teenager had been breaking into legions of computers around the world for many months. Retaining control over these compromised servers, he created a "zombie army" which on command would flood the servers of his next corporate victim. The cost of slowdowns and outages that occurred was an estimated billion dollars in economic losses.

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

Together, these incidents make clear that U.S. domestic efforts alone cannot deter or prevent cyber-attacks. We must work closely with our international partners to put into place those cooperative mechanisms that can help prevent the damage of such attacks.

4.2.2.8 Transportation Accident

A transportation accident is an incident related to a mode of transportation (highway, air, rail, waterway, port, and harbor) where an emergency response is necessary to protect life and property.
These are incidents involving air or rail passenger travel resulting in mass casualties or mass fatalities, and incidents the release, or potential release, of hazardous materials. Common day-to-day highway accidents are excluded because they are generally handled without emergency management organization involvement.

4.2.2.9 Urban Fire

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

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

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

4.2.2.10 Utility Failure – Power – Water Contamination

A major electrical power failure is defined as a failure of the electrical distribution system that will exceed twenty-four hours in duration and affect greater than 33% of the geographical area of the county. Electrical distribution systems can be interrupted for a number of reasons, but those that have historically been the main cause are high winds, severe thunderstorms and winter storms. A prolonged major electrical distribution system failure during the middle of winter, accompanied by very cold temperatures, can have dramatic effects on a population

Drinking water comes from surface water and from ground water. Large-scale water supply systems tend to rely on surface water resources such as rivers, lakes, and reservoirs. Smaller water systems tend to use ground water pumped from wells that are drilled into aquifers, geologic formations that contain water. Microbiological and chemical contaminants can enter water supplies. Chemicals can each through soils from leaking underground storage tanks, feedlots and waste disposal sites. Human wastes and pesticides can also be carried to lakes and streams during heavy rains or snow melt.

4.3 Hazard Analysis

Commented [REK102]: Begin Plan Review P 93 -10-30-11

The Hazard Analysis section focuses on those hazards initially identified in the Hazard Identification section and that are of particular concern and relevance to Anoka County. This section provides specific historical occurrences in Anoka County and identifies the future potential for a hazard event to occur. This includes identifying location and spatial extent of the event and best available data regarding the impact on the county.

44 CFR Requirement 44 CFR Part 201.6(c)(2): The plan shall include a risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Local risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards.

The table below is a comprehensive listing of specific hazards that are identified by the State of Minnesota Hazard Mitigation Plan to potentially threaten Minnesota communities. All of these hazards were initially considered for relevance in the hazard mitigation planning process. The table below indicates the specific hazard types identified by Anoka County for further study and analysis.

Summary of Natural and Manmade Hazard Threats to Minnesota Communities			
Natural Hazards		Manmade Hazards	
	Earthquake		Attack - Conventional/Nuclear
X	Flooding/Flash Flooding		Civil Disturbance/Strikes/Workplace Violence
	Landslides/Mudslides		Dam Failure
	Land Subsidence Sinkholes Caves Mines	X	Hazardous Material Incidents
X	Pandemics/Vectors		Fixed Facilities
	Severe Weather		Radiological Facilities
	Drought		Transportation/Pipeline
	Extreme Temperatures		Hostage Situation
X	Thunderstorm/Hail/High Winds/Lightning	X	Active Violence / Active Shooter
X	Tornadoes	X	Terrorism CBRNE-Cyber
	Tropical Storms/Hurricanes		Transportation Accident
X	Winter Storm	X	Urban Fire
X	Wildfire		Utility Power/Water Contamination

The Anoka County Emergency Management Group including jurisdictional representatives considered and re-evaluated all hazards that were identified in the previous plan. The hazards were evaluated and ranked in terms of their potential risk to Anoka County and participating municipalities. The decision to focus on the hazards checked in the above table was based on research of historical events, local knowledge, and the general priorities for implementing mitigation-planning efforts. The State of Minnesota Hazard Mitigation Plan identifies Blizzards and Ice Storms individually. For the purpose of this mitigation plan those hazards are combined under Winter Weather. In addition, Lightning, Windstorm and Hailstorm were individually identified. As those hazards are almost always encountered during thunderstorms, they are combined in the thunderstorm category. Infectious disease is a category that was re-categorized under Epidemics/Pandemics, which also includes Vectors. Water contamination is categorized under public utilities and radiological is categorized under Hazardous Materials.

44 CFR Requirement 44 CFR Part 201.6(c)(2)(i): The risk assessment shall include a description of the type, location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events
A. Does the plan include a description of the types of all natural hazards that affect the jurisdiction? If the hazard identification omits (without explanation) any hazards commonly recognized as threats to the jurisdiction, this part of the plan cannot receive a Satisfactory score.

During this update Methamphetamine Labs was removed from the 2019 plan. The planning teams review found that the risks from Methamphetamine Labs was reduced to the level that no longer warrant this as an identified hazard within Anoka County. In contract the planning team identified Active Violence / Active Shooter as a new risk and the level has risen to the level that warrants inclusion in the 2019 update.

4.3.1 Natural Hazards

Hazard selection for mitigation planning is primarily based on the historic occurrence of disasters that have occurred in the jurisdiction. However, new development and environmental changes may introduce new hazards that must be considered for inclusion in a mitigation plan. Examples include a new industry that introduces a hazardous material, the political climate, such as 9/11, which introduced terrorism, and other events such as human, animal and plant diseases, and infestations.

Each participating municipality was tasked with identifying and describing historical incidents of hazards from local sources such as newspapers, archives, etc. Anoka County Emergency Management then combined the local information with information from external sources such as Minnesota State Homeland Security and Emergency Management (HSEM), Federal Emergency Management Agency (FEMA), National Oceanographic Atmospheric Agency (NOAA), National Weather Service (NWS), and other sources to develop a complete historic analysis of hazards that have affected Anoka County and participating jurisdictions.

44 CFR Requirement 44 CFR Part §201.6(c)(2)(i): The risk assessment shall include a] description of the … location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events

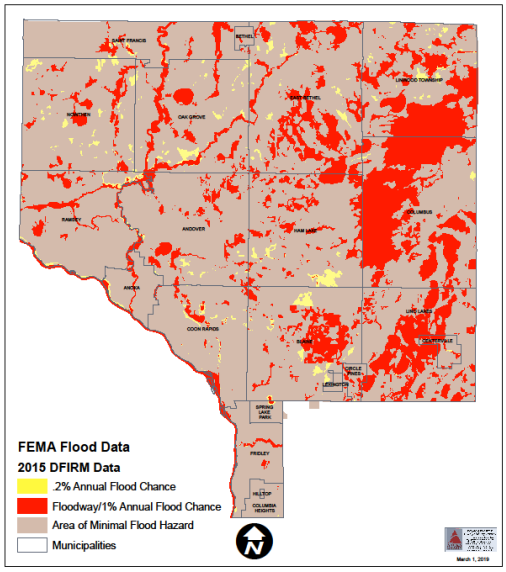
A. Does the risk assessment identify the location (i.e., geographic area affected) of each natural hazard addressed in the plan?

B. Does the risk assessment identify the extent (i.e., magnitude or severity) of each hazard addressed in the plan?

C. Does the plan provide information on previous occurrences of each hazard addressed in the plan?

D. Does the plan include the probability of future events (i.e., chance of occurrence) for each hazard addressed in the plan?

Anoka County, Minnesota
100/500 Year Flooplain Map



4.3.1.1 Flooding/Flash floods

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

Overland flooding is a concern in Anoka County for events that have a high rainfall amounts over a short amount of time. The prominent soil type in Anoka County is sand which will allow normal amounts of rain water to percolate though the soil and move though the storm water drainage systems move water though the six Watershed Districts in Anoka County.

Appendix B illustrates the structures and critical infrastructure in Anoka county that are located in and around the 100- and 500-year flood

Commented [RK103]: Updated with correct pages number and maps updated 2019

plain. The Anoka County Flood Vulnerability Report located in Appendix A pages 5-19 review the historical information available regarding flooding in Anoka County and includes several case studies on the probable losses due to future flood events in Anoka County. The report also reviews infrastructure that is located in and around the 100-year flood plain and may be affected due to 100-year flood event.

In reviewing the information on the infrastructure, facilities, and their physical location related to the flood plain from the maps provided by Anoka County GIS, the property may be in or next to a flood plain and property is marked as being in the flood plain. Many pieces of the infrastructure and structures were completed to meet current building codes and comply with the National Flood Insurance requirements and elevated above the 100-year flood plain level.

As part of the Anoka County Mitigation Plan, jurisdictions will continue to review mitigation options to reduce the impact of flooding on infrastructure and structures that do not comply with the National Flood Insurance requirements and / or are at risk for loss from flooding.

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

Commented [RK104]: Maps updated 2019

Anoka County and participating jurisdictions have experienced flood events 37 times since 1965 resulting in one fatality and five injuries. A total of $203,714,028 in structure damage has been logged along with $481,287 in content damage. A detailed list of flood events is provided in Appendix A.

In 1997, City of Anoka, which is located along the lower Rum River and Mississippi River was impacted to the extent that residents were evacuated, city streets closed, and septic and drain fields failed. Clean up was extensive in removing sandbags and debris. For Ramsey, Fridley and Anoka the likelihood of occurrence is moderate, but the impact is considered high.

Annual Rainfall for Anoka County												
year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2018	0.66	1.40	1.77	2.12	2.09	4.90	4.16	2.74	4.78	3.02R	1.61	1.20
2017	0.73	0.68	0.54	3.53	5.41	3.90	2.70	5.76	1.67	4.40	0.66	0.59
2016	0.24	0.79	1.72	2.75	3.44	3.66	6.02	6.77	5.24	3.08	2.54	1.93
2015	0.18	0.33	0.60	2.15	4.82	3.74	6.89	3.61	2.87	3.31	3.74	1.51
2014	0.91	1.06	0.74	7.23	4.86	10.90	1.96	5.27	2.11	0.96	1.52	1.05
2013	0.69	1.21	2.10	3.84	4.35	5.08	3.55	0.87	2.08	4.07	0.71	1.78
2012	0.53	1.63	1.49	2.49	10.84	3.27	5.27	0.81	0.57	2.03	0.88	1.55
2011	0.91	0.96	2.43	2.88	7.89	3.77	9.90	3.60	0.72	0.65	0.16	0.48
2010	0.51	0.69	1.06	2.03	3.32	6.91	4.43	5.26	5.95	1.80	2.04	2.51
2009	0.45	0.76	1.59	1.04	0.65	4.09	2.41	7.68	0.92	5.67	0.55	1.99
2008	0.08	0.45	1.39	3.34	3.79	4.15	2.61	1.80	3.07	1.60	0.97	1.31
2007	0.90	1.00	2.46	2.09	1.88	1.28	1.79	6.26	5.26	6.02	0.05	1.77
2006	0.37	0.61	1.30	3.52	3.42	3.92	1.38	6.01	4.47	1.32	1.13	1.60
2005	2.06	0.85	1.15	1.92	3.16	6.13	2.37	3.14	7.44	6.46	2.15	0.97
2004	0.38	1.17	2.27	2.50	7.11	3.81	2.97	2.39	5.29	4.13	0.93	0.46
2003	0.20	0.84	1.55	3.07	5.80	7.25	2.52	0.73	2.55	1.31	0.90	0.84
2002	0.37	0.93	1.93	4.15	3.79	6.01	7.06	6.36	5.08	4.50	0.15	0.26
2001	1.45	1.81	0.76	8.52	4.24	4.09	2.39	3.85	2.99	0.88	3.03	0.90
2000	0.77	1.43	0.96	1.91	2.18	4.25	3.79	2.52	0.87	1.21	4.16	1.27

Columbia Heights also experienced flooding citywide in 1997, with street flooding and flooding of structures in low areas. The likelihood of occurrence is considered moderate. Loss impact of future occurrence is less likely due to mitigation projects to correct flooding problems although the impact will continue to be moderate.

Coon Rapids located along the east bank of the Mississippi River experienced flooding from the Mississippi River in April of 1965, 1997 and 2001. All three years were the result of heavy spring rains combined with heavy winter snowfall amounts in the Mississippi River drainage areas. The southwest corner of the city requires sandbagging for approximately 25 homes. Additional sandbagging is necessary for an additional 12 properties in the northwest corner of the city. The river overflowing its banks threatens homes and property, utilities, and back-flooding of sanitary and storm water sewer systems. Out of banks flooding is likely to occur once or twice per decade. Future impact is considered moderate.

Blaine experiences minimal localized flooding with extensive rains and melting snow runoff, but occurrences are infrequent and the impact minimal.

Oak Grove which is located adjacent to the Rum River and experiences minimal flooding with extensive rains and melting snow runoff but occurrences are infrequent and the impact minimal.

Lino Lakes, Spring Lake Park and St. Francis experience storm-water flooding during periods of heavy rain. The flooding is infrequent and the impact minimal.

Anoka County has several dams within planning area. The inundation threat to business and residential areas from a failure is low based on the location of the dams and a review of the Emergency Action Plan for each of the dams that are required to have an emergency action plan. The plans for the Coon Rapids Dam and Oronoco Dam were reviewed and the risk to

Commented [RK105]: Included additional details regarding flooding risks from dam failures. A review of the dams in the around found a low risk to residential and businesses from dam failures.

residential and commercial buildings in Anoka County is low. The list of Dams within the planning area are included in Appendix B.

4.3.1.2 Epidemics/Pandemics/Vectors

Pandemics (World Wide epidemics) have occurred three times in the world's human population.

Anoka County has experienced minor cases of infectious diseases over the last 50 years that have been considered isolated occurrences or minor exposures.

Anoka County has experienced several pandemic/epidemic incidents since 1918. The impacts are multifaceted and include public health and financial impacts.

- The 1918-1919 Spanish Flu caused the highest number of deaths. India had 16 million deaths. The U.S. had 675,000 deaths. In England 230,000 died. In Germany 225,000 and in France 166,000 perished. Worldwide, the estimated fatalities were 20 million to 50 million. During the Spanish Flu pandemic, Spain closed its government. New York City closed its port and trains did not run. The British Navy did not sail for three weeks.
- The 1957-58 Asian Flu was identified in February 1957 in China. By June, it had crossed the Pacific and entered the U.S. Globally, it caused a million deaths. In the U.S., 70,000 persons died. It was a Type A virus.
- The 1968-69 Hong Kong Flu caused four million deaths worldwide and 34,000 deaths in the U.S. It was a Type A virus.
- The 2009 H1N1 Flu was identified in Anoka County with 49 confirmed cases.

Epidemics in Minnesota were major killers in the 1700s and 1800s. The worst culprits were smallpox, polio, influenza, measles, and cholera, and yellow fever.

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

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

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

In 1952 there were 20 cases of polio reported in Anoka County.

In July 2005, officials with Anoka County closed Coon Lake Beach in the City of Columbus for four days following an E. Coli outbreak that sickened at least four children.

Anoka County has developed a mass clinic plan to administer vaccine and other necessary drugs in the event of an epidemic or pandemic event. This plan is tested once every five years and the next exercise will occur in 2020. The drill occurs during the county's participation in the Strategic National Stockpile drill and has been revised to remediate weaknesses discovered in the plan.

Commented [RK106]: Anoka Co Public Health reviewed

Commented [RK107]: Add H1N1 info and review incident over years

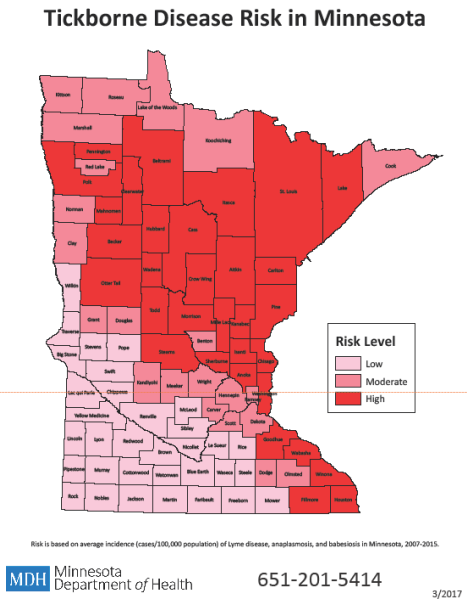
Anoka County and its municipalities have experienced illness and fatalities from pandemic/epidemic events, and the county is at risk of future events. The entire county would be equally impacted by pandemic/epidemic events.

A detailed event lists of epidemics/pandemics that have impacted Anoka County in the past is provided in Appendix A.

Animal and Vector-Based Hazards – One of the "emerging" threats to Minnesota and its citizens are vector-based threats - bacteria, insects and other animals that pose a direct or indirect hazard to humans, their food supply, or the state's economy. Vector-borne diseases diagnosed in Minnesota include: Western equine encephalitis, St. Louis encephalitis, Colorado tick fever, Rocky Mountain spotted fever, Lime Disease, tularemia, rabies, plague, and Hanta-Virus.

Lyme disease is a potentially serious bacterial infection caused by the bite of an infected deer tick. The disease affects both humans and animals. The Minnesota Department of Health is monitoring the spread of the disease across the state and working with residents to limit exposure to the ticks causing the disease.

Commented [RK108]: https://www.health.state.mn.us/diseases/lyme/highrisk.pdf



In Minnesota, the area where Lyme disease is endemic is primarily the drainage basin of the St. Croix River. The ticks are endemic to Washington County along the St. Croix Valley, and to Chisago, Anoka, Pine, Mille Lacs, Crow Wing, Kanabec, and Atkin counties.

Commented [REK109]: Updated 03/22/19

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

Anoka County has had no reported cases of these diseases. While the probability of future events exists, the risk is low for all jurisdictions.

Foot and Mouth Disease (FMD) is a highly infectious and difficult to control disease of cloven-hoofed mammals including cattle, swine, wild sheep, goats, deer, and pigs. Should an outbreak

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

Anoka County has not experienced FMD. Livestock in the rural areas of the county would be at greatest risk for FMD. The probability of this disease-affecting Anoka County is low.

West Nile Virus (WNV) is one of several mosquito-borne viruses in the United States. The virus exists in nature primarily through a transmission cycle involving mosquitoes and birds. Mosquitoes become infected with WNV when they feed on infected birds. Less than one percent of humans infected may develop meningitis or encephalitis, the most severe forms of the disease, which occur primarily in persons over 50 years of age. Symptoms of encephalitis or meningitis may include severe headache, high fever, neck stiffness, stupor, disorientation, tremors, convulsions, paralysis, coma and sometimes, death.

Commented [RK110]: Once case in 2012 from MN Dept of Health

Tests performed in 2004 on a dead bird confirmed the presence of WNV in Anoka County. One case was confirmed in 2012. While the probability for future events exists, this hazard presents a low risk to Anoka County and its municipalities.

4.3.1.3 Severe Weather – Thunderstorms-Hail/Lightning/Wind

Thunderstorms are formed from a combination of moisture, rapidly rising warm air, and a force capable of lifting air (i.e. warm and cold front, a sea breeze, or a mountain). Thunderstorms may occur singly, in clusters, or in lines. It is possible for several thunderstorms to affect one location in the course of a few hours. Most severe weather occurs when thunderstorms affect one location for an extended time.

All thunderstorms contain lightning, an electrical discharge that occurs within the clouds or between the clouds and the ground. A bolt of lightning reaches a temperature approaching 50,000° F. In the United States, on average 27 Americans are hit and killed each year per NOAA.

Hailstones are products of thunderstorms and are developed by downdrafts and updrafts that develop inside the cumulonimbus clouds of a thunderstorm, where super cooled water droplets exist. The transformation of droplets to ice requires a temperature below 32° F and a catalyst in the form of tiny particles of solid matter, or freezing nuclei. Continued deposits of super cooled water cause the ice crystals to grow into hailstones. Hail can be smaller than a pea or larger than softballs and can be destructive to property, crops, livestock, and people.

Straight-line winds, which have exceeded 100 miles per hour, are responsible for most thunderstorm damage. One type of straight-line wind, the downburst, can cause damage equivalent to a tornado. Thunderstorms are also associated with tornadoes and heavy rains that can lead to flooding.

All of the jurisdictions of Anoka County have experienced occurrences of severe thunderstorms accompanied by high winds, lightning and sometimes damaging hail.

Since 1961, 444 severe thunderstorms, hail, lightning, and wind have impacted Anoka County and its jurisdictions resulting in 3 fatalities and 195 injuries. The storms have also caused structure damage and content loss.

Commented [RK111]: https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=27%2CMINNESOTA

Commented [RK112]: update with recent storm data…

The city of Anoka experienced an unusually severe storm in September of 2005. There was damage to homes, trees, streets were closed due to flooding and septic, and drain field failures occurred. Extensive debris removal was required.

Blaine experienced severe thunderstorms in 1987, 1991 and 2002. In 1987 the Police Department fleet of squad cars sustained $74,000 in damage from large hail. Downed trees and roof damage were the major impact of these storms. Damage amounts are unknown but estimated in the $500,000 range per major storm event. The likelihood of occurrence of these storms is high due to Blaine's climate and geographic location. Thunderstorms are a frequent occurrence for the City of Blaine. With Blaine's rate of growth and construction practices what they are, loss from future severe thunder storms would be more significant than what has been seen historically.

City of Nowthen, Centerville, Circle Pines, Columbia Heights, Ham Lake, Oak Grove, Spring Lake Park, St. Francis and Hilltop experienced severe Thunderstorms, hail, winds, lightening in 2001, 2004 and twice in 2005. In all cases power outages occurred resulting from downed power lines. Hundreds of trees have been destroyed by these storms. It is expected that the frequency of these storms will continue to be moderate and the impact moderate.

In the 2005 severe weather event, Coon Rapids experienced hundreds of trees uprooted, power outages due to downed lines; property damage including but not limited to debris damage to private property; some roofs taken off, streets blocked by debris and downed trees; urban flooding due to heavy rainfall and catch basins clogged with debris; hail damage.

In 1996, Fridley encountered over 2 Million dollars in damage from a severe storm. In 1998 another 2.2 million in damage and over 1.5 million in damage from the September 2005 storm.

Ham Lake, on July 1, 1997, was impacted by a severe storm. The Fire Department responded to many calls, municipal employees worked overtime, pumping was required to stabilize a pond in one neighborhood and prevent loss of property/lives, the fire station required roof repair, and a city owned billboard required repair.

Overall the frequency of future occurrences will continue and are considered moderate. The impact of these severe storms is moderate to high and as construction and population continue to increase the impact is expected to increase to high. A detailed list of severe storms is provided in Appendix A.

(2011 heavy rainfall event)

In June 2017, a severe storm passed over the City of Coon Rapids, Circle Pines, and Blaine causing severe damage to buildings and structures. Streets in many communities were flooded with rainwater. In several places, mounds of hail could be seen floating on the floodwaters like small icebergs. In Coon Rapids, so much hail fell that streets had to be plowed. The estimated loss is in the range of 1 Billion dollars across Anoka County.

4.3.1.4 Severe Weather - Tornado

Commented [REK113]: Updated 10-26-11

Tornados are violent windstorms characterized by a twisting, funnel-shaped cloud. Spawned by a thunderstorm (or sometimes as a result of a hurricane), the funnel does not need to reach to the ground for a tornado to be present. A debris cloud beneath a thunderstorm is all that is needed to confirm the presence of a tornado. The damage from a tornado is a result of the high wind velocity and wind-blown debris.

The intensity, path length, and width of tornadoes are rated according to a scale developed by T. Theodore Fujita and Allen D. Pearson. The Fujita-Pearson Tornado Scale is presented below. Tornadoes classified as F0-F1 are considered weak, those classified as F2-F3 are considered strong, while those classified as F4-F5 are considered violent.

Enhanced Fujita Tornado Scale Description Table

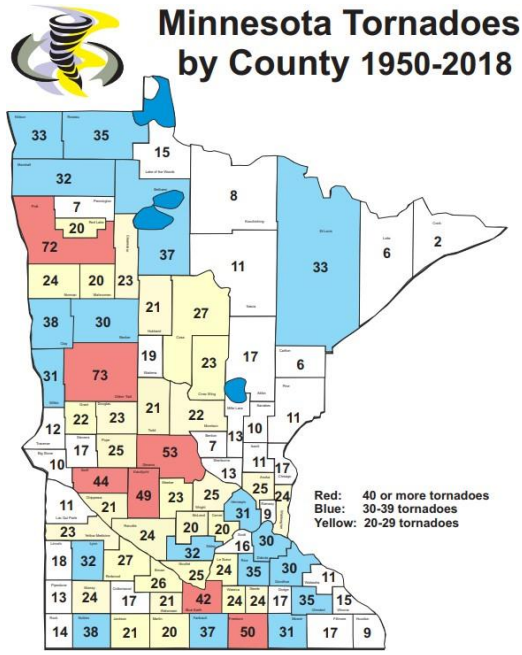
EF-Scale	Damage	Winds (mph)	Description
EF-0	Light	65-85	Chimney damage, tree branches broken
EF-1	Moderate	86-110	Mobile homes overturned
EF-2	Considerable	111-135	Considerable damage, trees downed, mobile homes demolished
EF-3	Severe	136-165	Roofs/walls torn down, trains and cars overturned
EF-4	Devastating	166-200	Well-constructed walls leveled
EF-5	Incredible	200 +	Homes lifted off foundation and carried considerable distances

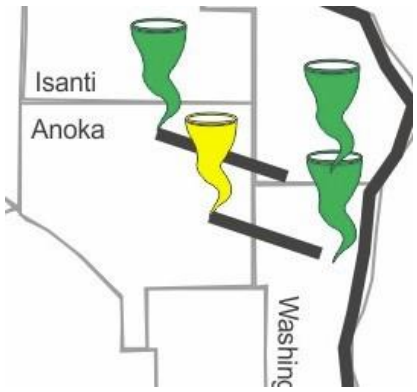
Commented [RK114]: Update graphic

The most violent tornadoes are capable of tremendous destruction with wind speeds of 250 mph or more. Damage paths can be in excess of 1 mile wide and 50 miles long. Even with advances in meteorology, warning time for tornadoes is short or impossible. Tornadoes can occur in any state, but are more frequent in the Midwest, Southeast and Southwest.

Tornado season is generally March through August, although tornadoes can occur at any time of year. They tend to occur in the afternoons and evenings. Over 80% of all tornadoes strike between noon and midnight.

There have been 24 tornado events that have impacted Anoka County and participating jurisdictions since 1961. In some cases, the same tornado may have impacted multiple jurisdictions and was reported more than once.





Two Tornados were confirmed in Anoka County in 2017

Due to climate and geographic location the likely occurrence of tornados can be a frequent occurrence for the City of Blaine. With Blaine's rate of growth and construction practices loss impact from future tornados would be more significant than what has been seen historically.

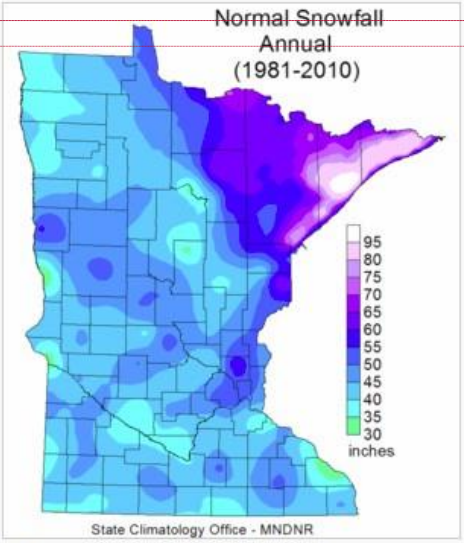
Although tornadoes have affected Anoka County infrequently in the past, probability of damage from this hazard in the future is likely. The entire county is at equal risk of future occurrences. While higher population and housing densities in the municipalities set the stage for increased impact, the potential for property damage and loss of live is equally high for the unincorporated areas of the county due to the large number of mobile homes throughout the rural areas. A detailed list of Tornado incidents is in Appendix A.

4.3.1.5 Severe Weather – Winter Storms

Winter storms include heavy snow, blizzards and extreme cold. Winter storms in Minnesota often include extreme cold and ice. These storms are especially hazardous in terms of closing emergency routes, creating power and utility system failures, and immobilizing economic activity.

In Minnesota, a heavy snow event is defined by six or more inches of snow in a 12-hour period and eight or more inches of snow in a 24-hour period. Snow is considered heavy when visibilities drop below one-quarter mile regardless of wind speed.

Blizzards are the most violent of the winter storms and are characterized by low temperatures, usually below 20° Fahrenheit, accompanied by strong winds in excess of 35 miles per hour with enough snow in the air caused by either falling or blowing snow to create visibilities of one-quarter mile or less for an extended period of time, usually at least three hours or more. While blizzards can occur in Anoka County from October through April, they most commonly occur from November through the end of March.



Normal annual snowfall in Minnesota. Snowfall is greatest in the northeastern part of the state. Source:State Climatology Office, Minnesota Department of Natural Resources - Division of Ecological and Water Resources

Commented [RK117]:

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https://www.dnr.state.mn.us/climate/summaries_and_publications/snow.html

Commented [RK115]: Updated mean annual snowfall 03/22/19

Ice storms bring the entire affected area to a standstill. Ice accumulation causes trees and utility lines to fall, interrupting telephone service and creating significant power outages. Emergency response time is greatly increased, especially to residents in remote, rural areas.

Freezing rain, probably the most serious of the ice storms, occurs during a precipitation event when warm air aloft exceeds 32° while the surface remains below the freezing point. When precipitation originating as rain or drizzle contacts physical structures on the surface ice forms on all surfaces creating problems for traffic, utility lines and tree limbs.

Since 1966 there have been 79 reported incidences of severe winter weather that has impacted Anoka County and its municipalities.

Commented [RK116]: Verify against winter storm data

Recent Winter Storms impacted Anoka County in 1991, 1996 and 2001. The 1991 & 2001 storms were heavy snowfall events, which impacted transportation, commerce and emergency services. Due to climate and geographic location winter storms can be a frequent occurrence for the entire county. With the continued growth rate and construction practices loss impact from future Winter storms would be more significant than what has been seen historically.

On October 31, 1991, county experienced a severe Winter Storm. Streets were closed. Some state highways were closed to vehicular traffic due to snow depth and quantity. There were power outages to many residents and businesses. There was a complete shutdown of businesses and schools. The likelihood of future occurrences is high and the impact may affect travel for multiple days.

During periods of extreme cold, water towers and water lines, particularly in low-income residences with sub-standard insulation, freeze and break, leaving residents without water and creating a burden on the public and private infrastructure.

The probability of future winter storm events is moderate to high, and the entire county is at equal risk. A detailed list of Winter Weather events is in Appendix A.

4.3.1.6 Wildfires

Wildfires are incidents of uncontrolled burning in grasslands, brush, or woodlands. In Minnesota, significant wild-land fires do not occur on an annual basis. However, several hundred lesser events occur annually across the entire state. Seasonal wild fires have been destructive, especially during periods of drought.

The Minnesota Department of Natural Resources (DNR), Division of Forestry has primary responsibility for wild-land fire protection on 22.8 million acres of public and private land. Its total responsibility encompasses 45.5 million acres or 89 percent of the total land base. Wildfires occur throughout Minnesota and according to the Minnesota State Fire Marshal, there are more than 2,000 annual wildfires with an estimated loss of more than $13 million dollars.

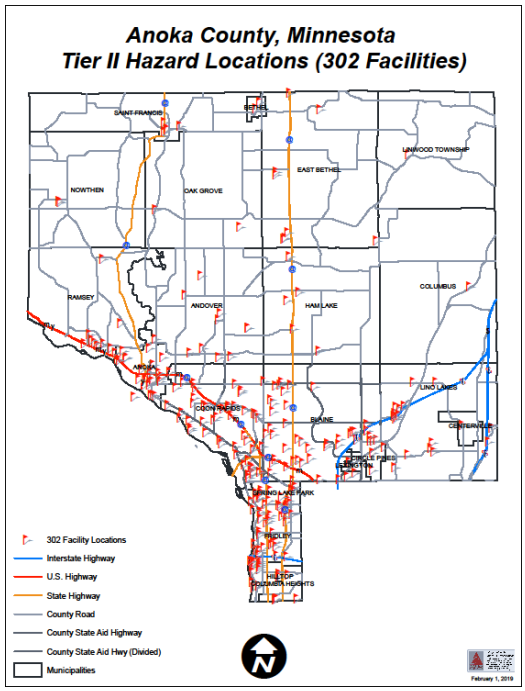
Due to the abundance of vegetation throughout the county, wildfires are a moderate threat in all rural areas. Significant events occur during periods of inadequate rainfall. Lesser events occur annually, usually as a result of escaped controlled burning or arson. The county's municipal and volunteer fire departments respond to a combined average of 100 wild-land fires annually. Many of these fires occur in mixed interface areas and pose threats to occupied structures. Several municipalities have extensive areas of greenbelt and parkland, and brush fires in these cities create a significant urban interface danger.

While we have not experienced the massive wildfires of the west, the potential exists, particularly if drought conditions are present. The probability of future wildfire events is moderate, and all areas of Anoka County are at equal risk for wildfires. A number of annual calls for Wild-land fires is included in Appendix A and are included with annual calls for Grass Fire. The local fire departments and Minnesota Department of Natural Resources have contained and extinguished wild-land and grass fires.

4.3.2 Manmade Hazards

In considering manmade hazards, the Anoka County Hazard Mitigation Planning Committee decided to concentrate its analysis and future mitigation efforts on events presently affecting Anoka County, and on those events that would result in major emergencies or disasters, such as hazardous materials incidents and dam failure.

Hazards that would result in smaller, isolated events (such as arson or civil unrest) or those that would be difficult to mitigate (such as hostage situation or enemy attack) were not considered for further study under this Plan. Additionally, those hazards that are being addressed through concurrent planning efforts, and those that are the result of other hazards being addressed were not considered for further study under this Plan. It is recommended that these manmade hazards become more fully incorporated during future Plan updates and enhancements.



4.3.2.1 Hazardous Materials Incident

Hazardous materials (hazmat) incidents are likely to affect many communities. Every city has multiple facilities that produce, store, or use some form of hazardous materials. Every water treatment plant has chlorine on site to rid the water of bacterial contaminants. Almost every county has a farmer's Co-Op,

which stores significant quantities of pesticides and fertilizers. Hazardous materials are transported down many roads every day. Propane trucks serve the rural populations, and natural gas, used by both rural and urban citizens, must be treated as a dangerous hazard when a leak occurs. In addition, every home has some hazardous materials present in the form of cleaners, batteries, bleach, paint, and gasoline. Hazardous materials incidents typically take three forms: fixed facility incidents, transportation incidents/pipeline incidents and radiological incidents. It is reasonably possible to identify and prepare for a fixed site incident, as laws require those facilities to notify state and local authorities about what is being used or produced. Transportation and pipeline incidents are much harder to prepare for, as the material involved and the incident location are not known until the accident actually happens.

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

A variety of hazardous materials exists in fixed facilities throughout Anoka County. They range from flammable liquids stored or used to fuel vehicles through exotic biological agents. Some materials are particularly lethal even in small amounts, while others require strong concentrations with prolonged exposure.

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

4.3.2.2 Active Violence / Active Shooter

An active violence / active shooter incident involves an individual actively engaged in killing or attempting to kill people in a confined and populated area. The individual may be armed with a firearm or bladed weapon or may in engage in other violent acts such as driving a vehicle into a crowd. There may or may not be a pattern or method to their selection of victims.

Workplace violence is any act or threat of physical violence, harassment, intimidation, or other threatening disruptive behavior that occurs at the work site. It ranges from threats and verbal abuse to physical assaults and even homicide. It can affect and involve employees, clients, customers and visitors. Homicide is currently the fourth-leading cause of fatal occupational injuries in the United States. According to the Bureau of Labor Statistics Census of Fatal Occupational Injuries (CFOI), of the 4,679 fatal workplace injuries that occurred in the United States in 2014, 403 were workplace homicides. In 2015, there were 417 workplace homicides. However, it manifests itself, workplace violence is a major concern for employers and employees nationwide.

Nearly 2 million American workers report having been victims of workplace violence each year. Unfortunately, many more cases go unreported. Research has identified factors that may increase the risk of violence for some workers at certain worksites. Such factors include exchanging money with the public and working with volatile, unstable people. Working alone or in isolated areas may also contribute to the potential for violence. Providing services and care and working where alcohol is served may also impact the likelihood of violence. Additionally, time of day and location of work, such as working late at night or in areas with high crime rates, are also risk factors that should be considered when addressing issues of workplace violence. Among those with higher-risk are workers who exchange money with the public, delivery drivers, healthcare professionals, public service workers, customer service agents, law enforcement personnel, and those who work alone or in small groups.

4.3.2.3 Terrorism

Commented [RK119]: Review SPLC, exec summary for MN MIPT.org

- Terrorism is defined in the Code of Federal Regulations as "the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives" (28 C.F.R. Section 0.85).
- The Federal Bureau of Investigation (FBI) defines terrorism based on the location of the actors:
- Domestic terrorism is the unlawful use, or threatened use, of force or violence by a group or individual based and operating entirely within the United States or Puerto Rico without foreign direction committed against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof in furtherance of political or social objectives.
- International terrorism involves violent acts or acts dangerous to human life that are a violation of the criminal laws of the United States or any state, or that would be a criminal violation if committed within the jurisdiction of the United States or any state. These acts appear to be intended to intimidate or coerce a civilian population, influence the policy of a government by intimidation or coercion, or affect the conduct of a government by assassination or kidnapping. International terrorist acts occur outside the United States or transcend national boundaries in terms of the means by which they are accomplished, the persons they appear intended to coerce or intimidate, or the locale in which their perpetrators operate or seek asylum.

Terrorism is the use of force or violence against people or property for the purposes of intimidation, coercion or ransom. Terrorists often use threats to create fear among the public, to try to convince citizens that their government is powerless to prevent terrorism, and to get publicity for their causes.

The 1966 Defense Against Weapons of Mass Destruction Act, defines weapons of mass destruction as "any weapon or device that is intended, or has the capability, to cause death or serious bodily injury to a significant number of people through the dissemination, release or impact of toxic or poisonous chemicals or their precursors, a disease organism, or radiation or radioactivity." President Clinton's 1994 Executive Order 12938 entitled "Proliferation of

Weapons of Mass Destruction" also defines weapons of mass destruction to be "nuclear, biological, or chemical weapons."

The Domestic Preparedness Program is a partnership of federal, state, and local agencies with the goal of ensuring that, as a nation, we are prepared to respond to a terrorist attack involving nuclear, biological, or chemical weapons - weapons of mass destruction (WMD). Today, the term "Homeland Security" is used to denote the concept of preparing for these kinds of events.

The FBI categorizes terrorism in the United States primarily as one of two types - domestic terrorism or international terrorism. Domestic terrorism, such as the bombing of the Murrah Building in Oklahoma City, involves groups or individuals whose terrorist activities are directed at elements of our government or population without foreign direction. International terrorism, such as the attacks on the World Trade Center in 2001, involves groups or individuals whose terrorist activities are foreign-based and/or directed by countries or groups outside the U. S., or whose activities transcend national boundaries. Attacks can take many forms. They are all designed to terrorize citizens.

While Anoka County has not experienced terrorist events, the county contains potential target sites for terrorist attack. The presence of these facilities places Anoka County at a high threat level for forms of terrorist attack. A terrorist event at these facilities would affect the entire county.

Bioterrorism: In the wake of the September 11, 2001 terrorist attacks, concerns about bio-terrorist attack involving smallpox prompted Minnesota health officials to develop a mass vaccination plan. Anoka County Community Health's plan was tested during an August 2004 Strategic National Stockpile drill and subsequently revised response plans to address problems found during that exercise.

During the outbreak of anthrax in the last months of 2001, local firefighters and law enforcement officers investigated several suspicious-looking substances, packages, and mail at a Department of Energy facility, private residences, businesses, a hospital, a post office, and a school. Though all tests were negative, decontamination procedures were initiated at a school and post office. Planned Parenthood received one of several hundred fake anthrax letters mailed by an anti-abortion extremist.

The probability of future events exists and the county and its municipalities are at equal risk of Bioterrorism. The Community Health and Environmental Services Department maintains an All Hazards Emergency Response and Recovery Plan, of which components are tested on an annual basis.

Bomb Threats: The Northtown Mall was the target of a bomb explosion that damaged the mall but caused no injuries.

Though none have been found credible, bomb threats by telephone are becoming an increasing problem for schools and government throughout Anoka County. In 2018 there were twenty-one bomb threats reported to Anoka County Central Communications.

Bethel, Blaine, Coon Rapids, Lexington, Lino Lakes and St. Francis all experienced multiple terrorist bomb or anthrax threats. All of which are considered domestic in nature. The majority of threats involved schools. A number of the incidents involve actual pipe bombs being found. In

2001, several Anthrax hoax letters were reported. The incident of domestic terrorist threats is decreasing.

Cyber-terrorism: Several facilities in Anoka County have been affected by computer viruses and attempted system entry by "hackers" malware. There are more than five intrusion attempts each day.

Improved virus detection capability and system security safeguards have reduced the threat of cyber-terrorism for Anoka County's larger industrial and government facilities. Smaller businesses and jurisdictions throughout the entire county remain at future risk of this hazard.

Anoka County and its municipalities have reported 176 instances of domestic terrorism since 1992. The vast majority of events are bomb threats. In 2001, there were several instances of anthrax threats. There have been some pipe bombs found and in one case a bomb was detonated in a local mall. The reported losses are $1,001 in structure damage and $4,101 in content damage.

The expectation is that the future occurrence of a terrorist's incident is low but the impact could be high. A detailed list of reported terrorist events is provided in Appendix A.

4.3.2.4 Urban Fire

The 2010 Minnesota State Fire Marshall reports on fire in Minnesota reports that structures fires are the most prevalent (44%) type of fire and are responsible for the most deaths and injuries. In structures, the three leading causes are 1) Cooking and 2) Open Flame 3) and other equipment. 36% occurred in structures without an operational smoke alarm. Flame damages were more extensive in rural structure fires, contained to the building, than urban structure fires that were contained to an object or room.

Anoka County and its participating jurisdictions experienced 916 fire runs in 2017 causing a total loss of $10,045,103 and 1 death. There have been 51 civilian fire related deaths since 1990 as reported by the Minnesota Fire Marshal's Office.

Commented [RK120]: https://dps.mn.gov/divisions/sfm/mfirs/Documents/Fire%20in%20Minnesota/Fire-in-Minnesota-2017.pdf

An urban fire is any instance of uncontrolled burning which results in major structural damage to large residential, commercial, industrial, institutional, or other properties in developed areas.

Generally, a large structure is defined as exceeding 25,000 square feet. Large structural fires would include fully involved structures of this size or greater such as hospitals, government centers, manufacturing facilities, warehouses, barns, and multiple storied buildings.

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

The likelihood of occurrence for serious urban fires continues to be a concern and the expectation of future occurrences is moderate and the impact is high.

4.4 Hazard Vulnerability

Commented [RK121]: Mention risk and capability assessment though Digital sandbox (2011) Identify further mitigation actions for the risks

4.4.1 Jurisdiction Hazard Vulnerability Assessment

This Vulnerability Assessment Section provides a vulnerability summary and builds upon the information provided in the Vulnerability Analysis Section and the detailed list of hazard events in Appendix A. This section identifies community assets and development trends in Anoka County, then assessing the potential impact and amount of damage that could be caused by each hazard event. The objective of the assessment is to prioritize hazards of concern to Anoka County and to identify hazard mitigation strategies that will reduce or eliminate their effects.

Multi-hazard Requirement §201.6(c)(2)(ii): [The risk assessment shall include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community.
FMA Requirement §78.5(b): Description of the existing flood hazard and identification of the flood risk, and the extent of flood depth and damage potential.
A. Does the plan include an overall summary description of the jurisdiction's vulnerability to each hazard?
B. Does the plan address the impact of each hazard on the jurisdiction?

The vulnerability findings presented in this section have resulted in an approximation of risk. These estimates should be used to understand relative risk from hazards and the potential losses that may be incurred, however, uncertainties are inherent in loss estimation methodology, arising from incomplete scientific knowledge concerning specific hazards and their effects on the environment, as well as incomplete data sets, and from approximations and simplifications that are necessary in order to provide a meaningful analysis. Further, most data used in this assessment covers relatively short periods of records which increases the uncertainty of any statistically based analysis.

To complete the assessment, each participating municipality provided the best available local data. The Anoka County Emergency Management Organization then collected data from a variety of external sources, including state and federal agencies, and analyses were performed qualitatively and quantitatively. Additional work will be done on an ongoing basis to enhance, and further improve the accuracy of the baseline established here, and it is expected that this vulnerability assessment will continue to be refined through future plan updates as new data and loss estimation methods or tools become available to Anoka County.

Two distinct methodologies were applied to assess the risk for Anoka County. The first includes a quantitative analysis that relies upon best available data and technology, while the second methodology includes a qualitative analysis that relies more on local knowledge and rational decision-making. Upon completion, the methodologies are combined to create a "hybrid" approach for assessing hazard vulnerability for Anoka County that allows for some degree of quality control and assurance.

Quantitative Methodology consists of utilizing Hazards U.S. Multi-Hazard (HAZUS®MH), a geographic information system (GIS) based loss estimation software available from FEMA. For some hazards, the quantitative assessment also incorporates a detailed GIS-based approach using best available local data from Anoka County. When combined, the results of these vulnerability studies are used to form an assessment of potential hazard losses (in dollars), along with the identification of specific community assets that are deemed potentially at-risk. As the HAZUS-MR software was only acquired by Anoka County during this mitigation planning cycle, its use was limited. Future updates to the plan will fully utilize HAZUS-MR along with the

Geospacial Analysis software from ESRI that Anoka County Emergency Management would like to purchase in the future to provide for additional features in HAZUS-MR.

Qualitative Methodology relies less on technology, and more on historical and anecdotal data, community input, and professional judgment regarding expected hazard impacts. The qualitative assessment is built around varying degrees and weights of risk values as assigned by the consensus of Anoka County's Hazard Mitigation Steering Committee.

The vulnerability assessment for Anoka County uses a scoring system based on the adjacent table.

HAZARD RATING	
No Fatalities/Injuries	0
Less than 3 injuries	1
Less than 5 fatalities/10 injuries	2
Less than 15 fatalities/50 injuries	3
Less than 25 fatalities/100 injuries	4
More than 26 fatalities/injuries	5
No Economic Damage or Cost	0
Less than 500,000 damage cost	1
Less than 2,000,000 damage cost	2
Less than 5,000,000 damage cost	3
Less than 10,000,000 damage cost	4
More than 10,000,000 damage cost	5
Extent area minimal/no evacuation	0
Extent area local/minimal evacuation	1
Extent area local/some evacuation	2
Extent area 1 mi./some evacuation	3
Extent area 3 mi./major evacuation	4
Extent area >3 mile/evacuation	5
Probability once in 100+ years	0
Probability once in 50 years	1
Probability once in 10 years	2
Probability once in every 5 years	3
Probability once in every 1 year	4
Probability more than once in 1 year	5
No repetitive loss	0
One repetitive loss	1
Three repetitive losses	2
Five repetitive losses	3
Ten repetitive losses	4
More than ten repetitive losses	5

Risk Analysis In 2011 Anoka County completed a risk and hazard assessment using Digital Sandbox. The results are being used to assess and review the natural and manmade risks to Anoka County. On an annual basis updates are conducted using the Department of Homeland Security THIRA (Threat Hazard Identification Risk Assessment) methodology.

4.4.1.1 Countywide Hazard Vulnerability

After analyzing and evaluating all available data, the Emergency Management Group developed the hazard history vulnerability assessment. The table below lists the hazards identified by the group as hazards that have impacted Anoka County and its municipalities in the past and the potential hazards that could impact the county and its municipalities in the future. The committee then used the risk table developed previously to determine the county's degree of vulnerability to each hazard.

When historical information for all selected hazards is evaluated and scored, flooding is the number one hazard that has impacted Anoka County. It was recognized that the availability and quantity of data varied significantly between hazards and thus impacted evaluations. The committee believed that had economic data been accurately recorded, urban fires and severe weather dollars could easily have been up to 5-10 times greater.

Below are tables that summarize the hazards that the Emergency Management Group identified as the potential hazards that could affect the communities in the county.

In 2011 Anoka County completed a risk and capability assessment though Digital sandbox and is participating in additional regional Threat and Risk Assessment though the Twin Cities Urban Area Security Initiative (UASI). The results of these studies will be used to increase the readiness of Anoka County and it's jurisdictions to respond to large-scale events and disasters

in Anoka County and the surrounding communities. On an annual basis updates are conducted using the Department of Homeland Security THIRA (Threat Hazard Identification Risk Assessment) methodology.

ANOKA COUNTY HAZARD VULNERABILITY SUMMARY							
Hazard	Incidents	Years	Avg./yr.	Fatalities	Injuries	Assets	Cost
Flooding	39	45	1	1	5	165	204,195,335
Pandemics/Vectors	10	99	0.1	89	5929	0	0
Thunderstorms	169	39	4.3	4	27	788	30,498,783
Tornadoes	32	39	0.8	84	672	1,010	123,144,790
Winter Storms	100	38	2.6	9	104	32	1,443,379
Wildfires	133	29	5.5	3	6	33	6,520,269
Hazmat	532	30	21.3	3	1	1	274,780
Active Violence / Active Shooter	0	0	0	0	0	0	Pre and Post costs in Millions
Terrorism	176	28	7.5	0	0	1	5,102
Urban Fires	175	40	5	36	3	214	15,627,050
Totals	1472			229	6748	2,383	244,072,448

Commented [REK122]: Updated from NWS Records

After analyzing and evaluating all available data, the Emergency Management Group developed the historic hazard vulnerability assessments below, using the risk table developed previously by assigning a value (1 through 5). This table is a result of the cumulative impact of total hazard events over a period of years ranging from a low of 20 years of data for hazard events to 94 years of data in the case of pandemics/epidemics.

ANOKA COUNTY HAZARD HISTORIC VULNERABILITY ASSESSMENT							
Hazard Event	Fatality and Injury	Economic Loss	Extent or Impact	Probability of Occurrence	Repetitive Loss	Vulnerability Score	Priority
Urban Fires	5	5	2	5	3	20	1
Thunderstorms	2	5	2	5	3	17	2
Flooding	2	5	5	3	3	16	3
Tornadoes	5	5	1	3	0	14	4
Wildfires	2	4	3	3	1	13	5
Pandemics/Vectors	5	3	1	1	2	12	6
Active Violence / Active Shooter	3	3	4	3	0	13	7
Winter Storms	4	2	1	3	1	11	8
Hazmat	2	1	0	5	2	10	9
Terrorism	1	1	2	5	0	8	10

Commented [RK123]: New item and priority 7

The second assessment table rates the overall impact of a future hazard event Hazardous Materials became the top priority hazard primarily because of the inventory of hazardous materials, the number of facilities in the county and the frequent shipment of hazardous material through the county. A fire and explosion resulting from an accident or a terrorist attack at these facilities would impact the county more than any other hazard except for severe weather (thunderstorms) and Urban fires. Flooding dropped from first to forth as a result of several mitigation projects that reduced the impact of floods. This table estimates the impact of a single severe hazard event.

ANOKA COUNTY HAZARD FUTURE ASSESSMENT

Hazard Event	Fatality and Injury	Economic Loss	Extent or Impact	Probability of Occurrence	Repetitive Loss	Vulnerability Score	Priority
Hazmat	5	4	3	3	2	17	1
Thunderstorms	2	3	3	5	2	16	2
Urban Fires	2	4	2	5	1	14	3
Flooding	2	4	3	3	1	13	4
Tornadoes	3	5	1	2	1	12	5
Pandemics/Vectors	5	3	1	1	1	11	6
Active Violence / Active Shooter	3	3	4	3	0	13	7
Terrorism	3	4	2	1	0	10	8
Wildfires	2	2	3	2	0	9	9
Winter Storms	1	2	1	2	1	7	10

Anoka County has been the subject of several disaster declarations and subsequent disaster funding. The table below identifies those declarations and the economic relief provided.

ANOKA COUNTY DISASTER DECLARATION ECONOMIC RELIEF

Date	Declaration Number	Hazard Incident	Economic Relief	Source
04/11/1965	OEP188	Flooding	Unknown	FEMA
04/18/1969	OEP255	Flooding	Unknown	FEMA
04/08/1997	DR-1175	Flooding	$137,941	FEMA
08/25/1997	DR-1187	Severe Storms, high winds, tornadoes	$217,574	FEMA
06/23/1998	DR-1225	Flooding	$103,623	FEMA
05/16/2001	DR-1370	Flooding	$36,186,739	FEMA
06/07/2011	DR-1990	Severe Storms and Tornados	$47,732	FEMA
06/11/2017	SD-0016	Wind and Hail	$202,476	MN
		Totals	$36,896,085	

Commented [RK124]: Add State Disaster Info

Commented [REK125]: Sheldus
http://webra.cas.sc.edu/hvri/products/sheldus.aspx

4.4.1.2 Municipality Hazard Vulnerability

In many instances individual municipalities have specific vulnerabilities to hazards that differ from the countywide vulnerabilities. This differentiation can exist due to factors such as geographic location, topography, geologic differences, and proximity to manmade hazards.

In addition to this summary section, within the discussion of each hazard in Section 4.4 Hazard Analysis, there is narrative identifying the specific municipalities or areas of the county that have been affected by hazards, the extent of impact and the probability of future occurrence in Anoka County. The table below summarizes each jurisdiction's specific vulnerability to each identified hazard.

Multi-hazard Requirement §201.6(c)(2)(iii): For multi-jurisdictional plans, the risk assessment must assess each jurisdiction's risks where they vary from the risks facing the entire planning area.
FMA FEMA 299 Guidance: The Plan should be coordinated with, and ideally developed in cooperation with, all of the local jurisdictions within the geographical area
A. Does the plan include a risk assessment for each participating jurisdiction as needed to reflect unique or varied risks?
D. Does the plan include the probability of future events (i.e., chance of occurrence) for each hazard addressed in the plan?

ANOKA COUNTY – LIKELIHOOD OF POTENTIAL HAZARD INCIDENT OCCURRING *

Very Likely=3 Likely=2 Possible=1 Jurisdiction	Flooding	Pandemic	Thunderstorm	Tornado	Winter storm	Wildfires	Hazmat	Active Violence / Active Shooter	Terrorism	Urban Fire
Anoka County	2	1	3	2	3	3	3	1	1	3
Andover	2	1	3	2	3	3	3	1	1	3
Anoka	2	1	3	2	3	1	3	1	1	3
Bethel	1	1	3	2	3	3	3	1	1	2
Blaine	1	3	1	2	1	2	2	1	3	2
City of Nowthen	1	1	3	2	3	3	3	1	1	1
Centerville	2	1	3	2	3	1	3	1	1	3
Circle Pines	1	1	3	2	3	1	3	1	1	3
Columbia Heights	1	1	3	2	3	1	3	1	1	3
City of Columbus	1	1	3	2	3	3	3	1	1	1
Coon Rapids	2	1	3	2	3	3	3	1	1	3
East Bethel	1	1	3	2	3	3	3	1	1	2
Fridley	2	1	3	2	3	1	3	1	1	3
Ham Lake	1	1	3	2	3	2			1	2
Hilltop	1	1	3	2	3	1	3	1	1	3
Lexington	1	1	3	2	3	1	3	1	1	3
Lino Lakes	2	1	3	2	3	3	3	1	1	3
Linwood Township	1	1	3	2	3	3	3		1	1
Oak Grove	2	1	3	2	3	3	3	1	1	2
Ramsey	2	1	3	2	3	3	3	1	1	3
St. Francis	2	1	3	2	3	3	3	1	1	2
Spring Lake Park	1	1	3	2	3	1	3	1	1	3
Totals	32	22	66	44	66	50	66	22	22	55

* Likelihood of occurrence in any single year.

Commented [JS126]: 2 down from 3

Commented [JS127]: 1 from no entry

Commented [JS128]: 1 from no entry

In addition to differing levels of vulnerability to identified hazards; individual municipalities can also suffer significant differences in losses resulting from the impact and extent of a disaster. Generally, these losses are a direct result of population density, commercial development, or housing density/ value.

Within the discussion of each hazard in Section 4.3 Hazard Analysis, the narrative identifies those municipalities and specific areas of the county that have increased vulnerability and impact to that hazard and notes the factors contributing to an increased impact or vulnerability. The table below depicts the differing aspects of losses by jurisdiction.

Multi-hazard Requirement
§201.6(c)(2)(i): The risk assessment shall include a description of the location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.
FMA Requirement §78.5(b): Description of the existing flood hazard and identification of the flood risk, and the extent of flood depth and damage potential
B. Does the risk assessment identify the extent (i.e., magnitude or severity) of each hazard addressed in the plan?

ANOKA COUNTY – IMPACT OF POTENTIAL HAZARD INCIDENT *

High=3 Medium=2 Low=1 Jurisdiction	Flooding	Pandemic	Thunder-storm	Tornado	Winter storm	Wildfires	Hazmat	Active Violence / Active Shooter	Terrorism	Urban Fire
Anoka County	1	3	1	2	1	2	2	2	3	2
Andover	1	3	1	2	1	2	2	2	3	2
Anoka	2	3	1	2	1	1	2	2	3	2
Bethel	1	3	1	2	1	2	2	2	3	1
Blaine	1	3	1	2	1	2	2	2	3	2
City of Nowthen	1	3	1	2	1	2	2	2	3	1
Centerville	1	3	1	2	1	1	2	2	3	2
Circle Pines	1	3	1	2	1	1	2	2	3	2
Columbia Heights	1	3	1	2	1	1	2	2	3	2
City of Columbus	1	3	1	2	1	2	2	2	3	1
Coon Rapids	2	3	1	2	1	2	2	2	3	2
East Bethel	1	3	1	2	1	2	2	2	3	1
Fridley	3	3	1	2	1	1	2	2	3	2
Ham Lake	1	3	1	2	1	2	2		3	1
Hilltop	1	3	1	2	1	1	2	2	3	2
Lexington	1	3	1	2	1	1	2	2	3	2
Lino Lakes	1	3	1	2	1	2	2	2	3	2
Linwood Township	1	3	1	2	1	2	2		3	1
Oak Grove	1	3	1	2	1	2	2	2	3	1
Ramsey	1	3	1	2	1	2	2	2	3	2
St. Francis	1	3	1	2	1	2	2	2	3	1
Spring Lake Park	1	3	1	2	1	1	2	2	3	2
Totals	26	66	22	44	22	36	44	43	66	36

Commented [JS129]: 2 from no entry

Commented [JS130]: 1 from no entry

3 = High – Significant and lasting destructive effect on lives or property
2 = Medium – Moderate destructive effect on lives or property; recovery is moderately expensive and/or takes longer to accomplish
1 = Low - Lower magnitude of destructive effect on lives or property; recovery can typically be accomplished in a reasonable period of time.

4.4.2 Critical Facilities and Infrastructure

Multi-hazard Requirement §201.6(c)(2)(ii)(A): The plan should describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard area
FMA Requirement §78.5(b): Description of the existing flood hazard and identification of the flood risk, including estimates of the number and type of structures at risk, repetitive loss properties.
A. Does the plan describe vulnerability in terms of the types and numbers of existing buildings (including repetitive loss structures), infrastructure, and critical facilities located in the identified hazard areas

According to HSEM, critical facilities and infrastructure are those systems "whose incapacity or destruction would have a debilitating impact on the defense or economic security of that community." These systems include the following eight general categories: telecommunications infrastructure; electrical power systems; gas and oil facilities; banking and finance institutions; transportation networks; water supply systems; government services; and emergency services.

Anoka County does not maintain an active database for critical facilities and infrastructure, although it has begun to build one through its development of GIS capabilities.

All participating municipalities provided the critical facilities and or assets within their communities. Anoka County Emergency management then combined the local jurisdiction information with the county information to identify all critical assets and structures.

This information was provided to the County's Information Technology Department which generated the value information from tax records and other sources. The content value was estimated using the following average percentages. The structure value was used as the basis.

- Residential=20%
- Agriculture=30%
- Government=40%
- Commercial/Industrial=50%

For security purposes the detailed tables are located in Appendix B and contain the asset name or description, the type of facility/asset, time open, capacity, square footage, structure and content value. In addition, the following information is provided.

- In Hazard defines whether the facility is within a hazard such as a Flood Plain, within a 3-mile radius of a major chemical facility, in the path of Dam Waters, within a 5-mile radius of a nuclear facility, etc.
- Economic Asset defines whether the asset or facility produces significant revenue for the jurisdiction or the loss of the facility would have a significant negative economic impact on the jurisdiction.
- Historic Asset defines whether or not the asset or its contents is of significant historic value to the jurisdiction.

- Construction defines the material the facility is constructed of: B=Block or Brick, C=Concrete, M=Metal and W=Wood. Only the predominant material is listed.
- Emergency Generator identifies if the facility has alternate stand-a-lone power capability.

The table below is a summary table that is extracted from the detailed tables in Appendix B and specifically lists the number of potentially at-risk buildings or facilities type, based on the GIS analysis of Anoka County's critical facilities database in combination with the databases of hazardous material facilities and Federal and state-owned facilities as provided.

ANOKA COUNTY AND PARTICIPATING JURISDICTIONS CRITICAL FACILITY SUMMARY

Jurisdiction	Number of Critical Facilities	Critical Facilities Total Sq. Footage	Total Structure Value	Total Content Value
Anoka County	34	1,218,567	141,462,381	74,110,957
Andover	44	889,600	138,310,000	55,204,120
Anoka	29	4,091,172	165,723,200	66,289,280
Bethel	4	475,000	950,000	380,000
Blaine	41	4,919,582	563,200,000	241,825,000
City of Nowthen	4	67,025	1,571,570	750,000
Centerville	4	73,000	11,500,000	4,600,000
Circle Pines	13	319,635	19,578,689	7,831,475
Columbia Heights	15	611,542	111,812,452	44,724,981
City of Columbus	9	251,069	12,866,646	6,322,314
Coon Rapids	102	5,404, 179	462,169,166	138,358,068
East Bethel	7	228,997	20,474,300	10,302,720
Fridley	32	4,702,725	221,589,091	102,166,296
Ham Lake	13	360,013	50,982,680	26,554,754
Hilltop	5	362,280	22,244,000	8,897,600
Lexington	10	416,779	8,662,500	3,830,000
Lino Lakes	34	112,1733	110,347,642	42,339,059
Linwood	3	112,1733	110,347,642	42,339,059
Oak Grove	7	119,454	15,496,250	9,016,370
Ramsey	21	901,901	55,983,480	25,315,262
St. Francis	21	1,971,390	80,407,300	35,099,223
Spring Lake Park	14	586,917	68,156,182	28,196,383
Totals	465	11,899,505	2,393,835,171	974,452,921

Commented [RK131]: ADDED LOTR / County Fair Ground

4.4.2.1 Repetitive Flooding Analysis

In order for local jurisdictions to qualify for hazard mitigation assistance through the Flood Mitigation Assistance Program (FMA), local hazard mitigation plans must include documentation in its mitigation strategy that continued enforcement of applicable flood plain management standards is parts of its strategy to reduce flood losses. In addition, a local mitigation plan must include a section in its risk assessment that describes the source of repetitive flooding problems and identifies the number and type (residential, commercial or governmental) of repetitive loss properties in the jurisdiction. This should include the extent of flood depth and damage potential.

REPETITIVE FLOODING STRUCTURES

Number of Structure	Structure Type Residential Commercial Government Critical etc.	Structure and Content Loss	Response and Recovery Costs	Flood Type Storm Water Out of Banks Low Lying Maintenance	Flood Location	Number of events	Flood Depth-ft	Damage Potential-H,M,L
12	Fridley	7,077,762	50,000	Out of Banks	Riverview Terrace Residential	4	842	H
12	Coon Rapids	0	5,000	Out of Banks	8200 block of Mississippi Blvd Residential	3	842	M
6	Coon Rapids	0	5,000	Out of Banks	114th & Zea Street Residential	3	838	M
7	Andover	0	32,412	Out of Banks	153rd &7th Avenue Residential	3	844	L
44	Anoka	800,000	25,000	Out of Banks	River Avenue Residential	7	842	H
23	Ramsey	0	15,000	Out of Banks	Bowers Drive Residential	3	842	M

Commented [REK132]: Followed up with cities for status, did not change for last 6 years.

There are currently no plans for mitigation actions for the properties in the city of Coon Rapids. The locations are watched and communication is maintained with the property owners during times that the Mississippi River is elevated.

Fridley is examining the possibility of adding a trail between the Riverview Terrance Apartments and the river to create a public walkway near the Mississippi River and also to act as a base in the event that a temporary levee may need to be constructed to prevent flooding.

The properties owners in the City of Anoka are aware of the possibility of flooding by the Mississippi River and currently do not have any plans for mitigation action. The residents and City track the water levels and maintain communications with the residents during times that the Mississippi River is elevated.

4.4.2.2 Future Structure Vulnerability

In Anoka County, only the hazard flooding has an identified geographic location and is defined by 100 and 500-year floodplain maps.

The hazard narratives in the hazard analysis section 4.2, describe the vulnerability of current structures in existing flood hazards in terms of impact, extent and future occurrences of flooding.

The table below identifies potential new structures that may be constructed in the flood plain area and the vulnerability of those structures to future flooding events within specific municipalities and Anoka County.

Multi-hazard Requirement §201.6(c)(2)(ii)(A): The plan should describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard area.
FMA Requirement §78.5(b): Description of the existing flood hazard and identification of the flood risk, including estimates of the number and type of structures at risk, repetitive loss properties.
B. Does the plan describe vulnerability in terms of the types and numbers of future buildings, infrastructure, and critical facilities located in the identified hazard areas?

4.4.3 Asset Inventory by Hazard

Commented [RK133]: Updated 03/29/19

The vulnerability of each of these facilities was partially assessed using GIS analysis by comparing their physical location with the extent of known hazard areas that can be spatially defined through GIS technology. For Anoka County, this is flooding (500-year flood zones).

For this vulnerability assessment, the rest of the defined hazard areas are not deemed unique enough to make definitive vulnerability assessments for potentially at-risk buildings or facilities that differentiate them from other areas of Anoka County.

The following four hazards were selected to provide an estimate and expectation of the impact of these hazards on Anoka County and the participating municipalities.

Although these are specific geographic locations for a hazardous materials event, tornado or terrorism incident, these hazards and the impact location were arbitrarily selected to demonstrate the possible impact of such an event on a municipality and Anoka County.

Commented [RK134]: Updated from each assessment - 2019

ANOKA COUNTY/MUNICIPALITY DISASTER ASSESSMENT SUMMARY							
Hazard Event	Hazard Description	Estimated Fatalities	Estimated Injuries	Damaged Assets	Estimated Structure, Asset, Contents Damage Cost	Estimated Response Recovery Wages Income Loss/Cost	Source FEMA State Local etc.
Flooding	Countywide 500-year flood	0	1	23	51,277,490	1,547,325	Local
Hazmat	Large Chemical Facility - 3-mile radius	5	50	760	178,250,202	5,356,906	Local
Terrorism	High rated terrorist target-1 square block	45	500	19	101,027,447	2,040,149	Local
Tornado	Typical municipality-500yds wide, 2 miles long	1	12	97	128,419,086	7,081,050	Local

Incident population and structure/asset information is collected using a GIS system and information from the county property tax assessor.

Current and future population and structures are identified, and variances calculated within a defined hazard area.

For flooding which has an identified geographic location (500-year flood plan maps), future structure vulnerability is also identified.

Maps for each of the Vulnerability Assessments are available in Appendix B.

Commented [RK135]: Updated 2019 info

ASSET INVENTORY SUMMARY-BY HAZARD						
Hazard	Hazmat Hazard – 3-mile radius					
	In Hazard Current	In Jurisdiction Current	%	In Hazard (10yr)	In Jurisdiction Projected	% Proj.
Population	53260	132785	40.11	56935	141947	40.11
Structure Type						
Residential	15161	44330	34.20	16070	46990	34.20
Agriculture	6	101	5.94	6	101	5.94
Commercial/Ind	647	1250	51.76	692	1337	51.76
Government	114	269	42.37	114	269	42.37
Total	15928	45950	34.66	16883	48697	34.66
Structure Value						
Residential	$2,883,228,400	$8,544,879,200	33.74	3,056,222,104	9,057,571,952	33.74
Agriculture	$922,900	$20,390,300	4.52	$922,900	$20,390,300	4.52
Commercial/Ind	$678,054,200	$1,247,054,500	54.37	725,517,994	1,334,348,315	54.37
Government	$134,532,300	$282,594,400	47.60	$134,532,300	$282,594,400	47.60
Total	$3,696,737,800	$10,094,918,400	36.61	3,917,195,298	10,694,904,967	36.62

ASSET INVENTORY SUMMARY-BY HAZARD											
Hazard		Hazmat Hazard – 3-mile radius									
Qty	Facility or Asset Name or Description and Address	Admin Offices Communication Utilities Education Type Emergency Svcs. Law Enforcement Medical Type Financial Svcs. Transportation	Capacity	Critical Asset	Economic Asset	Historic Asset	Vulnerable Population	Construction B,C,M,W	Special Considerations	Square Feet	Asset or Structure and Content Value
15,161	Residential	Residential	53260	Y	N	N	Y	W	Y	19,221,523	$3,459,874,080
11	Agriculture	Agriculture	0	N	N	N	N	W	Y	4,615	$922,900
647	Commercial/Ind	Commercial/Ind	9030	Y	Y	N	N	B	Y	2,630,667	$1,352,595,120
114	Government	Admin Offices Correctional	2210	Y	Y	N	N	B	Y	354,127	$105,194,218
1	Sandburg School	Education-Middle	979	Y	N	Y	Y	B	Y	22,173	$6,133,300
1	Fred Moore School	Education-Junior	1014	Y	N	N	Y	B	Y	41,634	$13,266,400
1	Franklin School	Education-Elem	345	Y	N	N	Y	B	Y	20,490	$4,956,000
1	AMRTC	Medical-State Hospital	394	Y	Y	N	Y	B	Y	201,786	$59,157,100
1	Wilson School	Education-Elem	553	Y	N	N	Y	B	Y	23,577	$5,863,300
1	St. Stephens School	Education-Private	450	Y	N	N	Y	B	Y	35,157	$10,471,300
1	Mercy Hospital	Medical	2400	Y	Y	N	Y	B	Y	626,379	$209,701,759
1	Mercy Healthcare	Medical	1625	Y	Y	N	Y	B	Y	121,990	$31,120,720
1	U.S. Post Office	Government	100	Y	Y	N	N	B	Y	8,877	$2,485,420
1	Hoffman Engineering	Major Industrial Employer	3000	Y	Y	N	N	C	Y	11,236	$3,595,520

Total	75,360		23,324,226	$5,265,337,137

ASSET INVENTORY SUMMARY-BY HAZARD						
Hazard	500-year flood					
	In Hazard Current	In Jurisdiction Current	%	In Hazard (10yr)	In Jurisdiction Projected	% Proj.
Population	2461	18,700	13.16	2633	20,000	13.16
Structure Type						
Residential	146	4848	3.01	23	5187	2.81
Agriculture	0	35	0	0	0	0
Commercial/Ind	3	349	.859	0	373	.803
Government	4	77	5.19	0	77	5.19
Total	153	5274	2.90	23	5638	2.71
Structure Value						
Residential	$63,378,800	$938,859,000	6.75	$67,815,316	$1,004,579,130	6.75
Agriculture	$0	$0	0	$0	$0	0
Commercial/Ind	$604,200	$235,648,400	.256	$646,494	$252,143,788	.256
Government	$405,500	$40,176,500	1.00	$433,885	$42,988,855	1.00
Total	$64,388,500	$1,214,683,900	5.30	$68,895,695	$1,299,711,773	.530

Commented [RK136]: Updated 2019

ASSET INVENTORY SUMMARY-BY HAZARD												
Hazard		500-year flood										
Qty	Facility or Asset Name or Description and Address	Admin Offices Communication Utilities Education Type Emergency Svcs. Law Enforcement Medical Type Financial Svcs. Transportation	Capacity	Critical Asset	Economic Asset	Historic Asset	Vulnerable Population	Construction B,C,M,W	Special Considerations	Square Feet	Asset or Structure and Content Value
146	Residences	Residential	2461	N	N	N	N	W	N	422,525	$76,054,560
3	Commercial / Ind	Commercial / Ind	431	Y	Y	N	N	B	Y	3,021	$966,720
4	Government	Government	289	Y	Y	N	N	B	Y	2,028	$567,700
		Total	3181							427,574	4,365,360

Commented [RK137]: Updated 2019 data

ASSET INVENTORY SUMMARY-BY HAZARD						
Hazard	Terrorism – 1 block radius					
	In Hazard Current	In Jurisdiction Current	%	In Hazard (10yr)	In Jurisdiction Projected	% Proj.
Population	545	61476	.89	575	68400	.84
Structure Type						
Residential	52	19,400	.25	55	21,517	.25
Agriculture	0	0	0	0	3	0
Commercial/Ind	12	900	2.21	13	573	2.21
Government	0	100	0	0	119	0
Total	1	20,400	3.70	68	22,212	3.70
Structure Value						
Residential	19,250,000	4,387,500,000	.43	2,544,871	4,103,620,313	.06
Agriculture	0	0	0	0	432,550	0
Commercial/Ind	154,178,715	877,500,000	17.57	31,582,797	804,825,529	3.92
Medical	149,673,600	149,673,600	100	157,905,648	157,905,648	100
Government	0	585,000,000	0	0	121,467,953	0
Total	173,428,715	5,850,000,000	18	34,127,668	5,030,346,344	.68

ASSET INVENTORY SUMMARY-BY HAZARD											
Hazard		Terrorism – 1 block radius									
Qty	Facility or Asset Name or Description and Address	Admin Offices Communication Utilities Education Type Emergency Svcs. Law Enforcement Medical Type Financial Svcs. Transportation	Capacity	Critical Asset	Economic Asset	Historic Asset	Vulnerable Population	Construction B,C,M,W	Special Considerations	Square Feet	Asset Structure and Content Value
1	Mercy Hospital	Medical	2400	Y	Y	N	Y	B	Y	626,379	200,441,120
1	Mercy Healthcare	Medical	1625	Y	Y	N	Y	B	Y	121,990	39,036,640
2	ECM Printing	Commercial	100	N	Y	N	N	B	N	16,988	5,436,160
2	North Star Glass	Commercial	10	N	Y	N	N	B	N	1,593	509,760
1	Peterson Pinney	Commercial	10	N	Y	N	N	B	N	15,100	656,960
1	Jerry's Schwinn	Commercial	10	N	Y	N	N	W	N	874	279,520
1	Loftus Apartments	Apartments	30	N	N	N	Y	B	Y	13,032	3,127,680
2	Eldorado Apartments	Apartments	66	N	N	N	N	B	N	13,815	3,315,480
2	Dakota Apartments	Apartments	30	N	N	N	N	B	N	9,661	2,318,520
52	Residences	Residential	245	N	N	N	Y	W	N	12,061	2,894,640
		Total	4631							857,506	269,785,944

Commented [RK138]: Updated 2019 data

ASSET INVENTORY SUMMARY-BY HAZARD						
Hazard	Tornado					
	In Hazard Current	In Jurisdiction Current	%	In Hazard (10yr)	In Jurisdiction Projected	% Proj.
Population	2800	26030	9.29	2868	29,000	9.88
Structure Type						
Residential	458	8205	5.58	475	9000	5.27
Agriculture	0	35	0	0	35	0
Commercial/Ind	0	300	0	0	330	0
Government	5	10	50	5	10	50
Total	463	8550	5.41	480	9375	5.12
Structure Value						
Residential	78,891,100	1,299,672,000	6.07	81,900,000	1,425,000,000	5.74
Agriculture	0	4,200,000	0	0	4,200,000	0
Commercial/Ind	0	247,000,000	0	0	275,000,000	0
Government	19,096,100	33,328,674	57.29	19,096,100	39,900,000	47.85
Total	97,987,200	1,584,200,674	6.18	100,996,100	1,744,100,000	5.79

ASSET INVENTORY SUMMARY-BY HAZARD											
Hazard		Tornado									
Qty	Facility or Asset Name or Description and Address	Admin Offices Communication Utilities Education Type Emergency Svcs. Law Enforcement Medical Type Financial Svcs. Transportation	Capacity	Critical Asset	Economic Asset	Historic Asset	Vulnerable Population	Construction B,C,M,W	Special Considerations	Square Feet	Asset or Structure and Content Value
458	Residences	Residential	2800	N	N	N	N	W	N	552,445	95,869,320
1	Andover Elementary	Elementary	2000	Y	Y	N	Y	B	Y	76,013	9,695,000
1	Andover City Hall	Admin Offices	250	Y	Y	N	N	B	N	19,441	1,860,320
1	Andover Public Works	Utilities	100	Y	Y	N	N	B	N	130,692	564,060
1	Andover Water Treatment Plant	Utilities	50	Y	Y	N	N	B	N	13,124	2,615,340
1	Andover Fire Station	Fire/Rescue	50	Y	Y	N	N	B	N	21,298	11,999,820
		Total	5250							813,013	122,603,860

4.4.4 Hazard Loss Calculations

To complete the loss estimation, the level of damage must be assessed, both as a percentage of the asset structural and content replacement value, and as a function.

Multi-hazard Requirement §201.6(c)(2)(ii)(B): The plan should describe vulnerability in terms of an estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(i)(A) of this section and a description of the methodology used to prepare the estimate.
A. Does the plan estimate potential dollar losses to vulnerable structures?
B. Does the plan describe the methodology used to prepare the estimate?

To illustrate, a library in a flood hazard could suffer 40% damage. The potential loss is calculated by multiplying the value of the structure, the contents, and the use by 40%.

To determine the loss to the structure in a particular hazard event, multiply the structure replacement value by the expected percent damage.

For example, if the library's structure replacement value equals $100,000 and the expected damage from a 100-year flood is 40 percent of the structure, then the loss to this structure from a flood is $40,000.

To determine the losses to the contents from a particular hazard event, multiply the replacement value of the contents by the expected percent damage.

For example, if the library's content replacement value equals $225,000 and the expected damage from a 100-year flood is 10 percent of the contents, then the losses to these contents from a flood is $22,500.

To determine the cost of the loss of function for the period that the business or service was unable to operate due to the hazard event,

Estimate the losses to structure use and function by determining functional downtime, or the time (in days) that the function would be disrupted from a hazard event. Then estimate the daily cost of the functional downtime.

Divide the average annual budget or sales by 365 to determine the average daily operating budget or sales.

Multiply the average daily operating budget or sales by the functional downtime to determine the cost of the loss of function for the period that the business or service was unable to operate due to the hazard event.

For example, if an ice cream shop had daily sales of $2,500 during the summertime and was forced to close for two weeks because of damages from a hazard event, the function loss would be $35,000 ($2,500 x 14 days).

For a public facility, such as a library with an annual budget of $600,000 and an average daily budget of $1,644 ($600,000 / 365), the loss estimate for a seven-day closure would be $11,508.

To determine the cost of the displacement from the regular place of business, determine the time (in days) that a function may need to operate from a temporary location due to a hazard event and multiply by the temporary location cost per day.

For example, if the library was closed for 7 days (loss of function) and then resumed operations from an empty trailer rented for $10 per day for the next 90 days, the displacement cost would be $900 (90 days x $10 per day).

For residences the cost of displacement would be the cost of alternate facilities and the average time of residential construction in Anoka County.

If content value is unknown the following uplift factors can be applied to the structure value:

- Residences – 20%
- Agriculture – 30%
- Government – 40%
- Commercial – 60%

Cubic yards calculations are based on the structure's square feet and the estimated damage. Then using appropriate factors to estimate burnable, soil, metal and building demolition debris. Disposal costs per cubic yard and landfill acres costs are provided by local sanitation officials.

If square footage is unknown an approximate square footage can be calculated from the structure cost. For example, use the typical governmental and commercial construction cost in the county and divide that into the structure cost. If construction cost is $200 per square foot and the structure value is $1,000,000 the approximate square footage is 5,000 square feet.

For Residential square footage use the median cost of housing in the county and divide that by the dollar per square foot building cost across the county. The median value is currently $121,500 and the estimate is $150 per square foot.

Response, evacuation, recovery and other costs are calculated using a factor times total structure value. The premise is that structure loss is directly related to the impact and extent of the hazard and therefore can be used as a basis for costs estimates.

Wages lost are a direct calculation of displaced days, structure capacity or workforce and the average daily wage for the jurisdiction

Commented [RK139]: Updated 2019 data

ANOKA COUNTY STRUCTURE/CONTENT/FUNCTION/USE COST							
Hazard		Hazmat – 3-mile radius					
Qty	Asset/structure Name/Description	Content Value	% Loss	Content Loss	Structure Value	% Loss	Structure Loss
15161	Residential	576,645,680	5.00%	28,832,284	$2,883,228,400	5.00%	144,161,420
11	Agriculture	0	0.00%	0	$922,900	0.00%	0
647	Commercial/Ind	826,461,720	0.00%	0	$526,133,400	0.00%	0
114	Government	34,368,918	0.00%	0	$70,825,300	0.00%	0
1	Sandburg School	1,698,800	0.00%	0	4,434,500	0.00%	0
1	Fred Moore School	4,939,600	0.00%	0	8,326,800	0.00%	0
1	Franklin School	858,000	0.00%	0	4,098,000	0.00%	0
1	AMRTC	18,800,000	0.00%	0	40,357,100	0.00%	0
1	Wilson School	1,148,000	0.00%	0	4,715,300	0.00%	0
1	St. Stephens	3,440,000	0.00%	0	7,031,300	0.00%	0
1	Mercy Hospital	84,426,059	0.00%	0	125,275,700	0.00%	0
1	Mercy Healthcare	6,722,820	0.00%	0	24,397,900	0.00%	0
1	U.S. Post Office	710,120	10.00%	71,012	1,775,300	10.00%	177,530
1	Hoffman Engineer.	1,348,320	20.00%	269,664	2,247,200	20.00%	449,440
	Totals	1,559,869,237		29,172,960	4,039,613,962		144,788,390
Qty	Asset/structure Name/Description	Avg. Daily Budget	Days Down	Lost Function	Daily Displace Cost	Days Disp	Function and Use Cost
15,161	Residential	0	45	0	15,000	45	675,000
11	Agriculture	10,000	2	20,000	0	2	20,000
647	Commercial/Ind	14,081	2	28,162	140	2	28,442
114	Government	671,926	2	1,343,852	6,000	2	1,355,852
1	Sandburg School	21,082	2	42,164	2,108	2	46,380
1	Fred Moore School	21,835	2	43,670	2,183	2	48,036
1	Franklin School	7,429	2	14,858	743	2	16,344
1	AMRTC	8,500	2	17,000	850	2	18,700
1	Wilson School	11,908	2	23,816	1,191	2	26,198
1	St. Stephens	9,690	2	19,380	969	2	21,318
1	Mercy Hospital	460,444	2	920,888	2,000	2	924,888
1	Mercy Healthcare	230,222	2	460,444	1,000	2	462,444
1	U.S. Post Office	15,500	5	77,500	1,550	5	85,250
1	Hoffman Engineer.	20,000	20	400,000	4,000	40	560,000
	Totals	1,502,617		3,411,734	37,734		4,288,852

Sq. Foot Damage		964,212		Total asset/function loss		178,250,202	
Burnable Cu. Yards	Soil Cu. Yards	Metal Cu. Yards	Demolition Cu. Yards	Total Cu. Yards	Disposal Cost/Yd	Landfill Acres Cost	Total Debris Cost
61,248	244,991	12,250	48,998	367,487	$12.00	1,194,462	6,004,306
Response Costs	Other Costs	Recovery Costs	Evacuation Costs	Wage Days Lost	Average Daily Wage	Total Wages Lost	Disaster Related Loss
1%	.5%	1%	.5%				
1,782,502	891,251	1,782,502	891,251	47	200	9,400	5,485,572
						Total Disaster Cost	189,611,414

ANOKA COUNTY STRUCTURE/CONTENT/FUNCTION/USE COST							
Hazard		500-year flood					
Qty	Asset/structure Name/Description	Content Value	% Loss	Content Loss	Structure Value	% Loss	Structure and Content Loss
146	Residences	12,675,760	50	6,337,880	63,378,800	50	38,027,280
0	Agriculture Structure	0	0	0	0	0	
3	Commercial/Industry	362,520	50	181,260	604,200	50	483,360
4	Government/Other	162,200	50	81,100	405,500	50	283,850
	Totals	13,200,480		6,600,240	64,388,500		38,794,490

Commented [RK140]: Updated 2019 values

Qty	Asset/structure Name/Description	Avg. Daily Budget	Days Down	Lost Function	Daily Displace Cost	Days Disp	Function and Use Cost
146	Residences	0	45	0	1,900	45	12,483,000
0	Agriculture Structure	0	0	0	0	0	0
3	Commercial/Industry	0	0	0	0	0	0
4	Government/Other	0	0	0	0	0	0
	Totals	0	45	0	1,900	45	12,483.000

Sq. Foot Damage		213,787		Total asset/function loss			51,277,490
Burnable Cu. Yards	Soil Cu. Yards	Metal Cu. Yards	Demolition Cu. Yards	Total Cu. Yards	Disposal Cost/Yd	Landfill Acres Cost	Total Debris Cost
16,568	3,741	2,138	30,999	53,447	$12.00	231,896	873,257
Response Costs	Other Costs	Recovery Costs	Evacuation Costs	Wage Days Lost	Average Daily Wage	Total Wages Lost	Disaster Related Loss
1%	.5%	1%	.5%				
512,775	256,387	512,775	256,387	45	200	9,000	1,547,325
						Total Disaster Cost	53,698,072

Demolition Waste

Burnable	Wood	31%
Recycle	Metal	4%
Soil	Clean and Contaminated Dirt	7%
Demolition Waste	Construction and Cleaning Debris	58%

Landfill Cost

350,000 Per Acre	80,668 CY of Waste Stored

ANOKA COUNTY STRUCTURE/CONTENT/FUNCTION/USE COST							
Hazard		Terrorism – High Priority Target/1 square block					
Qty	Asset/structure Name/Description	Content Value	% Loss	Content Loss	Structure Value	% Loss	Structure and Content Loss
52	Residences	482,440	20	96,488	2,412,200	20	578,928
0	Agriculture Structure	0	0	0	0	0	0
12	Commercial/Industry	17,961,780	20	3,592,356	29,936,300	20	9,579,616
0	Government/Other	0	0		0	0	0
1	Mercy Hospital	84,426,059	50	42,213,030	125,275,700	40	73,531,955
1	Mercy Healthcare	6,722,820	20	1,344,564	24,397,900	20	6,224,144
	Totals	109,593,099		47,246,438	182,022,100		89,914,643

Qty	Asset/structure Name/Description	Avg. Daily Budget	Days Down	Lost Function	Daily Displace Cost	Days Disp	Function and Use Cost
75	Residences	0	45	0	7,500	45	337,500
0	Agriculture Structure	0	0	0	0	0	0
7	Commercial/Industry	36,849	20	736,980	150	60	745,980
0	Government/Other	0	0	0	0	0	0
1	Mercy Hospital	460,444	14	6,446,216	2000	120	6,686,216
1	Mercy Healthcare	230,222	14	3,223,108	1000	120	3,343,108
	Totals	727,515		10,406,304	10,650		11,112,804

Sq. Foot Damage		308,102		Total asset/function loss			101,027,447
Burnable Cu. Yards	Soil Cu. Yards	Metal Cu. Yards	Demolition Cu. Yards	Total Cu. Yards	Disposal Cost/Yd	Landfill Acres Cost	Total Debris Cost
23,878	5,392	3,081	44,675	77,025	$12.00	334,200	1,258,506
Response Costs	Other Costs	Recovery Costs	Evacuation Costs	Wage Days Lost	Average Daily Wage	Total Wages Lost	Disaster Related Loss
.5%	.25%	1%	.25%				
505,137	252,569	1,010,274	252,569	98	200	19,600	2,040,149
						Total Disaster Cost	104,326,101

Commented [RK141]: Updated 2019 values

Commented [RK142]: Updated 2019 values

ANOKA COUNTY STRUCTURE/CONTENT/FUNCTION/USE COST							
Hazard		Tornado					
Qty	Asset/structure Name/Description	Content Value	% Loss	Content Loss	Structure Value	% Loss	Structure and Content Loss
458	Residences	19,933,120	20	3,986,624	99,665,600	30	33,886,304
0	Agriculture Structure	0	0	0	0	0	0
0	Commercial/Industry	0	0	0	0	0	0
1	Andover Elementary	242,816,000	20	48,563,200	6,070,400	20	49,777,280
1	Andover City Hall	80,640,000	20	16,128,000	2,016,000	20	16,531,200
1	Andover Public Works	118,172,000	5	5,908,600	2,954,300	10	6,204,030
1	Andover Fire Station	35,892,000	20	7,178,400	897,300	20	7,357,860
1	Andover Water Treatment	63,408,000	5	3,170,400	1,585,200	10	3,328,920
	Totals	560,861,120		84,935,224	113,188,800		117,085,594

Qty	Asset/structure Name/Description	Avg. Daily Budget	Days Down	Lost Function	Daily Displace Cost	Days Disp	Function and Use Cost
458	Residences	0	45	0	9,200	45	414,000
0	Agriculture Structure	0	0	0	0	0	0
0	Commercial/Industry	0	0	0	0	0	0
1	Andover Elementary	29,373	20	587,460	150	90	600,960
1	Andover City Hall	50,144	5	250,720	150	90	264,220
1	Andover Public Works	25,072	2	50,144	0	0	50,144
1	Andover Fire Station	12,536	2	25,072	0	0	25,072
1	Andover Water Treatment	12,536	1	12,536	0	0	12,536
	Totals	129,661		925,932	9,500		1,366,932

Sq. Foot Damage			277,028	Total asset/function loss			128,419,086
Burnable Cu. Yards	Soil Cu. Yards	Metal Cu. Yards	Demolition Cu. Yards	Total Cu. Yards	Disposal Cost/Yd	Landfill Acres Cost	Total Debris Cost
21,470	4,848	2,770	40,169	69,257	$12.00	300,494	1,131,580
Response Costs	Other Costs	Recovery Costs	Evacuation Costs	Wage Days Lost	Average Daily Wage	Total Wages Lost	Disaster Related Loss
2%	1%	2%	.5%				
2,568,382	1,284,191	2,568,382	642095.43	90	200	18,000	7,081,050
						Total Disaster Cost	136,631,715

4.4.5 Tier II Hazardous Materials Assessment

On October 17, 1986, in response to a growing concern for safety around chemical facilities, Congress enacted the Emergency Planning and Community Right-to-Know Act (EPCRA), also known as Title III of the Superfund Amendments and Reauthorization Act (SARA). The Act has a far-reaching influence on hazardous materials issues. EPCRA contains five sections covering issues associated with the manufacture, use, exposure, transportation, and public education of hazardous materials. It is the mission of the Local Emergency Planning Committees (LEPCs) and State Emergency Response Commission (SERC) to implement EPCRA in the State of Minnesota and mitigate the effects of a release or spill of hazardous materials.

The State Emergency Response Commission is responsible for implementing federal EPCRA provisions in Minnesota and serving as a technical advisor and information clearinghouse for state and federal hazardous materials programs. The Minnesota Homeland Security and Emergency Management is the lead agency responsible for implementing EPCRA and provides administrative functions and support to the SERC. The Commission conducts quarterly public meetings in varying locations throughout the state. Currently, SERC membership is comprised of Governor-appointed individuals who represent the interests of state and local government, emergency services, industry, and the environment.

4.4.6 Terrorism Vulnerability

Hostile attack is the most threatening manmade hazard that could affect Anoka County. There is no history of hostile attacks; however, the potential exists. The most dangerous variants of terrorism - nuclear, biological, or chemical attacks could affect Anoka County. The probability is relatively low. At present, the most likely form of nuclear, biological, or chemical terrorism may be a threat or hoax of a chemical device or sabotage.

Commented [RK143]: Reviewed for NorthStar Line + additional commercial Industry

Commented [RK144]: Include 3M PGA Tour and high-profile public events

With the mobility of the world's population and the possibility of a terrorist attack, it is possible to have a major disease outbreak or nerve gas release anywhere in the US, including Anoka County. It is impossible to assess Anoka County's vulnerability to international terrorism. Although extremist groups exist within the state, it is unlikely that any terrorist act perpetrated by these groups would be disastrous statewide. Authorities on terrorism generally agree that terrorism cannot be wiped out entirely. For the present, it is a problem to be managed, not solved. Efforts to manage political terrorism in Anoka County should include:

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

4.4.7 Land Use and Development Trends

Commented [RK145]: Sections were reviewed and updated for 2019

Multi hazard Requirement §201.6(c)(2)(ii)(C): [The plan should describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.
A. Does the plan describe land uses and development trends?

ANOKA COUNTY
Changes in Development – Anoka County continues on a sustainable growth rate as development and re-development continue across the entire county. Each of the jurisdictions has provided updates on the land use and development that has occurred within their jurisdiction.

The planning and economic development plans provide a roadmap for the future of Anoka County. The Metropolitan Council and jurisdictions within Anoka County have completed the Thrive MSP 2040, a 30-year vision for the Twin Cities Metropolitan Region. This document serves as the regional comprehensive planning guide. In 2017 Anoka County, business, and development partners completed the Economic Development Business Recruitment Roadmap. The roadmap provides guidance to Anoka County and the development partners to setup Anoka County's economy for a successful future.

One of the goals in Thrive MSP 2040 is have each community identify local mitigation and adaptation strategies and infrastructure resiliency plans to protect against potential negative impacts to local economies, local resources, and infrastructure systems that result from more frequent or severe weather events.

An increase in new large multi-floor multi-tenant housing has been identified as a new risk to Anoka County. The fire departments within Anoka County have been mitigating this risk though the acquisition of new firefighting equipment that is capable of responding to multi-floor residential structures to contain and extinguish structure fires. The number of multi-tenant housing permits that have been issued from 2013 to 2018 are included in Section 3.4.

The regulatory authority within each jurisdiction is an identified tool that can reduce vulnerability though planning and regulatory controls. Building codes and zoning requirements are some examples of regulatory controls. The tools available to each of the jurisdictions are available in section 5.1.3.1.

Geographic location and characteristics - Anoka County is one of the seven metropolitan counties that make up the Twin Cities. It is situated in the northwestern portion of the Minneapolis-St. Paul metropolitan area. Anoka County is located in the eastern part of the State of Minnesota, roughly midway between the state's northern and southern boundary. It is bounded on the north by Isanti County, on the east by Chisago and Washington Counties, on the south by Ramsey County, on the south and west by Hennepin County, and on the west by Sherburne County. The Mississippi River forms the southwestern boundary between Anoka County and Hennepin County. Anoka County lies on both sides of the Rum River, which enters the county approximately 20 miles north of its confluence with the Mississippi River in the City of Anoka. The Rum River enters Anoka County in the City of St, Francis and flows south through the Cities of Oak Grove, Ramsey, Andover, and finally Anoka. Anoka County has a total surface area of 430 square miles. This includes approximately 320 square miles of land surface, 90 square miles of wetland surface, and 20 square miles of lakes and streams surface. The southern portion of the county is mostly urbanized and the northern portion of the county is rural in nature. During the past several decades, Anoka County has been one of the fastest

developing counties in Minnesota. Residential, commercial, and industrial development is continuing with the most activity concentrated in the central portion of the county.

Public lands - Anoka County has thousands of acres of public land set aside for all types of activities. There are 11 large State of Minnesota wildlife management areas and land trusts sites in Anoka County. There is numerous smaller land trust and research sites scattered throughout the northern half of the county. The largest of the wildlife management areas is Carlos Avery covering 26,000 acres located in the City of Columbus and Linwood Township. Carlos Avery is a unique natural resource. It is the largest wildlife management area in close proximity to a major metropolitan city. The second largest is Cedar Creek Natural History Area covering 3,000 acres in the City of East Bethel, with an additional 500 acres in Isanti County. The third largest management area is the Bethel Wildlife Management Area covering 160 acres located in the City of St. Francis.

Anoka County also has a number of major regional facilities. One is the Blaine Anoka County Regional Airport - Janes Field the largest of the reliever airports in the Metropolitan Airports Commission system. Another is the National Sports Center. Both of these facilities are located in the City of Blaine. The Blaine Anoka County Regional Airport is both a recreational asset and a commercial/industrial asset. The National Sports Center is a unique recreational venue. The Center is a nationally recognized facility that supports multiple sporting activities including soccer, hockey, figure skating, cycling, and track and field. As one of the largest amateur sports facilities in the world, the National Sports Center hosts upwards of three million visitors each year for events such as the USA Cup. Within Anoka County, there are hundreds of other locations that provide recreational opportunities to residents.

There are over 55 major community parks in the cities and township of Anoka County. Many of the cities in Anoka County support both organized team activities as well as individual and personal types of activities at municipal parks and recreational complexes. Local public and private schools also have parks and recreational equipment available to residents year-round. In 1963 Anoka County established the Anoka County Parks and Recreation system. There are currently over 9000 acres of parkland and 20 parks in this system. These include major regional parks, county parks, and regional trails. The Anoka County Parks are located throughout the county. Many have access to water and offer water related activities. The list of activities offered at the county parks include: archery, biking, boating, canoeing, camping, fishing, golfing, hiking, horseback riding, picnicking, playgrounds, swimming, water park activities, and cross-country skiing. Some county and municipal parks offer educational and informational programs and offer facilities for public meetings and family gatherings.

Anoka County has two major higher education institutions. Both are members of the Minnesota State Colleges and Universities system. Anoka Ramsey Community College is a multi-campus institution that first opened in 1965 in a wing of Centennial High School in the City of Circle Pines. In 1967 the College moved to its current 103-acre Coon Rapids Campus along the banks of the Mississippi River in the City of Coon Rapids. In 1978 the College opened its Cambridge Campus in the City of Cambridge in Isanti County. Classes are offered at both campuses as well as at offsite locations in the area. The College serves over 9,000 traditional and non-traditional students annually. Anoka Technical College has three campuses and serves over 4,000 students each year. The main campus and the horticulture campus are located in the City of Anoka. The aviation campus is located at the Blaine Anoka County Regional Airport in the City of Blaine.

Anoka County has two private hospitals owned and operated by Allina Health Systems that serve the needs of the general public. Mercy Hospital in the City of Coon Rapids and Unity Hospital in the City of Fridley are part of the not for profit Allina Hospitals and Clinic system. The hospitals operate as one business unit from two campuses, one in Coon Rapids and one in Fridley. The hospitals have more than 3,300 employees, 782 affiliated physicians, and 800 youth and adult volunteers. They serve over 225,000 households in the northern metro area. Numerous local clinics and health care facilities also provide for the health care needs of Anoka County residents.

Anoka County has 12 golf courses, of which three are publicly owned and operated by local units of government. Chomonix Golf Course in the City of Lino Lakes belongs to Anoka County. Greenhaven Country Club is located in and belongs to the City of Anoka. Bunker Hills Golf Course is located in and belongs to the City of Coon Rapids. The other 9 courses are owned and operated by the private sector and are open to the general public or to members only.

Private tee areas -

The other major private fee areas in Anoka County are the 10 privately owned and operated golf courses. The courses either serve the general public or are for members only. The courses and their locations are listed here:

The Ponds Golf Course	St Francis
Hidden Haven Golf Course	East Bethel
Viking Meadows Golf Course	East Bethel
The Refuge Golf Course	Oak Grove
The Links Golf Course	Ramsey
Rum River Hills Golf Course	Ramsey
Woodland Creek Golf Course	Andover
Majestic Oaks Country Club	Ham Lake
Tournament Players Club	Blaine

Agriculture and Forestry - The southern third of Anoka County is fully developed with residential, commercial, and industrial development and has been for many years. This area and the southern most communities are involved in ongoing redevelopment activities. There is almost no agricultural activity in the lower third of the county. The center third of Anoka County has experienced rapid growth and development over the last 15 years. This area has changed from predominately agricultural and wetland to urban and suburban in nature. Large residential, commercial, and industrial developments have occurred in all the communities in the center third of Anoka County. This urbanization process is likely to continue as long as the local economy remains strong. Policies of the Metropolitan Council, a regional planning agency established by the State of Minnesota, guide local and regional planning and development efforts, through the establishment of the Metropolitan Urban Service Area (sanitary sewer service.) These policies greatly influence the location and timing of development in the portions of Anoka County where the Urban Service Area is expanding, which is the center third of the county. The northern third of Anoka County is still rural or semi-rural in nature and has a substantial amount of agricultural activity. However, the communities here are also growing and experiencing residential, commercial, and some industrial development. The residential growth is on larger suburban lots several acres in size or in townhouse type developments clustered around amenities such as a golf course or a water feature. The commercial services that are expanding are those that generally follow residential development. These new developments in

the northern third of Anoka County usually result in a corresponding loss of agricultural or forested land, and some impact on wetlands. There is no major forest products industrial activity in Anoka County. There is a small amount of wood harvesting activity from farm or suburban wood lots, especially in the northern and central thirds of the county. Forest activity in the very urbanized southern third of Anoka County would be the result of local communities or property owners "caring for" the urban forest.

Commercial and Industrial development and trends - The southern third of Anoka County currently has the largest concentration of commercial and industrial development. This type of development is now moving into the central third of the county. Commercial and industrial development is occurring along the three major transportation corridors that exist in Anoka County, Interstate 35W, Highway 10, and Highway 65. Anoka County is the home of several large corporate entities, including Medtronic World Headquarters, Aveda, BAE Systems, Hoffman Engineering, Onan, and Federal Cartridge. The largest commercial growth segment has been in the area of retail. Commercial and retail development has followed the increase in residential development and population in the central portion of the county. The northern third of Anoka County has experienced commercial development that is supported by residential development. There has been very limited industrial development so far in the northern third of the county, but it is expected to increase because land costs are significantly less than in the central or southern portions of the county.

Residential Development and Trends - Anoka County has been, and will continue to be in the near future, one of the fastest growing counties in the State of Minnesota. The communities in the southern third of the county are fully developed and are engaged primarily in redevelopment efforts. These redevelopment efforts involve residential, commercial, and industrial property. Original or older residential structures are or will be refurbished and brought up to modern standards. Some commercial and industrial uses are changing to residential use. In the central portion of the county, local communities are engaged in both redevelopment as well as first time residential development. However, the development that is occurring now is not just single family residential. More lifestyle type developments that offer a multitude of living arrangements and options are being built. These include town homes, patio homes, senior housing, as well as multi-family housing. In the northern third of the county the development is still dominated by single-family housing units on large multi acre lots, however town homes and/or patio homes are being built around amenities such a water features or golf courses. The northern part of Anoka County is expected to experience significant residential development in the coming years.

Infrastructure and Infrastructure projects - Anoka County is planning a number of major capital improvement projects that will have positive long-term benefits for the State of Minnesota, the Minneapolis-St. Paul Metropolitan Area, Anoka County, and the local communities in Anoka County.

Another major initiative in Anoka County that will have statewide, metropolitan-wide, and countywide significance is the North Star Commuter Rail Project. Anoka County is partnering with the State of Minnesota, the Metropolitan Council, and other counties and local communities. Commuter rail service runs along the existing Burlington Northern Santa Fe railroad tracks from Minneapolis through Anoka County and initially terminates at the City of Big Lake in Sherburne County. The long-term goal is to eventually extend service to St. Cloud in Benton and Stearns County. The project will help relieve traffic congestion along the Highway 10 and Interstate 94 travel corridors.

ANDOVER

Geographic location and characteristics: Andover is located in west-central Anoka County, approximately 20 miles north of downtown Minneapolis. Andover is located at Latitude 45.23N, Longitude 93.36W. The city shares borders with Oak Grove to the north, Ham Lake to the East, Coon Rapids and Anoka to the south, and Ramsey to the west. The Rum River marks the western boundary of the City. The City of Andover encompasses a total of 34.1 square miles.

Public lands: There is approximately 525 acres of city owned parkland in Andover. The larger parks include Kelsey Round Lake Park (136 acres), Sunshine Park (39 acres), Prairie Knoll Park (19.5 acres), and Fox Meadows Park (12.75 acres). Additionally, Bunker Hills Park, which is owned and operated by Anoka County, encompasses over 400 acres. Nearly 190 acres within the city are owned by school districts. The City Hall and Public Works complex covers over 55 acres.

Agriculture and forestry: Nearly 3011 acres of property in Andover are classified as "Agricultural" by the Anoka County Assessor's Office. The city is home to a number of sod farms and traditional farms, as well as a turkey feedlot. There are no publicly managed forests in the City of Andover.

Commercial and industrial development and trends: Commercial and industrial development in Andover is focused around the two major arterial roadways that serve the city: County Road 116 (Bunker Lake Boulevard) and County Road 78 (Hanson Boulevard). The city is currently marketing land that is owned by the Economic Development Authority (EDA) in an area known as "Andover Station North." The site, nearly 120 acres in total, was formally home to an automobile salvage and crushing yard. The City, with the assistance of the Minnesota Pollution Control Agency (MPCA) has cleaned the site and is now marketing it for a wide range of uses, including town homes, commercial, and light industrial. Commercial development in the city tends to focus on the retail and service industries.

Residential development and trends: Andover has been one of the fastest growing cities in the Twin Cities metropolitan area during the last 20 years. While the city's population was 15,216 in 1990, it now exceeds 31,000. The Metropolitan Council has projected a population of 42,000 in Andover by 2020 and 44,600 by 2030. Andover has added an average of 63 new housing units per year over the last 5 years. This rate of growth is expected to increase in the coming years as municipal services are extended to the "Rural Reserve" area, which will open nearly 1,000 acres to urban development.

Infrastructure and infrastructure projects: The City of Andover's water treatment plant went online in October of 2004. It is capable of treating up to 9 million gallons per day. As of 2004, there was a total of 191.94 miles of City, County, and State Aid roads in the city. Additional city and county road improvements will be necessary to accommodate the development of the Rural Reserve. A new trunk sanitary sewer line will be constructed to provide service to the Rural Reserve, and a second water treatment plant may be needed to serve the area as well.

ANOKA

Geographic location and characteristics: The City of Anoka is located in western Anoka County, approximately 25 miles north of Minneapolis/St. Paul. Anoka shares its borders with Ramsey, Andover, Coon Rapids, and Champlin. On its southern border are the Mississippi River and the Rum River runs through the center of the City. The City of Anoka is 7.13 square miles in size. Anoka is located at Latitude 45.21N, Longitude 93.39W.

Public lands: 30% of the City of Anoka is in public land. These areas include land owned by the State of Minnesota (Anoka Metro Regional Treatment Center and Highway Department), the County of Anoka (Anoka County Courthouse, Correctional Facility, and Fairgrounds). Within the city, the areas include churches, schools, city offices, public works facilities, public safety center, parks department, an ice arena, the aquatic center, a city-owned golf course, 13 parks, and 7 trail/corridors through the city.

Private fee areas: There are no private fee areas in the City of Anoka.

Agriculture and forestry: Approximately 265 acres in the Rum River Nature area, west of 7th Street and north of County Road 116, are presently agriculture and forestry. While the City of Anoka has an abundance of trees, there are no publicly managed forestlands.

Commercial and industrial development and trends: 40,000 – 80,000 square feet will be part of a mixed-use redevelopment (modest retail – office buildings).

Residential development and trends: In 2006, 40 acres south of the High School on 7th Avenue was developed into residential housing. Another 8-acre parcel on west Garfield Street will be developed in the near future. Beyond this, there will only be redevelopment.

Infrastructure and infrastructure projects: Following are infrastructure projects planned for the future. In regard to transportation, projects included are the conversion of U.S. Highway 10 to a limited access freeway and the improvement and widening of County and State aid roads. There will be a center medium placed on County Road 116 from Highway 47 west of Thurston that is scheduled in spring, summer 2006. Streets and sewer systems will be redone in an orderly fashion through the next 5 years.

BETHEL

Geographic location and characteristics: The City of Bethel is located in central Anoka County, approximately 36 miles north of Minneapolis/St Paul. Bethel shares its borders with St. Francis and East Bethel. The City of Bethel is .9 square miles in size. The City of Bethel is located at Latitude 45.40N and Longitude 93.26 W and has an elevation of 930 feet.

Public lands: The City has 95 acres of public land within the City. These areas include churches, schools, city offices, public work facilities, and fire station. Within the City, there is 45 acres of Public Park. The City-owned Park is Booster Park (45 acres).

Private fee areas: Within the City of Bethel, there are no private fee areas.

Agriculture and forestry: The City of Bethel has an abundance of trees, and there is the Bethel Wildlife Management Area, DNR Land 40 Acres in size.

Commercial and industrial development and trends: The City of Bethel maintains constant growth. Since 2000, the City has added 13 industrial buildings of commercial/retail space.

Residential development and trends: The City has a sustained little growth with a population increase of 2.5% on average of growth per year.

Infrastructure and infrastructure projects: There are few planned infrastructure projects. For utilities, the City will be attempting to install City Water and extend sewer lines through town to accommodate residential development.

BLAINE

Geographic location and characteristics: The City of Blaine Minnesota is located in southern Anoka County, 13 miles north of downtown Minneapolis, Minnesota. Ramsey County and the Cities of Shoreview and Mounds View are adjacent to its southern border. Adjacent cities in Anoka County include Lino Lakes to the east, Ham Lake to the north, Coon Rapids to the west and Spring Lake Park to the south. An industrial park is within the corporate limits of the City of Blaine and Ramsey County. The City is 34.12 square miles in size. The City of Blaine is located at Latitude 45.168N and Longitude -93.204W and has an elevation of 900 feet (NGVD 29).

Public lands: The City of Blaine has 4622.59 acres of public land, including churches, schools, city offices and facilities, and fire stations. Anoka County owns two large park areas in Blaine: Bunker Lake and Rice Creek Chain of Lakes Parks. Bunker Lake Park consists of 120.34 acres and is located in the northwest corner of the City. Rice Creek Chain of Lakes Park consists of 60.60 acres and is located in the southeast corner of the City. There are sixty-two city owned parks throughout Blaine. The three largest parks are: Aquatore (66.57 acres), Lochness Park (89.22 acres) and Pioneer Park (100.04 acres).

Private fee areas: The City of Blaine has 2 private fee area; the Tournament Players Club of the Twin Cities and Metro Gun Club.

Agriculture and forestry: Very little agricultural land exists in Blaine. Currently, there are two parcels (totaling 72.56 acres) zoned Agricultural and they are located north of 125th Avenue and west of Radisson Road.

Commercial and industrial development and trends: Of Blaine's 21,795 acres, 3557.75 acres are zoned for commercial or industrial use. 1,500 of these acres are vacant.

Residential development and trends: A little less than half of Blaine's total acreage is dedicated to single-family development. 9,553 acres are zoned for single-family homes, and only 2,619 acres remain vacant. Similarly, 954 acres are zoned for medium-density residential, with 350 acres remaining vacant. Finally, 342 acres are dedicated to high-density residential development, with 178 acres remaining vacant

Infrastructure and infrastructure projects: The City of Blaine has an ongoing, aggressive street pavement management program that includes reconstruction, overlays, seal coats and other minor maintenance. Funding of this work is through general fund budget and property assessments. The City has utility fees in place for sanitary sewer, water supply and storm water and performs routine maintenance of these utilities. The city currently has 240 miles of City, County, State and Federal roads, 134 miles of sidewalks and trails, 242 miles of sanitary sewer, 281 miles of water main, 17 wells, four water towers, one water reservoir, three water treatment plants, and 151 miles of storm sewer. The City's sanitary sewers connect to three Metropolitan Council interceptors.

CENTERVILLE

Geographic location and characteristics: Centerville is located in the eastern part of Anoka County at Latitude 45.16 N and Longitude 93.05 W and an elevation of 899 feet. The city has a total area of 1,597 acres (2.2 square miles.) Located between the shores of Peltier Lake and Centerville Lake. The two lakes are used as a water supply for the city of St. Paul in drought

situations. It is a suburb of Minneapolis/St. Paul and is located 20 minutes from St. Paul. Centerville is totally surrounded by the city of Lino Lakes.

Public lands: There are two parks located in the city.

Private fee areas: There are no private fee areas in the city.

Agriculture and forestry: Some agriculture left but mostly developed.

Commercial and industrial development and trends: The commercial development is increasing with smaller to medium size businesses. There are no major businesses in Centerville; they are mostly small retail shops. They include two liquor establishments of which one service food, a machine shop, auto repair, woodworking, construction, and service type business

Residential development and trends: Almost completely built out and should be completely built out in the next 10 years.

Infrastructure and infrastructure projects: City has sewer in almost all of the developed area and they are working on getting water to all areas. Centerville city properties have city sewer and over half of the properties have city water service.

CIRCLE PINES
Geographic location and characteristics: The city of Circle Pines is located in the southeastern portion of Anoka County, and borders Lino Lakes on the east, Blaine on the north, and Lexington to the west. The city is 15 miles north of Minneapolis / St. Paul. The city is two square miles in size and is a suburban community. With fields of oaks and elms, the rural appearance can be deceiving – homes and businesses are fairly closely spaced. The City of Circle Pines is located at Latitude 45.13N and Longitude 93.15 W and has an elevation of 889 feet.

Public lands: 33% of the land in Circle Pines is public.

Private fee areas: 67% of the land in Circle Pines is private

Agriculture and forestry: Circle Pines is made up of 33% of wetland/park/public areas. A majority of that is County Park Preserve.

Commercial and industrial development and trends: Businesses in Circle Pines are mostly retail and located on the west side of the city near Lake Drive and Lexington Avenue and well in the center of the city along Lake Drive. Circle Pines has just finished a mixed-use building with commercial development. Otherwise the city doesn't have any more room within the city for more development.

Residential development and trends: Circle Pines has just built its last residential development of single-family homes (52 in 2006) Circle Pines is developmentally full.

Infrastructure and infrastructure projects: Circle Pines is the only suburban city that operates its own natural-gas distribution company-a result of its cooperative past. The system also services a portion of Lino Lakes and Blaine. No new infrastructure projects are planned.

COLUMBIA HEIGHTS

Geographic location and characteristics: The City of Columbia Heights is located at the southern tip of Anoka County on the northern border of the City of Minneapolis (Hennepin County). Ramsey County borders on the east, with the City of Fridley bordering on the west. Columbia Heights is 3.4 square miles in size and is a fully developed, urban community that is now seeing areas of redevelopment. The City of Columbia Heights is located at Latitude 45.04 N and Longitude 93.26 W and has an elevation of 922 feet.

Public lands: Columbia Heights has 16 parks of varying sizes and amenities. Anoka County has one park within the City. The City has been upgrading parks and athletic facilities over the past five years and will continue as long as funding is available. The City has three wading pools in its park system though these are older pools that need expensive upgrading.

Private fee areas: There are no private fee areas in Columbia Heights.

Agriculture and forestry: Columbia Heights is fully developed with no agriculture or forest areas.

Commercial and industrial development and trends: Columbia Heights is in the process of redeveloping the commercial areas. Many of the commercial properties are very old and cannot meet the needs of today's businesses. The City is leading the way by joining with developers to buy up and redevelop properties.

Residential development and trends: Most of the housing stock was built in the early 1900's and then post WWII. There has been a decline in property maintenance. The City as implemented many programs that include initial code inspections by the Building Official of new rental properties prior to licensing and revoking certificate of occupancies of vacant and abandoned properties. The City's property maintenance code was updated to maintain the housing stock. The City has also started a program of buying up properties that are in poor condition and then demolishing them for future replacement. With the redevelopment of many areas of Columbia Heights, approximately 500 residential units will be added. Most of these units will be town homes and condominiums. The recent downturn in the economy and in the townhome and condominium market has slowed this redevelopment down.

Infrastructure and infrastructure projects: The City has an ongoing 7-8 year schedule for replacement/repair of city streets and alleys. Included with this schedule is the replacement of water, sewer, natural gas, and storm drains. The city is broken into seven zones with one zone being done each year. Public works finished the first phase of a storm water mitigation plan. More plans are being proposed for future storm water mitigation issues. This includes purchasing more residential properties that are prone to flooding. These properties are turned into storm water retention ponds. A City park was remodeled to include a storm water retention pond due to street flooding nearby. The City continues to inspect homes for sump pumps being deposited into sewer systems due to the sewer systems backing up in areas during heavy rains. A plan is in place to assist homeowners with the cost of installing a valve on their main sewer lines in their homes to shut off future sewer backups**.**

CITY OF COLUMBUS

Geographic location and characteristics: The City of Columbus is located in east central Anoka County in the northerly portion of the Twin Cities metropolitan area. It is characterized by its large open spaces and low-density rural character. The City is located at Latitude 45.26 N and Longitude 93.07 W and has an elevation of 919 feet. Wetlands and surface waters

dominate the landscape in Columbus, covering nearly two-thirds of the City. While Columbus is a large community (48 sections approx. 30,573 acres) the amount of developable land in the City is much less than surrounding communities. Approximately, 9,300 gross acres and 5,660 net acres of land are used as rural residential, which requires a 5-acre minimum lot size.

Public lands: The public/institutional land use category includes the Columbus City Hall, Fire Hall, and Public Works complex on Kettle River Blvd. and Notre Dame Street; public utilities; four churches; the Columbus Elementary School; State "school trust" land; and two Wildlife Management Areas. The gross public/institutional acreage is approximately 11,175 acres or over 36% of the total City acreage. The only City site that is on the National Register of Historic Places is the Carlos Avery Game Farm, located at County Highways 17 and 18. It has been on the Register since 1991. It is the site of buildings built by the WPA in the 1930's and includes an entrance gate to the site that is built of stone and iron. During that era, it was a national showplace for the rearing of quail. The facilities are now the home of the north metro wildlife office of the Department of Natural Resources (DNR), the headquarters for the DNR's Carlos Avery Wildlife Management Area, and the Wildlife Science Center, a nonprofit group that conducts research on wolves.

There are approximately 654 acres of City and County park land in Columbus, which provide active and passive recreation opportunities to residents and businesses. The City currently has one community park, three neighborhood parks and three undeveloped, natural areas. The City maintains the major community park adjacent to the City Hall that includes land on either side of Kettle River Boulevard. This facility includes five softball diamonds, two tennis courts, a volleyball court, a football field, a picnic area and shelter, and playground equipment. Anoka County owns and maintains Coon Lake County Park, which includes a swimming beach, boat access, and picnic facilities.

Private fee areas: There are few fee areas in Columbus.

Agriculture and forestry: Columbus has 2 Century Farms. The Furrer Farm and the Thurnbeck Farm. The Furrer farm became a Century Farm in August 1989. Alfred Bergeron (1857 – 1949) came to Minnesota as a young man of seventeen in 1874 from Quebec, Canada. He bought his first forty acres on the eastern edge of Anoka County in the City of Columbus between Forest Lake and Centerville in 1883. The Thurnbeck farm was settled in 1893 and became a Century Farm in 1994.

Although Columbus is currently being developed, the minimum lot size is 5 acres, which does allow for the preservation of a significant portion of the current tree cover. These forests are comprised mainly of Northern Pin Oak, Burr Oak, Red Oak, and White Oak. Of the mature forest, the oaks comprise roughly 60 – 70 % of the tree species, with minor contributions of hackberry, red maple, basswood, aspen, white pine, red pine and spruce. The most significant forestry problem currently is oak wilt disease. The community has participated in an extensive oak wilt management program since 1991 to contain the effects of this devastating disease.

For the future, tree preservation of its existing woodlots and invasive pests will be the largest threats to this suburban forest.

Commercial and industrial development and trends: There are two primary commercial areas within Columbus, which account for 6% of the total City area. One lies along the southerly portions of Lake Drive (CSAH 23) near Lino Lakes. The other surrounds a portion of

Interstate 35 comprising a 3 square mile area. The City of Columbus hopes to see high growth in our commercial area as public utilities become available.

Residential development and trends:
Recent population and household growth in Columbus was strongest in the 1970's and 1980's. This growth reflects a region-wide, outer-ring suburban trend, which largely resulted from the development of the interstate highway system. Communities surround Columbus as well as Anoka County, experienced similar if not more rapid growth. The large lot, rural residential character of housing and the limited amount of developable land in Columbus has resulted in a decrease in the rate of growth since 1990. Housing in Columbus is predominantly single family detached (96%).

Infrastructure and infrastructure projects: The City has 52 miles of roadway with 27 miles of blacktop and 25 miles of gravel. The city continues to improve city roads each year based on resident petitions. The city completed the Trunk Sanitary Sewer system and the Trunk Water System in 2007. The City will continue public utility projects based on property owner petitions in the commercial 3 square mile area of the I-35 corridor.

COON RAPIDS
Geographic location and characteristics: The City of Coon Rapids Minnesota is located fifteen miles north of Minneapolis, MN. The Mississippi River establishes the City's southern border. Hennepin County and the City of Brooklyn Park are located across the river. Coon Rapids shares its remaining borders with the cities of Anoka, Andover, Blaine, and Fridley. The City is 23 square miles in size. The City of Coon Rapids is located at Latitude 45.17 N and Longitude 93.31 W and has an elevation of 863 feet.

Public lands: The City of Coon Rapids has 3420 acres of public land, including religious institutions', schools, city offices and facilities, and fire stations. Anoka County owns two large parks within the City: Bunker Lake Park consists of 863.95 acres and is located in the NE quadrant of the City. The City owns and operates a public golf course in this park. Anoka County also owns Coon Rapids Dam Regional Park (operated by Three Rivers Park District), located on the South border of the City along the Mississippi River. Fifty-two city owned parks are located throughout Coon Rapids. The three largest are Sand Creek Park (73.63 acres), Wilderness Park (73.08 acres), and Erlandson Nature Center (67.09 acres).

Private fee areas: No private fee areas exist within Coon Rapids.

Agriculture and forestry: Very little agricultural land exists in Coon Rapids. One sod farm exist in the City; Rocket Turf at Main Street and Coon Creek Boulevard (85.99 acres). A sixty-three lot single-family plat has been approved for the Peterson farm and is expected to develop in 2006.

Commercial and industrial development and trends: Of Coon Rapids' 14,921 acres, over ninety-seven percent is developed. 530 acres are developed with industrial uses, 145 acres are dedicated to office related uses, and 1090 acres of commercial land is developed. It is unlikely that most of the remaining 918 acres will see development due to easements, soils conditions, storm water detention, or similar constraints.

Residential development and trends: The vast majority of Coon Rapids' acreage is dedicated to single-family development. 8523 acres are zoned for single-family homes, and only 101 acres remain vacant. Similarly, 674 acres are dedicated to moderate density

development, with forty-nine acres remaining vacant. Finally, 387 acres are dedicated to high-density residential development, with only four acres remaining vacant. Coon Rapids is entering the redevelopment and infill phase of its growth. Given that very little land exists in the Minneapolis-St. Paul Seven County metropolitan area with urban services, Coon Rapids expects to see more moderate and high-density development.

Infrastructure and infrastructure projects: Coon Rapids has an on-going street reconstruction program were a few miles of streets, curbs, and other related services are reconstructed, or otherwise maintained. The City is lobbying for the construction on a wider bridge over US Hwy 10 at Hanson Boulevard with a center-point-diamond design. The city is also lobbying for expansion of US Hwy 10 from four to six lanes. Coon Rapids contains the following: 303 lanes miles of City, County, State, Federal Roads, 246 miles of sewer lines, 282 miles of water lines, 24 wells, 5 water towers, 1 water treatment plant and the Metropolitan Council handles sanitary sewer service.

EAST BETHEL

Geographic location and characteristics: The city is located at the northern edge of Anoka County and the Minneapolis/St. Paul Metropolitan Area at latitude 45.33 N and longitude .21W and has an elevation of 902 feet. The City of East Bethel is 48 square miles and has 30,432 gross acres. Residential development accounts for the vast majority of the developed areas of the city. Residential development covers approximately 6,086 acres or 20% of the 30,432 total gross acres. Public and institutional property occupies only about 1% (304 acres). Parks, private recreation and open spaces, including Cedar Creek Natural History Area and the developing Sand Hill Crane Nature Preserve account for approximately 17% of the acres (5,173) in the city. Vacant or rural areas account for roughly 54% (16,433) of the acres in the community. Major water bodies account for 7% (2,130) acres. The remainder falls in miscellaneous categories.

Public lands: East Bethel has a number of unique natural amenities. These areas offer exceptional recreational, educational, and scientific opportunities. The largest of these is The Cedar Creek Natural History Area. The Cedar Creek Natural History Area encompasses more than 3,000 acres and is the largest open space in East Bethel. It is one of the largest ecological research sites in central Minnesota. The three great ecosystems of North America meet in the vicinity of Cedar Creek - the western prairies, the northern evergreen forests, and the eastern deciduous forests. In addition, within its nine square miles Cedar Creek contains rare ecosystems including spruce bogs, a northern cedar forest, and tracts of never plowed savannas. Cedar Creek was established in 1942 and ranks among the world's top ecological research sites. Cedar Creek is owned and operated by the University of Minnesota, in cooperation with the Minnesota Academy of Science. Entirely contained within the Cedar Creek Area is Fish Lake. The lake is 332 acres in size and has a maximum depth of 13 feet. Adjacent to and immediately south of Cedar Creek across County Road 26 is the Helen Allison Savanna Scientific and Natural Area. This is an 86-acre area on the Anoka Sandplain that was formed 16,000 years ago by glacial melt water. The area was established in 1960. Oak savanna, which consists of oak trees over prairie vegetation, occupies 54 acres of the preserve. Over 45 species of birds have been documented in the preserve.

Another unique natural resource in East Bethel is the Sand Hill Crane Natural Area. The area includes Ned, Mud, and Deer Lakes. It covers 533 acres and is owned and cooperative managed by the Minnesota Department of Natural Resources, the Minnesota Pollution Control Agency, Anoka County, and the City of East Bethel. Another 74 acres of government land is adjacent to the Sand Hill Crane property bringing the total amount of government land in this

unique resource to 607 acres. Another one of East Bethel's unique physical resources is Coon Lake. It is located in the southeast corner of East Bethel, with portions of the lake in the City of Ham Lake and the City of Columbus. Coon Lake is part of the Anoka County Park System. Coon Lake has numerous access points and is used for boating and swimming. The lake covers 1,259 acres with a littoral area of 1,098 acres. It also supports many forms of wildlife such as loons, ducks, geese, fish, beaver, and turtles.

East Bethel also has a number of community focused recreational facilities. The East Bethel Ice Arena is located on Highway 65 at 207th Avenue NE. Booster Park is the oldest and most popular park in the city. It is adjacent to city hall and consists of 45 acres and offers traditional activities such as baseball diamonds, tennis courts, a hockey rink, picnic facilities, and hiking trails. The city recently acquired 32 acres to expand Booster Park. John Anderson Memorial Park surrounding Cooper Lake is in the northwestern corner of the city. It is a total of 70 acres in size. The city also has a number of smaller neighborhood parks that offer recreational opportunities to residents.

Private fee areas: East Bethel has two privately owned and operated golf courses. Viking Meadows Golf Club and Hidden Haven Golf Club. Both courses are open to the general public.

Agriculture and forestry: While a large amount of land in East Bethel is vacant or rural (54%, 16,414 acres) agriculture is limited due to soil conditions and the declining availability of agricultural support and services. Portions of the community are currently zoned for agriculture or are participating in agricultural preserve programs.

Commercial and industrial development and trends: The majority of commercial and industrial development has occurred and is expected to continue to occur along the major transportation corridors of the city, specifically along State Highway 65 and Viking Boulevard (County Road 22). Accessibility is the primary factor that has determined past development and that will influence future development. The city is currently in the process of constructing public water and sewer systems for the area surrounding Viking Blvd and Highway 65.

Residential development and trends: Residential areas account for the vast majority of developed areas in the City, accounting for approximately 20% of the gross acres in the City. Much of the rural residential development is located near lakes or near Trunk Highway 65. Because of the lack of public wastewater treatment systems, the maximum allowable density in residential areas is one home per two and one-half (2.5) acres. Residential areas also include two manufactures home parks along Trunk Highway 65, one of which is located on the northern border of the City, the other on the southern end.

Recent interest in the community for a more diverse housing stock (i.e. multi-family, town homes and senior housing) with areas of high density per acre as part of the City Center development, are more consistent with the community becoming classified as a rural growth center. The plan for the City to have a state-of-the-art wastewater treatment facility is a critical element of the plan for a more varied housing stock. The City is developing appropriate zoning classifications that reflect this change while maintaining, for the most part, larger lots of a minimum of two acres in size.

Infrastructure and infrastructure projects: The East Bethel City Hall complex is currently located at 2241 221st Avenue NE. It is a 7,500 square foot facility. As envisioned in the new comprehensive plan municipal management functions would eventually move to the new "City Center area." The current transportation system in East Bethel is a network of local streets,

county highways, and a state highway. State Highway 65 runs the length of the community from north to south a total of 8 miles. It is a major state roadway that provides access to the northern suburbs to and from the core City of Minneapolis, approximately 25 directly south of East Bethel. The status of Highway 65 in East Bethel was recently changed by the Minnesota Department of Transportation (MnDOT) from an expressway to a limited access freeway. Highway 65 holds the main concentration of retail and commercial development for East Bethel. Viking Boulevard (County Road 22) is the city's main east - west road. County Road 22 is being considered by MnDOT as a future State Highway that would provide for a state highway east - west corridor/connection through northern Anoka County. There are a total of 36.7 miles of county roads and County State Aid Highways in East Bethel. These roads along with Minnesota State Highway 65 provide the transportation backbone for East Bethel. Currently the road system in East Bethel is adequate.

As East Bethel continues to grow and develop both governmental and private services will need to be expanded to serve the needs of an increased number of residents of all ages. The new East Bethel Comprehensive Plan lays out the communities' vision and articulates a strategy to be followed to move towards that vision.

FRIDLEY

Geographic location and characteristics: The City of Fridley is located in southern Anoka County, approximately 9 miles north of Minneapolis/St. Paul. Fridley shares borders with Spring Lake Park, Coon Rapids, Mounds View, New Brighton, Columbia Heights, and Minneapolis. On its western border is the Mississippi River. The City of Fridley is 10.2 square miles in size. The City of Fridley is located at Latitude 45.09 N and Longitude 93.26 W and has an elevation of 850 feet.

Public lands: Approximately 14.5% of the communities land area is developed as public or semi-public for uses such as parks, schools, religious institutions, government facilities and other non-profit agencies. Despite being fully developed, Fridley has recently experienced commercial, industrial, and residential redevelopment.

Commented [JS146]: Previous language for the last sentence:

Future development in this area is unlikely unless done as part of a redevelopment initiative.

Agriculture and forestry: The City of Fridley has no land designated for agriculture or forestry use.

Commercial and industrial development and trends: The City of Fridley has a significant portion of land area devoted to industrial and commercial land use. The industrial land uses fall mainly in three areas of the city. (1) Along BNSF railroad tracks from the south border to 61st Ave, (2) in the northern part of the city between the railroad tracks and University Ave north of 79 Way (3) and along Central Ave near the Medtronic and Onan campuses. Few vacant lands are available for future commercial and industrial development.

Commented [JS147]: Previous language for the last sentence:

The commercial land use is primarily located along University Ave and Hwy 65 near major east/west roadways such as I694, Mississippi St, Osborne Rd, and 57 Ave NE. Vacant lands are available for future commercial and industrial development.

Residential development and trends: Residential land use comprises approximately 34 % of the city's total land area. Residential uses include single-family detached housing, mobile homes, multi-family apartment complexes, individual apartment buildings, town homes, twin homes, and condominiums. Single-family residential land use constitutes 29.6% of the total land area. Future opportunities for residential development will likely only be due to redevelopment initiatives due to the limited available land.

Infrastructure and infrastructure projects: Interstate 694 runs east/west in the southern area of the city. Two State Highways run through the City of Fridley, State Hwy 65 and State Hwy 47, as well as numerous county roads and municipal state aid roadways. Burlington Northern

Santa Fe rail yard is located in the southern part of Fridley and the railroad runs north/south throughout the city. The Northstar Commuter passenger rail line shares the BNSF tracks, providing service north to Big Lake and south to Minneapolis, making connections to bus and light rail service to many other destinations, including MSP Airport.

Infrastructure and infrastructure projects: Interstate 694 runs east/west in the southern area of the city. Two State Highways run through the City of Fridley, State Hwy 65 and State Hwy 47, as well as numerous county roads and municipal state aid roadways. Burlington Northern Santa Fe rail yard is located in the southern part of Fridley and the railroad runs north/south throughout the city. The Northstar Commuter passenger rail line shares the BNSF tracks, providing service north to Big Lake and south to Minneapolis, making connections to bus and light rail service to many other destinations, including MSP Airport.

HAM LAKE

Commented [REK148]: For 2019

Geographic location and characteristics: The City of Ham Lake is a thirty-six square mile (23,040 acres) suburb approximately 20 miles north of Minneapolis/St. Paul, located in the middle of Anoka County, with Latitude of 45.25 N and Longitude of 93.20 W and an elevation of 915 feet. The city is bordered by East Bethel to the north,

It has five natural lakes: Ham Lake (193 acres), Lake Netta (168 acres), Coon Lake (1259 acres with only a portion of this lake located in the City), Mallard Lake (23 acres) and South Coon Lake (49 acres). Ham Lake is basically a mixture of prairie and wetland with some forested areas.

Public lands: Currently the City has approximately 350 acres of public parks, which includes 21 neighborhood parks and two regional parks. One regional park is adjacent to the City Hall (Lions Park) and provides ball fields, soccer fields, tennis courts, picnic facilities, walking trails, playground facilities, large covered shelter (200 capacity) restrooms and concession stand. The other is Ham Lake Park (over 100 acres), adjacent to Ham Lake, with many of the same amenities but also includes an indoor shelter, public boat access and fishing pier. A trail system has been established to provide safe pathways for bikes and pedestrians and is implemented as land develops and/or street construction projects take place.

Commented [JS149]: Removed "the concentration has been on developing city wide regional parks, as opposed to neighborhood parks"

Private fee areas: Majestic Oaks Golf Course consists of 330 acres (two eighteen-hole and one nine-hole courses) and is a privately-owned facility that must remain open to the public through a development agreement through 2030.

Ham Lake Sportsman Club is a clay target range and Ham Lake Resort is located adjacent to Ham Lake with 143 sites available. Carlos Avery Game Farm abuts the City to the east. It is a 106-acre wildlife management area that allows permit hunting.

Commented [JS150]: Resort from Campground

Agriculture and forestry: Of the thirty-six square miles comprising Ham Lake, three square miles are sod fields. There are approximately 4,000 acres of land in the City that is presently either actively farmed for crops, used as pasture, or remains wooded. In terms of contiguous tracts suitable for conventional agriculture, there are nine sites containing as much as 160 continuous acres of land suitable for such purposes. The eastern portion of the City contains the greatest amount of suitable farmland. The City does not consider animal feedlots compatible with urban settlement.

It is expected that the housing market, will eventually lead most of the farming operations to convert to single-family residential uses.

Finally, in that sod-farming activity does result in removal of soil, existing sod farms will eventually return to their former status as wetland and be used as open space and wildlife habitat. It is the City's intention to prevent the reclaiming of sod farmland by adopting controls that enhance the return of these lands to a natural wetland state.

The urban forest of Ham Lake is comprised of individual stands of native trees, which include: oak, maple, pine, and lowland species. The City has implemented a Shade Tree Disease Control Program.

Commercial and industrial development and trends: Ham Lake currently has eight commercial zoning classifications. I-P (Industrial Park); I-1 (Light Industrial); CD-5 (Commercial Development 1,2,3,4,5 with each allowing specific uses) and GF (Government Facilities).

The City of Ham Lake has approximately 400 businesses located in the city. There are currently 5 active major industrial/commercial parks and almost all of the rest of the businesses are abutting the Trunk Highway 65 corridor. The commercial/industrial parks are: Ham Lake Industrial Park (22 light industrial businesses ranging from machine shops to construction companies); Bunker Lake Commercial Park, Majestic Oaks Commercial Park, Fox Tail Ridge, Christensen, Stone Estates, North Pine, Rosewood Addition, Lachinski, and Enterprise Plaza. All commercial/industrial parks maintain high standards of building construction and are occupied by concrete block buildings. An additional two small industrial Parks are Wybrite and Gilpin, which house only five small businesses.

The major retail area of the City is located at Trunk Highway 65 and Crosstown Blvd. This area contains the supermarket, bank, library, and numerous smaller retail facilities. The City will continue to focus to develop/redevelop this area. Neighborhood commercial centers are and will be used to provide convenience facilities in the eastern portion of the City.

Residential development and trends: Currently, the City has eight residential zoning categories: R-1 (Single-Family Residential); R-2 (Multi-Family Residential); R-A (Rural Single Family Residential); RS-1 (Shoreland Residential – General Development); RS-2 (Shoreland Residential – Recreational Development); R-M (Manufactured Home); PUD (Planned Unit Development); and R-AH (Affordable Housing District).

The City of Ham Lake has over 5,000 dwelling units (which includes approximately 450 units for low-income families and senior citizens), with room for perhaps another 1,600. Included in this total are 285 mobile home units in the Flamingo Terrace Mobile Home Park. 90% of all housing in the City is single-family housing.

Commented [JS151]: up from 4,600

Only about 2/3 of the City's 23,040 acres are even capable of being developed, but approximately 2,560 acres of this are (or will be) used for parklands, road right-of-way, commercial uses and golf courses, reducing the developable area for residential use to about 58% of the total land area (approximately 13,363 acres).

The City prefers to continue to allow all development at a residential density of at least 1.0 acre per unit, both to keep a rural feel and the logistics of attempting to service a community that is comprised of approximately one-third wetlands with a municipal sewer/water. Users of the sewer system must pay for the system, and the cost extending lines across hundreds of acres

of wetlands to serve relatively small and isolated pockets of residential development is considered prohibitive.

It is estimated that when fully developed there will be a resident population of 19,500. This future plan will include approximately 650 housing units available for low-income families and senior citizens.

There is no organized historical preservation entity in the City, although Anoka County maintains an active and effective historical society. One site (a pioneer church building) is maintained by the parent congregation.

Infrastructure and infrastructure projects: Ham Lake infrastructure includes a major State Trunk Highway 65 passing through from south to north. County Roads 116, 16, 18, 52, 60, 61, 68, and 17 also bisect Ham Lake. While only one road leading out of the City to the east, the natural barrier created by the Carlos Avery Game Preserve makes this situation necessary and permanent. Intra-City travel if provided by north/south collectors (University Avenue, Radisson Road, Xylite Street and Naples Street). County Roads 116, 16, 18 and 149th Avenue NE, provides the east/west collection function.

Commented [JS152]: Removed
Currently the City is served only by individual private septic systems and wells. In March 2005 the City contracted to have a study completed regarding the feasibility of a sanitary sewer and water supply. The planning area included the Trunk Highway 65 corridor from 169th Avenue to the City's north border, and a corridor out to and around Coon Lake. This system could be tentatively joined with a system proposed by the City of East Bethel, which abuts the city to the north.

Said there are no plans for this.

HILLTOP

Geographic location and characteristics: The City of Hilltop is located in southern Anoka County, within the City of Columbia Heights, a first-ring suburb on the northeast border of the City of Minneapolis. Hilltop is completely surrounded by and shares all of its borders with the City of Columbia Heights. Hilltop is 80 acres in size or 0.1 square miles. The City of Hilltop is located at Latitude 45.05 N and Longitude 93.24 W and has an elevation of 942 feet.

Public lands: Hilltop has 27 acres of public land within the city. These areas include schools, city offices, public works facilities and a small public park.

Private fee areas: There are no such areas in Hilltop.

Agriculture and forestry: There are no such areas in Hilltop.

Commercial and industrial development and trends: Hilltop is fully developed. There is no significant growth projected. Redevelopment/ renewal of aging commercial areas is all that is expected in the near to distant future.

Residential development and trends: Hilltop is fully developed. No growth in the number of households is projected.

Infrastructure and infrastructure projects: There is no planned expansion of streets, water or sanitary sewer service.

LEXINGTON

Commented [RK153]: Updated for 2019

Geographic location and characteristics: The City of Lexington is located in the SE corner of Anoka County about 5 miles north of HWY 694. Lexington shares North, South, and West borders with Blaine and East Border with Circle Pines. Lexington is about 1 sq. mile in size. The City of Lexington is located at Latitude 45.13 N and Longitude 93.17 W and has an elevation of 909 feet.

Public lands: The City has 2 public parks, city offices, public works facilities and a fire station. There are 3 churches in Lexington. The City of Lexington owns and operates Lexington Memorial Park. It is nearly 20 acres in size and supports two tennis courts, five ball fields, a hockey rink and a warming house. There are also two neighborhood playgrounds in the city.

Private fee areas: There are no private fee areas in Lexington.

Agriculture and forestry: There are no agriculture or forestry in Lexington.

Commercial and industrial development and trends: Lake Drive (CSAH 23), where most of the commercial activity of the city is located, divides the city from the northeast to the southwest. Retail uses dominate commercial areas, although there are automobile service uses, restaurants, storage facilities, professional offices, and other commercial use as well. There is no future growth anticipated.

The center of commercial activity in Lexington is Northway Shopping Center, located along the south side of the Lake Drive frontage road. This center, which includes 90,000 square feet, was built about 1950 and remodeled in 1989. The city considers Northway and its immediate environs to be Lexington's "downtown."

Residential development and trends: The City of Lexington is nearly fully developed, with residential uses constituting a majority of the area. Maximum anticipated residential growth is 20 homes.

Infrastructure and infrastructure projects: Local road improvements.

LINO LAKES

Commented [RK154]: Updated for 2019

Geographic location and characteristics: The City of Lino Lakes is located in northeastern Anoka County, approximately 30 miles north of Minneapolis/St. Paul. Lino Lakes shares its borders with Blaine, Circle Pines, Shoreview, Columbus, White Bear Lake Township, North Oaks and Hugo. The City of Lino Lakes is 33 square miles in size. While residents are attracted to the city because of its natural amenities, including 13 lakes and several seasonal wetlands, Interstate I-35E and I-35W make it just a 20- minute drive to either downtown Minneapolis or St. Paul. The City surrounds the City of Centerville. The City of Lino Lakes is located at Latitude 45.17 N and Longitude 93.10 Wand has an elevation of 889 feet.

Public lands: Within the City there is 3,580 acres of public lands. This includes a 5500-acre Regional Park, and churches, schools, city offices, public works facility and a fire station. Within the City, there are 203 acres of Public Park.

Private fee areas: Within the City of Lino Lakes there is a county public golf course, Chomonix. Lino Lakes has two private airport facilities, the Hansen Sea Plane Base and the Lino Lakes Airpark.

Agriculture and forestry: Approximately 3,920 acres within the City of Lino Lakes are agricultural. While the City of Lino Lakes has an abundance of trees, there are no publicly managed forestlands

Commercial and industrial development and trends: The City of Lino Lakes continues to see growth in its industrial and commercial sectors. The availability of vacant land, municipal utilities, and freeway access each are strong amenities that will allow Lino Lakes to compete for future economic development. New development has occurred with the extension of sanitary sewer and municipal water.

Between 2008 and 2018, the City has added 439,655 square feet of industrial space and between 2008 and 2018, 78,280 square feet in commercial/retail space.
Residential development and trends: The City has a sustained residential growth that will continue over the next 20 years.

Infrastructure and infrastructure projects: There are many planned infrastructure projects. The City has identified a need to provide convenient pedestrian and automobile connections throughout the community in order to establish a unified community identity. A future interchange location has been identified at 80th Street and I-35E. A new bridge will be constructed at 35W and 80th Street. The City has constructed a new City well and has made system connection thought the City. The City has completed a second Fire Station that services the East side of the City. For utilities, the City will be extending sewer and water trunk lines to facilitate residential development.

LINWOOD TOWNSHIP
Geographic location and characteristics: Linwood Township is a thirty-six square mile community located in the northeast corner of Anoka County, approximately 35 miles northeast of Minneapolis/St. Paul. The township is primarily agricultural and residential in land use, with very little commercial development. The Town of Linwood is located at Latitude 45.37 N and Longitude 93.08W and has an elevation of 892 feet.

Public lands: The Township of Linwood has 220 acres of public land. These areas include churches, schools, township offices, fire station, public works, and township parks. The Martin-Island-Linwood Lakes Regional Anoka County Park is located in Linwood Township as well and is 700 Acres in size. Carlos Avery Wildlife Management Area is also located in Linwood and is 5760 acres in size.

Private fee areas: There are no private fee areas in Linwood Township.

Agriculture and forestry: Approximately 4563 acres within Linwood Township receive the agricultural property tax classification by the Anoka County Assessors Office. The Carlos Avery Wildlife Management Area does have publicly managed forestlands.

Commercial and industrial development and trends: The Township of Linwood has very little commercial or industrial property within its boundary due to the lack of centralized sewer system.

Residential development and trends: The Township has a sustained residential growth that will continue for the foreseeable future as the existing farmland is developed into residential parcels. There have been 61 new single-family dwelling permits issued in Linwood Township from 2014 through 2018.

Commented [JS155]: Previous Language:

There have been 206 new single-family dwelling permits issued in Linwood Township from the beginning of the year 1999 through the end of year 2004.

Infrastructure and infrastructure projects: Two Anoka County highways serve as the main corridors for traffic, Fawn Lake Drive on the north, and Viking Blvd on the south. urn lanes are being added to one section of Fawn Lake Drive and street lights have been added to Viking

Blvd. Linwood Township has no centralized sewer or water, and there are no existing plans for it at the present time.

CITY OF NOWTHEN

Geographic location and characteristics: The latitude of Burns is 45.33N. The longitude is 93.44 W. City of Nowthen is located in the northwest corner of Anoka County, Minnesota. City of Nowthen is bordered by the City of Ramsey on the south, the City of Oak Grove on the east, the City of St. Francis on the north, and the City of Elk River (located in Sherburne County) on the west. The township has a total area of 35.2 miles. Of this total, 33.8 miles is land and 1.4 miles water. The total area is 3.95% water. There are 11 lakes in Burns, with Twin Lake being the largest.

Public lands: Ownership of the Twin Lakes County Park (63 acres) will be turned over to City of Nowthen in 2006. This public park will have trails, fishing, play areas and a pond/natural area within it. The trails within this park will connect up to trails currently being developed within neighborhood developments in the township.

Private fee areas: A State Wildlife Management area (40 acres) is located within the township. This public land is open land, which can be used by the public for hunting.

Agriculture and forestry: **Wetlands consist of 4,927 acres and 14,294 acres are undeveloped/agricultural use. In 2000 there was 1,159 acres classified as Open Water Bodies.**

Commercial and industrial development and trends: Within Nowthen, as of 2010, there was approximately 55 acres with the land use of Commercial/industrial businesses and 153 acres in parks. Currently the Burns Town Center and the Burns Commercial Park are developed. Within these commercial developments currently there is a bar & grill establishment, mini storage, auto repair, bank, transmission shop, paving company, cabinet business, collision center, nursery, welding and convenient store businesses. Within City of Nowthen there is additional land, currently zoned Commercial and Industrial, available for development. This land located along Highway 47, and land along County Road 5 and County Road 22.

Residential development and trends: A total of 2,063 acres are residential land use and within this number, 439 acres are classified farmstead use. In 2010, Nowthen only had a total of 7 acres with multifamily use. City of Nowthen currently has (3) new residential developments near completion. Within these developments there are (21) lots open for future single-family dwellings.

Infrastructure and infrastructure projects: A major transportation infrastructure project had been discussed in which County Road 22, which runs from east and west through the City, would be converted to a U.S. Highway. This project would not only involve City of Nowthen but eventually all communities in which County Road 22 runs east and west through and would when completed connect two major highways, Interstate 35W and State Highway 169.

OAK GROVE

Geographic location and characteristics: The City of Oak Grove is a community in the northwestern quadrant of Anoka County. Its 36 square miles are bounded by the City of Andover, City of Nowthen, City of East Bethel, and City of St. Francis. The principal water features within the City include the Rum River, Cedar Creek, Seelye Brook, and Lake George.

The City of Oak Grove is located at Latitude 45.34 N and Longitude 93.32 W and has an elevation of 896 feet.

Public lands: Oak Grove has two significant areas of public land: a 160-acre landfill owned by the Metropolitan Pollution Control Agency, which is located, south on CR22 east of CR9, and the very southeast corner of the city, Section 36 which is State designated land. There is also a wildlife management area located in Section 23 owned by the DNR. There are twelve plus smaller parcels of public land designated for open spaces, the public wastewater system around Lake George along with the public well water system also servicing properties near Lake George, recycling center, easements for roads and public accesses to Lake George.

Private fee areas: Lake George Regional Park is maintained by the Anoka County Parks Department. Oak Grove is home to a total of 42 parks, which have various recreational uses. Oak Grove Preserve, Ramblin Rum Estates, Robert C. Burman Estates, Swanson's Brookview, and the City Hall park require facility use permits which can be obtained from City Hall. Recreational hunting is allowed in Oak Grove.

Agriculture and forestry: One-third of Oak Grove is currently designated as agricultural with farmland being used as such. Future trends and plans are addressed in the City's 2030 Comprehensive Plan.

Commercial and industrial development and trends: Currently there are few commercial and industrial areas designated in Oak Grove. The properties that are zoned commercial and industrial are located along Viking Boulevard (CR22) and the railroad tracks. There is no established downtown area in Oak Grove.

Residential development and trends: Zoning district classifications in Oak Grove are identified as Single Family Residential (SFR), Agricultural (Ag), Lake George Districts (LG-1-2-3), Master-Planned Golf Course Community (MPGCC), and Planned Unit Developments (PUD). The historic heart of the City began at the enclave of Cedar in the middle to late 1800s. The City's 2030 Comprehensive Plan considers future development areas as residential trends assure steady growth for the City of Oak Grove.

Lots are primarily acreage lots served by private wells and onsite septic systems. There are two exception areas served by public water systems and/or wastewater collector systems. One area is Lake George, a city sewer/wastewater facility. The westerly side of Lake George includes a redevelopment area with a 52-unit senior apartment building and 14 single-family lots, which is serviced by the city sewer facility and the West Lake George Public Well water system. A second area is the new Ponds 18-hole golf course and housing development with 206 urban size single-family lots and 18 townhouse lots. The City of St. Francis provides the drinking water and wastewater is handled by a wetland treatment system.

Infrastructure and infrastructure projects: Street mileage for Oak Grove is 116.45 miles (22.34 of which are MN State Aid streets.) One bridge spans the Rum River and the Burlington Northern Railroad tracks run north south through the City. Independent School District #15 owns property in Oak Grove for a future elementary school. The Rum River Tree Farm is an example of a business located in Oak Grove.

RAMSEY
Geographic location and characteristics: The City of Ramsey is located in western Anoka County, approximately 30 miles north of Minneapolis/St Paul. Ramsey shares its borders with

Anoka, Oak Grove, City of Nowthen and Elk River. On its southern border is the Mississippi River and to the East, Rum River. The City of Ramsey is 29 square miles in size and has latitude of 45.26 N and longitude of 93.44 W and an elevation of 879 feet.

Public lands: The City has 266 acres of public land within the City. These areas include churches, schools, city offices, public work facilities, and fire stations. Within the City, there is nearly 1000 acres of Public Park. The larger City-owned parks are Elmcrest Park (95 acres), Central Park (41.3 acres), Rivers Bend Park (47.3 acres) and Peltzer Park (32 acres). In addition, Anoka County has two regional parks within Ramsey Mississippi West Regional Park (204 acres) and Rum River Central Park (308.8 acres). The State of Minnesota operates a wayside rest along Highway10 that is 18 acres in size.

Private fee areas: Within the City of Ramsey, there are two public golf courses, Rum River Hills, along Highway 47, and Northfork, along Highway 10. The Boy Scouts own 160 acres of land along Highway 47 and the Rum River that they use for camping and other scout activities.

Agriculture and forestry: Approximately 1500 acres within the City of Ramsey receive the agricultural property tax classification by the Anoka County Assessors Office. While the City of Ramsey has an abundance of trees, there are no publicly managed forestlands. There are several private business tree nurseries (two along Highway 47, and one on Alpine Drive) located within the City of Ramsey.

Commercial and industrial development and trends: The City of Ramsey growth has slowed but since 2007 has added 225,000 square feet of commercial and industrial buildings. The Ramsey Town Center, renamed the COR in 2010 once completed will add nearly 750,000 square feet in new commercial/retail space.

Residential development and trends: The City has a sustained residential growth that will continue over the next 20 years.

Infrastructure and infrastructure projects: There are many infrastructure projects planned for the future. In regard to transportation, projects included conversion of U.S. Highway 10 to a limited access freeway, a new bridge crossing over the Mississippi River, the relocation of State Highway 169 through Ramsey, and the improvement and widening of County and State aid roads. For utilities, the City will be extending sewer and water trunk lines north of the existing service area to facilitate residential development. The City will also be constructing several new City wells, another water tower, and a water treatment plant within the next 5 years.

ST. FRANCIS

Geographic location and characteristics: The City of St. Francis is located in northern Anoka County, approximately 35 miles north of Minneapolis/St. Paul. St. Francis shares its borders with Bethel, Oak Grove, and City of Nowthen in Anoka County, and has Isanti County on the northern border. Running through the center of town is the Rum River. The City of St. Francis is 24 square miles in size. The latitude of St. Francis is 45.38 N and the longitude is 93.35 W, with an elevation of 919 feet.

Public lands: The city has 8.51% of its land as public land within City Limits. These areas include churches, schools, city offices, public works facilities and fire stations. Within the City, there is over 100 acres of Public Park. There are 13 city parks totaling 82.6 acres. The larger City Owned parks are Deer Creek 1st addition (16.5 acres) and the Community Park (15 acres).

In addition, St. Francis has 1 regional park Anoka Rum River North County Park, 6.7 miles of trails.

Private fee areas: Within the City, there is one public golf course, The Ponds, located along County Road 24.

Agriculture and forestry: Approximately 7% within the City of St. Francis receive agricultural property tax classification by Anoka County Assessors Office. The City of St. Francis has an abundance of trees in the 460-acre Bethel Wildlife Management Area along with the DNR 40-acre land.

Commercial and industrial development and trends: The City of St. Francis continues to see high growth in its industrial and commercial sectors. Since 2000, the city has added 1,800 square feet of industrial space and 130,815 square feet of commercial/retail space. The St. Francis City Centre, once completed will add nearly 104,500 square feet in new commercial/retail space. In 2007, the city built a 26,000 square foot water treatment plant.

Residential development and trends: The City has sustained residential growth that will continue over the next 20 years. In 2000 there was an estimated 1,638 homes in the City of St. Francis, and in 2004 there was an estimated 2,357 homes total. In 2010, the census reported 2,520 households.

Infrastructure and infrastructure projects: There are many infrastructure projects planned for the future. In regard to transportation, projects included in conversation are US Highway 47 through St. Francis, widening and improving the road. A project for Hwy 47 from Cree St. To Ambassador Blvd is scheduled as soon as 2021. For utilities, the City will be attempting to extend City sewer and water trunk lines north and east of the existing service to facilitate residential growth. There is possible construction of new City wells within the next 5 years as well.

SPRING LAKE PARK

Commented [REK156]: Reviewed and updated 2019

Geographic location and characteristics: The City of Spring Lake Park is located mostly in southern Anoka County, with a tiny portion located in the western part of Ramsey County. The City of Spring Lake Park is approximately 10 miles north of Minneapolis/St. Paul. Blaine, Fridley, Coon Rapids and Mounds View border Spring Lake Park. The City of Spring Lake Park is 2.9 square miles in size and has latitude of 45.10 N and longitude of 93.23 W and an elevation of 902 feet.

Public lands: The City has 186 acres of public land within the City. These areas include churches, schools, city offices, public work facilities, and fire stations. Within the City, there is 39 acres of Public Park.

Private fee areas: There are no private fee areas in the City of Spring Lake Park.

Agriculture and forestry: There are no agriculture and forestry areas in the City of Spring Lake Park.

Commercial and industrial development and trends: Spring Lake Park does not have a wide range of commercial businesses. Commercial businesses in the city either attempt to capture pass-by traffic along Highway 65, County Road 10 and University Avenue, or they are

destination businesses. Light industrial businesses are located east of Highway 65. Spring Lake Park due to its size and development does not anticipate much growth in the way of commercial or industrial development. Scattered though out the City of Spring Lake Park are strip malls with numerous other family owned businesses and other small businesses. Since the last mitigation plan HyVee has purchased a site at Hwy 65 and 81st Ave and is currently constructing a grocery store to open in Nov. 2019.

Commented [JS157]: Updated 4/8/19

Residential development and trends: The City is predominately a residential community with families and children. This is expected to continue, although the aging of the population and the need for senior housing, as well as the need for housing for young adults, presents an opportunity for the development of different types of housing, such as multiple-family apartments, townhouses and housing units on one level.

The Metropolitan Council's forecasts assumes that growth in Spring Lake Park's population and households will result almost entirely from the development of multi-family housing at a density of 10 dwelling units per acre. Based on the Council's estimate of 2,503 households in 1995, that would be an increase of 167 dwelling units during the next 20 years. Since the last mitigation plan update the City of Spring Lake Park has added a large multi-family apartment complex consisting of 194 units. The City has also added several small townhomes and single-family dwelling units.

Commented [JS158]: Updated 4/8/19

Infrastructure and infrastructure projects: Consists of two State Highways within the City of Spring Lake Park. On the Westside of the City is MN Hwy 47 that runs north and south. The city is also divided in half north and south with MN Highway 65 (Central Ave). Anoka County Road 10 runs east to west through the northern portion of Spring Lake Park connecting both Highway corridors.

Since the last mitigation plan update the City of Spring Lake Park has completed a Local Surface Water Management Plan, which has identified several roadways within the City that are prone to flooding. These areas are, but not limited to: Arthur St NE and 81st Ave NE, 8200 to 8300 Block of Monroe St Ne, 7700 block to 7800 block of Terrace Rd Ne, 8200 block to 8300 block of Able St. Ne, 8400 block of Able St, Ne and 8300 block of Fillmore St Ne. The City has also identified several drainage ponds that need upgrading and are part of the Local Surface Water Management Plan. Theses ponds are, but not limited to: Arthur St. Ne and 81st Ave, Triangle Park Pond and Fillmore St Ne. and 83rd Ave Ne drainage area. A copy of the Local Surface Water Management Plan is on file at the Spring Lake Park City Hall for review.

Commented [JS159]: Updated 4/8/19

SECTION 5: CAPABILITIES, MITIGATION AND MAINTENANCE

5.1 Jurisdiction Capabilities

This section of the Plan discusses the capability of Anoka County and the participating local jurisdictions to implement hazard mitigation actions. It consists of the following eight subsections:

- Capability Assessment Overview
- Conducting the Capability Assessment
- Capability Assessment Findings
- External Resources
- Disaster Shelters
- Previously Implemented Mitigation Measures
- Repetitive Flooding Mitigation
- Linking Capability Assessment, Risk Assessment, and Mitigation Strategy

5.1.1 Capability Assessment Overview

The purpose of conducting a capability assessment is to determine the ability of a local jurisdiction to implement a comprehensive mitigation strategy, and to identify potential opportunities for establishing or enhancing specific mitigation policies, programs, or projects. As in any planning process, it is important to try to establish goals, objectives and actions that are feasible, based on an understanding of the organizational capacity of those agencies or departments tasked with their implementation. A capability assessment helps determine which mitigation actions are practical and likely to be implemented given a local government's regulatory framework, level of administrative and technical support, and fiscal resources.

A capability assessment has two primary components: an inventory of a local jurisdiction's relevant plans, ordinances, or programs already in place, and an analysis of its capacity to carry them out. A capability assessment also highlights the positive mitigation measures already in place or being implemented at the local level, which should continue to be supported and enhanced through future mitigation efforts. The capability assessment completed for Anoka County and its jurisdictions serves as a critical planning step and is an integral part of the foundation for designing an effective multi-jurisdictional hazard mitigation strategy. Coupled with the Risk Assessment, the Capability Assessment helps identify and target meaningful mitigation actions for incorporation in the Mitigation Strategy section of the Hazard Mitigation Plan. It not only helps establish the goals and objectives for Anoka County, but also ensures that those goals and objectives are realistically achievable under given local conditions.

5.1.2 Conducting the Capability Assessment

In order to facilitate the inventory and analysis of local government capabilities throughout Anoka County, a Capability Assessment Survey was distributed to Anoka County and its municipalities. The survey was completed by appropriate local government officials and requested information on a variety of "capability indicators" such as existing local plans, policies, programs, or ordinances that contribute to the community's ability to implement hazard mitigation actions. Other indicators requested included information related to each jurisdiction's fiscal, administrative, and technical capabilities, such as access to local budgetary and personnel resources for mitigation purposes. At a minimum, survey results provide an extensive inventory of existing local plans, ordinances, programs, and resources in place or under development. The survey instrument thereby not only helps accurately assess each

jurisdiction's degree of local capability, but also serves as a good source of introspection for those jurisdictions wishing to improve their capability as identified gaps, weaknesses, or conflicts can be viewed as opportunities for specific actions to be proposed as part of the community's mitigation strategy.

5.1.3 Capability Assessment Findings

The findings of the capability assessment are summarized in this Plan to provide insight into relevant capacity of Anoka County's jurisdictions to implement hazard mitigation activities. All information is based upon the responses provided by local government officials to the Capability Assessment Survey and during meetings throughout the planning process.

The information provided by participating jurisdictions was scored using a simple scoring methodology to rank each jurisdiction's overall capability. A total score and general capability rating of "High," "Medium" or "Low" was then determined for each jurisdiction according to the total number of points. The classifications are designed to provide an assessment of each jurisdiction's local capability. The result of this multi-jurisdictional capability assessment provides critical information for developing an effective and meaningful mitigation strategy.

5.1.3.1 Planning and Regulatory Capability

Planning and regulatory capability is based on the implementation of existing plans, ordinances, and programs by a local government. These measures can help demonstrate a local jurisdiction's commitment to guiding and managing growth, development, and redevelopment in a responsible manner while maintaining the general welfare of the community. Such measures include emergency response and mitigation planning, comprehensive land use planning, and transportation planning, in addition to the enforcement of zoning or subdivision ordinances and building codes that regulate how land is developed and structures are built. Although some conflicts can arise, these planning initiatives present significant opportunities to integrate hazard mitigation principles and practices into the local decision-making process.

This assessment is designed to provide an overview of the key planning and regulatory tools in place or under development for jurisdictions in Anoka County, along with their potential effect on loss reduction. This information will help identify opportunities to address existing gaps, weaknesses, or conflicts with other initiatives, in addition to integrating this Plan with existing planning mechanisms, where appropriate. The table below provides a summary of the relevant local plans, ordinances, and programs already in place or under development for Anoka County's participating jurisdictions. A more detailed discussion on jurisdiction planning and regulatory capability follows.

Building codes regulate construction standards. In many communities, permits and inspections are required for new construction. Decisions regarding the adoption of building codes (that account for hazard risk), the type of permitting process required both before and after a disaster, and the enforcement of inspections all affect the level of hazard risk faced by a community.

Each of Anoka County's jurisdictions has either recently adopted or has begun the process of reviewing the International Building Code (IBC), which was first introduced in 2000 and recently revised in 2012. Adoption of the new code has become a priority for city officials because of the building code effectiveness.

A Capital Improvements Plan (CIP) guides the scheduling of spending on public improvements. A CIP can serve as an important mechanism to guide future development away from identified hazard areas. Limiting public spending in hazardous areas is one of the most effective long-term mitigation actions available to local governments.

A Comprehensive Plan incorporates all aspects of the various tactical plans and programs into a strategic county plan that guides the county and its jurisdictions to successfully improve and enhance the quality of life for all citizens.

An Economic Development Plan provides for development of existing business in the county and a strategy to attract new business to locate in the county. A successful Economic Development Plan provides long-term, attractive employment opportunity to communities and increases the tax base.

An Emergency Response Plan is part of an Emergency Operations Plan (EOP) that outlines responsibilities and the means by which resources are deployed following an emergency incident or disaster.

Anoka County Emergency Management maintains a countywide EOP. The EOP addresses emergency operations on behalf of all jurisdictions in Anoka County. During a disaster, the Emergency Operations Center (EOC) serves as the hub of operations where local government officials and agency representatives from across the county will report to ensure all response efforts are effectively coordinated.

The county's EOP has been determined to have a moderate effect on loss reduction, as its emphasis focuses on preparedness and response operations versus hazard mitigation activities. However, the mission, execution, and implementation of the EOP strongly support the goals of this Plan.

A Flood Management Plan (or a flood mitigation plan) provides a framework for action regarding the corrective and preventative measures in place to reduce flood-related impacts. Typical flood control activities include: structural flood control works (such as bank stabilization, levees, and drainage channels), acquisition of flood-prone land, flood insurance programs and studies, river and basin management plans, public education programs, and flood warning and emergency preparedness activities. Anoka County and its municipalities have pursued a variety of flood mitigation activities that strongly support loss reduction efforts. These activities will be built upon as actions in this Plan are implemented.

An important strategy for all jurisdictions is participation in the National Flood Insurance Program (NFIP). In addition to approaches that cut across hazards, such as education, outreach, and the training of local officials, the NFIP contains specific regulatory measures that enable government officials to determine where and how growth occurs relative to flood hazards. Participation in the NFIP is voluntary for local governments, but the program is promoted by FEMA as a basic first step for implementing and sustaining an effective hazard mitigation program. It is therefore used as a key indicator for measuring local capability as part of this assessment. In order for a county or municipality to join the NFIP, it must adopt a local flood damage prevention ordinance that requires jurisdictions to follow established minimum building standards in the floodplain. These standards require that all new buildings and substantial improvements to existing buildings will be protected from damage by the 100-year flood, and that new floodplain development will not aggravate existing flood problems or

increase damage to other properties. Anoka County and its municipalities participate in the National Flood Insurance program.

Another key service provided by the NFIP is the mapping of identified flood hazard areas. Once prepared, the FIRMs are used to assess flood hazard risk, regulate construction practices, and set flood insurance rates. FIRMs are an important source of information to educate residents, government officials, and the private sector about the likelihood of flooding in their community.

Another voluntary program that provides significant value is the Community Rating System (CRS). CRS is an incentive-based program that encourages counties and municipalities to undertake defined flood mitigation activities that go beyond the minimum requirements of the NFIP, adding extra local measures to provide protection from flooding. All of the 18 creditable CRS mitigation activities are assigned a range of point values. As points are accumulated and reach identified thresholds, communities can apply for an improved CRS class. Class ratings, which run from 10 to 1, are tied to flood insurance premium reductions. As class ratings improve, the percent reduction in flood insurance premiums for NFIP policyholder's increases. CRS Premium Discounts, by class as defined by FEMA, are depicted in the adjacent table.

Class	Discount
1	45%
2	40%
3	35%
4	30%
5	25%
6	20%
7	15%
8	10%
9	5%
10	0%

Any community that is in full compliance with the rules and regulations of the NFIP may apply to FEMA for a CRS classification better than class 10. The CRS application process has been greatly simplified over the past several years based on community comments to make the CRS user-friendly. Extensive technical assistance is also available for communities who request it. Anoka County and its municipalities are investigating participation in the CRS program.

Participating Anoka County Jurisdictions will continue to be a part of the National Flood Insurance Program by maintaining in good standing with the National Flood Insurance Program (NFIP) and comply with local regulations pertaining to the NFIP. Jurisdictions participating in the National Flood Insurance Program will follow criteria are established in the NFIP regulations at 44 CFR §60.3. The jurisdictions will adopt and maintain floodplain management ordinance that meets or exceeds the minimum NFIP criteria. As part of the compliance requirements participating Jurisdictions have adopted building codes and flood management plans to regulate construction in Special Flood Hazard Areas. In Anoka County, each city is responsible for updating flood maps for their jurisdiction; Anoka County assists Linwood Township with their needs for updating flood maps.

Jurisdictions in Anoka County Participating in the National Flood Insurance Program			
Anoka County	Circle Pines	Ham Lake	Ramsey
Andover	Columbia Heights	Lexington	Spring Lake Park
Anoka	Columbus	Lino Lakes	St. Francis
Blaine	Coon Rapids	Linwood Township	
Bethel	East Bethel	Nowthen	
Centerville	Fridley	Oak Grove	

Growth Control Ordinances are primarily used by local governments to encourage growth in an orderly manner in the areas covered by the ordinance. The purpose of most growth control

ordinances is to preserve residential housing values, protect historic areas, and insure that local governments can provide appropriate services to citizens.

Hazard Setback and Hillside Ordinances or Regulations are usually part of a comprehensive land use plan. Typically, a comprehensive plan is comprised of demographics, land use, transportation elements, and community facilities. Given the nature of the plan and its regulatory standing, the integration of hazard mitigation measures into the comprehensive plan enhances the likelihood of achieving risk reduction goals, objectives, and actions.

A Post Disaster Ordinance provides for the protection of lives and property and enhances the recovery from disasters. The ordinance is used to control price gouging and allows local governments to facilitate the purchase and deployment of equipment and resources to speed disaster recovery.

A Post Disaster Recovery Plan provides the framework to establish assistance to victims of disaster, assess the long-term economic effects of disaster on the community, facilitate post-disaster recovery, and assist the community with redevelopment plans.

Real Estate Disclosure is an important issue that facilitates real estate transactions and ensures that both buyers and sellers fully understand any mitigating circumstances associated with properties.

Shoreline Ordinances identify and provide for shoreline maintenance and control. Shorelines of waterways including creeks, tributaries, canals, rivers lakes and oceans require continual maintenance to mitigate flooding and provide environmental protection.

Site Plans/Subdivision Ordinance is intended to regulate the development of residential, commercial, industrial, or other uses, including public infrastructure, as land is subdivided into lots for future development. Subdivision design that accounts for natural hazards can dramatically reduce the exposure of future development.

Wildfire Ordinances are a means to control the potential of wildfire occurrence by requiring burn permits and the reduction of fuel for wildfires in both urban interfaces and forests in general.

Zoning Ordinances are the means to control land use by local governments. As part of a community's police power, zoning ordinances are used to protect the public health, safety and welfare of its citizens. Since zoning regulations enable local jurisdictions to limit the type and density of development, it can serve as a powerful tool when applied in identified hazard areas. All Anoka County jurisdictions have zoning ordinances.

The legal and regulatory capability summary below defines deficiencies in existing jurisdictional planning and regulatory tools for Anoka County and its municipalities. This information will serve as a guide for those jurisdictions committed to improving their communities, and goal actions to mitigate these deficiencies are included in this Plan.

The survey identifies whether resources are jurisdiction employees/contractors, resources that are provided by other authorities or are not in place

Additional information on administrative and technical capability can be obtained through Anoka County or its local jurisdictions.

Regulatory Control in place Yes=1 No=0 0-7=Low 8-14=Medium 15-20=High Jurisdiction	Building Codes	Capital Improvement Plan	Comprehensive Plan	COOP/COG Plan	Economic Development Plan	EMAP Certified	Emergency Response Plan	Flood Management Plan	Growth Control Ordinance	Hazard Setback Ordinance	Hillside Ordinance	Historic Ordinance	Post Disaster Ordinance	Post Disaster Recovery Plan	Real Estate Disclosure	Shoreline Ordinance	Site Plan Requirements	Subdivision Regulations	Wildfire Ordinance	Zoning Regulations	Score	**CAPABILITY**
Anoka County	1	1	0	1	1	0	1	1	1	0	0	0	0	1	1	0	0	0	0	0	9	**M**
Andover	1	1	1	0	1	0	1	1	1	0	0	0	0	1	1	1	1	1	0	1	13	**M**
Anoka	1	1	1	0	1	0	1	1	0	0	0	1	0	1	1	0	1	1	0	1	12	**M**
Bethel	1	1	1	0	0	0	1	0	0	0	0	0	0	1	1	1	1	1	0	1	10	**M**
Blaine	1	1	1	1	1	0	1	1	1	1	0	0	0	1	1	1	1	1	0	1	15	**M**
Centerville	1	1	1	0	1	0	1	1	1	1	1	0	0	1	1	1	1	1	1	1	16	**H**
Circle Pines	1	1	1	0	0	0	1	1	0	0	0	0	0	1	1	0	1	1	0	1	10	**M**
Columbia Heights	1	1	1	0	1	0	1	1	0	0	0	0	0	1	1	1	1	1	0	1	12	**M**
City of Columbus	1	1	1	0	1	0	1	1	0	0	0	0	0	1	1	1	1	1	0	1	12	**M**
Coon Rapids	1	1	1	0	1	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	15	**H**
East Bethel	1	0	1	0	1	0	1	1	1	1	0	0	0	1	1	1	1	1	0	1	13	**M**
Fridley	1	1	1	0	1	0	1	1	1	1	1	0	0	1	1	1	1	1	0	1	15	**M**
Ham Lake	1	1	1	0	1	0	1	1	0	1	0	0	0	1	1	1	1	1	0	1	13	**H**
Hilltop	1	0	1	0	0	0	1	0	0	0	0	0	0	1	1	0	1	0	0	1	7	**L**
Lexington	1	1	1	0	0	0	1	1	0	0	0	0	0	1	1	0	1	1	0	1	10	**M**
Lino Lakes	1	1	1	0	1	0	1	1	1	0	0	0	0	1	1	1	1	1	1	1	14	**M**
Linwood Twp.	1	1	1	0	1	0	1	0	0	0	0	0	1	1	1	1	1	1	0	1	12	**M**
Nowthen	1	1	1	0	1	0	1	1	0	0	0	0	0	1	1	0	1	1	0	1	11	**M**
Oak Grove	1	1	1	0	1	0	1	0	0	1	0	0	1	1	1	1	1	1	1	1	14	**M**
Ramsey	1	1	1	0	1	0	1	1	0	0	1	0	1	1	1	0	1	1	1	1	14	**M**
St. Francis	1	1	1	0	1	0	1	1	0	0	0	0	0	1	1	0	1	1	0	1	11	**M**
Spring Lake Park	1	1	1	0	0	0	1	1	0	0	0	0	0	1	1	0	1	1	0	1	10	**M**

5.1.3.2 Administrative and Technical Capability

The ability of a local government to develop and implement mitigation projects, policies, and programs is directly tied to its ability to direct staff time and resources for that purpose. Administrative capability is evaluated by determining how mitigation activities are assigned to local departments and the personnel resources available to implement the activities. Key Resources to respond to and mitigate disaster include the following:

Agriculture Risk Assessor to assess the risk and vulnerability and implement mitigation of crops and livestock.

Construction Practices management and monitoring to ensure that facilities meet established building codes, land use, and other ordinances in place to mitigate disasters.

Emergency Manager to develop, manage and execute disaster plans in order to protect lives and property from disasters.

Emergency Staff to assist the Emergency Manager in the execution of Emergency Management duties.

Emergency Medical Technicians to respond to and provide emergency medical services to community populations.

Emergency Medical Service – First Response to respond to medical emergencies and support the Emergency Medical Technicians.

Fire Service to respond to all fire events to protect lives and property.

Flood Plain Manager to manage floodplains and flood information and provide that information to appropriate officials for enforcement purposes.

GIS and/or Hazus provides mapping information to jurisdictions that identifies hazard areas and asset and facility location, value, etc. information to appropriate officials.

Government Administrative is jurisdiction employees that provide internal and community products and services.

Government Elected is elected jurisdiction officials that manage the jurisdiction.

Grant Writer is a position that works with the community and officials to identify and apply for grants to mitigate hazards.

Hazard Risk Assessor is a position that analyzes potential hazards that may affect jurisdictions and identifies vulnerabilities to those hazards.

HAZMAT Team is a team of certified personnel with training and equipment authorized to mitigate hazardous material spills and releases.

Land Use Management is a position that develops, manages and enforces land management practices that mitigate disasters.

Law Enforcement is agencies and personnel that are trained and equipped to maintain law and order, etc. for jurisdictions.

Medical Personnel are trained and equipped medical persons (public or private) that respond to and provide medical services.

Public Communications are communications in place to provide alert and warning of disaster events as well as ongoing communications during disaster events.

Public Works/Utilities are organizations that provide street/road maintenance, shoreline maintenance and deliver utility services to jurisdictions.

Surveyor is a position that provides surveying services to jurisdictions.

The Capability Assessment Survey was used to capture information on administrative and technical capability through the identification of available staff and personnel resources.

The survey identifies whether resources are jurisdiction employees/contractors, resources that are provided by other authorities or are not in place.

Additional information on administrative and technical capability can be obtained through Anoka County or its local jurisdictions.

Resources in place Yes=2 Other Authority=1 No=0 30-40=High 17-29=Medium 0-16=Low Jurisdiction	Agriculture Risk Assessor	Construction Practices	Emergency Manager	Emergency Staff	EMT Certified	EMS – First Response	Fire Service	Flood Plain Manager	GIS and/or Hazus	Government Administrative	Government Elected	Grant Writer	Hazard Risk Assessor	HAZMAT Team	Land Use Management	Law Enforcement	Medical Personnel	Public Communications	Public Works/Utilities	Surveyor	Score	**CAPABILITY**
Anoka County	1	2	2	2	2	0	0	2	2	2	2	2	2	1	2	2	2	2	2	2	34	**H**
Andover	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	1	2	2	37	**H**
Anoka	1	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	1	2	2	37	**H**
Bethel	1	2	2	2	2	2	2	1	1	2	2	1	1	1	1	1	1	1	2	1	29	**M**
Blaine	2	2	2	2	2	2	2	2	2	2	2	0	1	2	2	2	1	1	2	2	35	**H**
Nowthen	1	2	1	1	2	2	2	1	1	2	2	1	1	1	1	1	1	1	2	1	27	**M**
Centerville	1	2	2	2	2	2	2	2	2	2	2	1	1	2	2	2	1	1	2	2	34	**H**
Circle Pines	1	2	2	2	2	2	2	2	1	2	2	1	1	2	2	2	1	1	2	2	34	**H**
Columbia Heights	1	2	2	2	2	0	2	2	2	2	2	1	1	2	2	2	2	1	2	2	32	**H**
City of Columbus	1	2	2	2	2	2	2	1	1	2	2	1	1	1	2	1	1	1	2	1	30	**M**
Coon Rapids	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	40	**H**
East Bethel	1	1	1	1	2	2	2	2	1	2	2	2	1	1	1	1	1	1	2	1	28	**M**
Fridley	1	2	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2	1	2	2	36	**H**
Ham Lake	1	2	2	2	2	2	2	2	1	2	2	1	2	2	2	1	1	1	2	2	34	**H**
Hilltop	1	2	1	1	2	2	2	0	1	2	2	1	1	1	1	2	1	1	2	2	28	**M**
Lexington	1	2	2	1	2	2	2	1	1	2	2	1	1	2	1	2	1	1	2	2	31	**H**
Lino Lakes	1	2	2	2	2	2	2	1	1	2	2	1	1	2	2	2	2	1	2	2	34	**H**
Linwood Twp.	1	2	1	2	2	2	2	0	1	2	2	0	1	2	2	1	1	1	2	1	28	**M**
Oak Grove	1	2	1	2	2	2	2	0	1	2	2	1	1	1	1	1	1	1	2	1	27	**M**
Ramsey	1	2	1	2	2	2	2	2	2	2	2	1	1	2	2	2	2	1	2	2	35	**H**
St. Francis	1	2	2	2	2	2	2	2	1	2	2	2	1	1	2	2	2	1	2	2	35	**H**
Spring Lake Park	1	2	2	2	2	2	2	0	1	2	2	1	1	2	2	2	1	1	2	2	32	**H**

5.1.3.3 Fiscal Capability

The ability of a local government to take action is closely associated with the amount of money available to implement policies and projects. This may take the form of outside grants or local-based revenue and financing. The costs associated with mitigation policy and project implementation vary widely. In some cases, policies are tied primarily to staff or administrative costs. In other cases, direct expenses are linked to an actual project such as the acquisition of flood prone homes, which can require a substantial commitment from local, state, and federal funding sources. The Capability Assessment Survey was used to capture information on each jurisdiction's fiscal capability through the identification of locally available financial resources.

The survey identifies whether the jurisdiction does or does not have the capability and scores overall fiscal capability.

Fiscal Capability in Place Yes=1 No=0 7-9=High 5-6=Medium 0-4=Low Jurisdiction	Community Grants	Public Debt Procurement	Private Debt Procurement	Impact Fees	Jurisdiction Bonds	Project Funding	Special Taxes	Hazard Spending Restrictions	Utility Fees	Score	**CAPABILITY**
Anoka County	1	1	1	0	1	1	1	1	0	7	**H**
Andover	1	1	1	1	1	1	1	0	1	8	**H**
Anoka	1	1	1	1	1	1	1	0	1	8	**H**
Bethel	1	1	1	1	1	0	1	0	1	7	**M**
Blaine	1	1	0	1	1	1	1	0	1	7	**H**
Centerville	1	1	1	1	1	1	1	1	1	9	**H**
Circle Pines	1	1	0	1	1	1	1	0	1	7	**H**
Columbia Heights	1	1	1	1	1	1	1	1	1	9	**H**
City of Columbus	1	1	0	1	1	1	0	1	1	7	**M**
Coon Rapids	1	1	1	1	1	1	0	1	1	8	**H**
East Bethel	1	1	0	0	1	1	0	0	1	5	**M**
Fridley	1	1	1	1	1	1	0	1	1	8	**H**
Ham Lake	1	1	0	1	1	1	1	0	0	6	**M**
Hilltop	1	1	1	1	1	1	1	0	1	8	**H**
Lexington	1	1	0	0	1	1	1	0	1	6	**M**
Lino Lakes	1	1	1	1	1	1	1	1	1	9	**H**
Linwood Twp.	1	1	1	1	1	1	1	0	0	7	**H**
Nowthen	1	1	0	1	1	1	0	1	0	6	**M**
Oak Grove	1	1	0	0	1	1	0	0	1	5	**M**
Ramsey	1	1	1	1	1	1	1	0	1	8	**H**
St. Francis	1	1	0	0	1	1	0	1	1	6	**H**
Spring Lake Park	1	1	1	1	1	1	1	0	1	8	**H**

5.1.4 External Resources

Commented [RK160]: Update current contacts

The table below lists the resources available to Anoka County and its municipalities.

ANOKA COUNTY LOCAL MITIGATION CAPABILITY ASSESSMENT					
Agency/Department Name and Function	Contact Name and email	Contact Telephone	Effect on Loss Reduction		
			Support	Facilitate	Hinder
Anoka County Emergency Management	Terry Stoltzman Terry.Stoltzman@co.anoka.mn.us	763-324-4761	X	X	
Anoka County Central Communications	Valerie Sprynczynatyk Valerie.Sprynczynatyk@co.anoka.mn.us	763-324-4773	X	X	
Anoka County Fire Protection Council	Charlie Smith csmith@sbmfire.org	763-786-4436	X	X	
Anoka County Tax Assessor	Alex Guggenberger Alex.Gugggenberger@co.anoka.mn.us	763-323-5400	X		
Anoka County Highway Department	Doug Fischer Doug.Fischer@co.anoka.mn.us	763-324-3100	X		
Anoka County Parks Department	Anders Oredson Anders.Oredson@co.anoka.mn.us	763-324-3300	X		
Anoka County Emergency Medical Service Providers	Allina Jeff Czyson North Medical Kevin Novotny	651-222-0555 763-581-9900	X		
American Red Cross Chapter	Jill Hallonquist jhallonquist@redcrosstc.org	612-460-3679	X		
Salvation Army	David Dynes David_Dynes@usc.salvationarmy.org	651-746-3488	X		
Anoka County Joint Law Enforcement Council	Tony Palumbo (Chair) Tony.Palumbo@co.anoka.n.us	763-324-5550	X	X	
Anoka County Public Health	Jonelle Hubbard Jonelle.Hubbard@co.anoka.mn.us	763-324-4224	X	X	
FEDERAL AND STATE MITIGATION CAPABILITY ASSESSMENT					
Agency/Department Name and Function	Contact Name and email	Contact Telephone	Effect on Loss Reduction		
			Support	Facilitate	Hinder
Federal Emergency Management Agency	FEMA Region V	312-408-5500	X	X	
U.S. Department of Homeland Security	Central Switchboard	202-282-8000	X	X	
National Flood Insurance	Ceil Strauss, State NFIP	651-259-5713	X	X	

Program	Coordinator				
Minnesota Department of Homeland Security and Emergency Management	Joe Kelly Joseph.kelly@statem.mn.us	651-201-7404	X	X	
Minnesota Department of Public Safety	John Harrington dps.commissioners@state.mn.us	651-215-1527	X		
National Weather Service-Chanhassen	Todd Krause Todd.krause@noaa.gov	952-368-2554	X		
Minnesota Department of Human Services	Tony Lourey tony.lourey@state.mn.us	651-431-2907	X		
Minnesota Department of Health	Jan Malcolm Jan.malcolm@state.mn.us	651-201-5810	X		
Minnesota State Fire Marshal/Office of Pipeline Safety	Bruce West bruce.west@state.mn.us	651-201-7201	X		
Minnesota Department of Natural Resources	Sarah Strommen Commissioner.dnr@state.mn.us	651-296-6157	X		
Minnesota Department of Transportation	Margaret Anderson Kelliher Info.dot@state.mn.us	651-336-4800	X		

5.1.5 Disaster Shelters

Commented [REK161]: Shelter info updated 10-29-11

Anoka County and its participating jurisdictions have several shelters. There are designated Red Cross shelters and other facilities that are designated as shelters by municipalities and Anoka County. The Hazard Mitigation Appendix A includes the identified shelters and their characteristics. Local Jurisdictions have the responsibility for short term sheltering of individuals due to evacuation for hours 0 to 12, after which Red Cross Shelters and other facilities would be made ready to receive short term shelter evacuees depending on needs.

5.1.6 Previously Implemented Mitigation Measures

The success of future mitigation efforts in a community can be gauged to some extent by its ongoing or past efforts. Previously implemented mitigation measures indicate that there is, or has been, a desire to reduce the effects of natural hazards, and the success of these projects can be influential in building local government support for new mitigation efforts. Anoka County's previous mitigation efforts and programs include the following:

- Each jurisdiction in Anoka County supports a public works department and many provide water and wastewater treatment facilities.
- Allina and North Medical provide emergency medical service throughout the county.
- Law enforcement is provided for each municipality, either by the 10 municipal law enforcement agencies, or by the Anoka County Sheriff's Office.

- Fire Protection and fire medical / rescue services are provided for each municipality by one of 16 fire departments, with either all paid, a combination of paid and volunteer, or all volunteer firefighters.
- Fridley has completed a project to construct a levee and enable bank stabilization along the Mississippi River to protect homes in certain vulnerable areas.
- The City of Anoka completed a project to acquire property and remove chronically flood threatened homes along the Rum River.
- Anoka County and the municipalities within, participate in the National Flood Insurance Program.
- Minnesota health officials helped to develop a mass clinic plan. Anoka County Health Department's plan was tested during an August 2004 Strategic National Stockpile drill and subsequently revised to address problems found during that exercise. The plan was implemented for the H1N1 Pandemic in 2009.
- Anoka County is responsible for planning a mass vaccination process should this be necessary due to contagious disease outbreak. Locations for mass dispensing sites have been identified, and a process for administering medicines is being refined and tested.
- Practice exercises are conducted between HSEM, NWS, FBI, Anoka County Emergency Medical Services, city first responders and Anoka County Emergency Management to assure preparedness.
- All facilities involved with hazardous materials provide annual TIER II reports.
- Cities throughout Anoka County continue to add outdoor warning sirens to improve warning effectiveness, and to maintain existing sirens to insure proper operation.
- The American Red Cross has multiple designated emergency shelters. We continue to work with the Red Cross on pet compliant shelters.
- Multiple Anoka County communities have been active in the Firewise program, which works with the state Department of Natural Resources to remove potential fuel sources that may be involved in wild land fires. This mitigation effort limits the spread of wild land fires and helps to protect homes.
- Anoka County participates in the Joint Terrorism Task Force.
- Communities are participating in Lock Box programs with residents and business.

State mitigation efforts and programs that are significant to Anoka County include the following:

State of Minnesota Pipeline Safety Plan: The state of Minnesota, along with gas and oil pipeline providers, maintains a pipeline safety plan. Pipeline providers are required to schedule meetings with local officials to facilitate discussions about mitigation and response to pipeline disasters.

The State Emergency Response Commission is responsible for implementing federal Emergency Planning and Community Right-to-Know Act (EPCRA) provisions in Minnesota and serving as a technical advisor and information clearinghouse for state and federal hazardous materials programs. The Minnesota Homeland Security and Emergency Management Agency is the lead agency responsible for implementing EPCRA.

Minnesota Emergency Management Plan (MEOP): The Minnesota Emergency Operations Plan (MMP) is the document that provides the foundation for all disaster and emergency response

operations conducted within the state of Minnesota. Minnesota state law requires HSEM to develop this plan and update it on a periodic basis.

HSEM Regional Offices: HSEM has six Regional Offices. The regional office serves as the primary day-to-day point of contact with local governments and the citizens of the state. A Regional Program Coordinator heads each office. The Area Coordinators travel to local Emergency Management offices to help coordinate planning and preparedness activities, ensure that federally assisted counties are complying with grant requirements, and provide training to emergency responders. The RPC also serves as the agency's conduit to state assistance to major emergencies. An HSEM RPC responds to any major emergency, emergencies involving multiple state agencies, hazardous materials, multiple fatalities, and other events upon the request of local officials.

Each county in Minnesota has its own Local Emergency Management Director, and at least one designated Assistant Director, who serve at the direction of the respective County Boards. Because disasters occur at the local government level, the Local Director is the key to comprehensive community emergency management. Some local Emergency Management programs receive federal funding assistance through HSEM. Such programs must meet minimum mutually agreed upon criteria. These counties are called Emergency Management Performance Grant (EMPG) counties. The HSEM Regional Offices are responsible for ensuring EMPG counties meet or exceed the minimum EMPG criteria. Anoka County is an EMPG county and member of the Twin Cities Urban Area under the Urban Area Security Initiative (UASI).

The Domestic Preparedness Program is a partnership of federal, state and local agencies with the goal of insuring that, as a nation, we are prepared to respond to a terrorist attack involving nuclear, biological or chemical weapons - weapons of mass destruction (WMD). Today, the term "Homeland Security" is used to denote the concept of preparing for these kinds of events. We continue to review and update our county wide programs as guidance documents are published by the Department of Homeland Security.

5.1.7 Repetitive Flooding Mitigation

This section describes the source of repetitive flooding problems and identifies the number and type (residential, commercial or governmental) of repetitive loss properties in the jurisdiction.

A repetitive loss structure, as defined by the National Flood Insurance Program (NFIP), is a structure that is covered by flood insurance by NFIP that has suffered flood damage twice over a 10-year period in which the average cost of repair is over 25% of the market value of the structure at the time of the event.

The table below identifies the repetitive flooding sources structures and mitigation measures taken to reduce future incidents.

REPETITIVE FLOODING MITIGATION					
Number of Structures	Structure Type Residential Commercial Government Critical Facility Etc.	Flood Location	Flood Type Storm Water Out of Banks Low Lying Maintenance	Number of events	Mitigation Action Structure Buy Out Levee Built Drainage Improvement Etc.
12	Residential	Riverview Terrace, Fridley	Out of Banks	4	Levee Built
44	Residential	River Avenue, Anoka	Out of Banks	7	Structure Buy Out

Commented [RK162]: Trail was built up to reduce flooding.

5.1.8 Linking Capability Assessments, Risk Assessment, and Mitigation Strategy

The findings of the Capability Assessment and Risk Assessment serve as the foundation for a meaningful hazard mitigation strategy. During the process of identifying the goals, objectives and mitigation actions, each jurisdiction must consider not only its level of hazard risk but also its existing capability to minimize or eliminate that risk.

In jurisdictions where the overall hazard risk is considered to be HIGH, and local capability is considered LOW, specific mitigation actions that account for these conditions should be considered. This may include less costly actions such as minor ordinance revisions or public awareness activities. Also, specific capabilities may need to be improved in order to address recurring threats.

In cases where the hazard vulnerability is LOW and overall capability is HIGH, more emphasis can be placed on actions that may impact future vulnerability such as guiding development away from known hazard areas.

5.2 Mitigation Strategy

5.2.1 Overview

The intent of the Mitigation Strategy is to provide Anoka County and its municipal jurisdictions with goals that will guide future mitigation policy and project administration, along with a list of proposed actions deemed necessary to meet those goals and reduce the impact of natural and manmade hazards. It is designed to be comprehensive and strategic in nature.

Development of the comprehensive strategy included a thorough review of all natural and selected manmade hazards, and identification of policies and projects to reduce the future impacts of hazards and assist the county and municipalities to achieve compatible economic, environmental, and social goals. The strategy ensures that all policies and projects are linked to established priorities and assigned to specific departments or individuals responsible for their implementation with target implementation deadlines. When applicable, funding sources are identified that can be used to assist in project implementation.

The first step in designing the Mitigation Strategy includes a review of existing mitigation measures and the identification of countywide Mitigation Goals. Mitigation Goals represent broad statements that are achieved through the implementation of more specific, action-oriented objectives listed in the county's Mitigation Action Plan. These actions include both hazard

mitigation policies (such as the regulation of land in known hazard areas through a local ordinance), and hazard mitigation projects that seek to address specifically targeted hazard risks (such as the mitigation of an area prone to repetitive flooding).

The second step involves the identification and analysis of available mitigation measures to help achieve the identified mitigation goals. This is a long-term, continuous process sustained through the development and maintenance of this Plan. Alternative mitigation measures will continue to be considered as future mitigation opportunities become identified, as data and technology improve, as mitigation funding becomes available, and as this Plan is maintained.

The third and last step in designing the Mitigation Strategy is the creation of the local Mitigation Action Plans (MAPs); The MAPs represent unambiguous plans for action and are considered to be the most essential outcome of the mitigation planning process. They include a prioritized listing of proposed hazard mitigation actions (policies and projects) for each of Anoka County's jurisdictions, along with accompanying information regarding those agencies or individuals assigned responsibility for their implementation, potential funding sources and an estimated target date for implementation. The MAPs provide those individuals or agencies responsible for implementing mitigation actions with a clear roadmap that also serves as an important tool for monitoring progress over time.

5.2.2 Mitigation Goals

The goals of the Anoka County Multi-Jurisdictional Hazard Mitigation Plan were crafted early in the planning process through a facilitated discussion and brainstorming session with the Mitigation Steering Committee. At each step of the planning process, the overreaching goals were reviewed and modified, if necessary, based on any new information that was gathered and assimilated into the Plan. Some additional goals were added based on the analysis of the Capability Assessments submitted by each jurisdiction and feedback received in the community meetings. There are goals established for each hazard identified by the Hazard Committee as hazards that have a significant potential of impacting assets and population of Anoka County and the participating jurisdictions.

44 CFR Requirement

44 CFR Part 201.6(c)(3)(i): The mitigation strategy shall include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the important first step. It has been determined by the Anoka County Mitigation Steering Committee that the following goal statements are consistent with the State of Minnesota's current mitigation planning goals as identified in the State of Minnesota's Hazard Mitigation Plan promulgated by MEMA.

The following goal statements represent a broad target for Anoka County and its jurisdictions to achieve through the implementation of their own specific Mitigation Action Plans before the next Plan update.

COMMUNITY GOALS	
Jurisdiction	Goals
Each Mitigation Goal is paired with a Community Goal in section 5.2.5.	Continue to improve jurisdictional capabilities to prepare for, respond to, mitigate, and recover from natural and technological disasters. Continue participation in drills and exercises to improve response capabilities for all hazards events. Continue participation in the National Flood Insurance Program or similar Federal Flood Insurance Program. Continue aggressive fire prevention education. Improve citizen awareness and preparedness education. Improve technological tools to provide development of databases relating to hazard mitigation. Support and participate in cooperative jurisdictional planning to improve hazard mitigation. Review existing codes and ordinances to ensure adequacy in restricting development in identified hazard areas. Support Minnesota Homeland Security strategies to counter terrorism.

Commented [RK163]: Review CPG 101 and NRF core capabilities PDS-8

5.2.3 Identification and Analysis of Mitigation Techniques

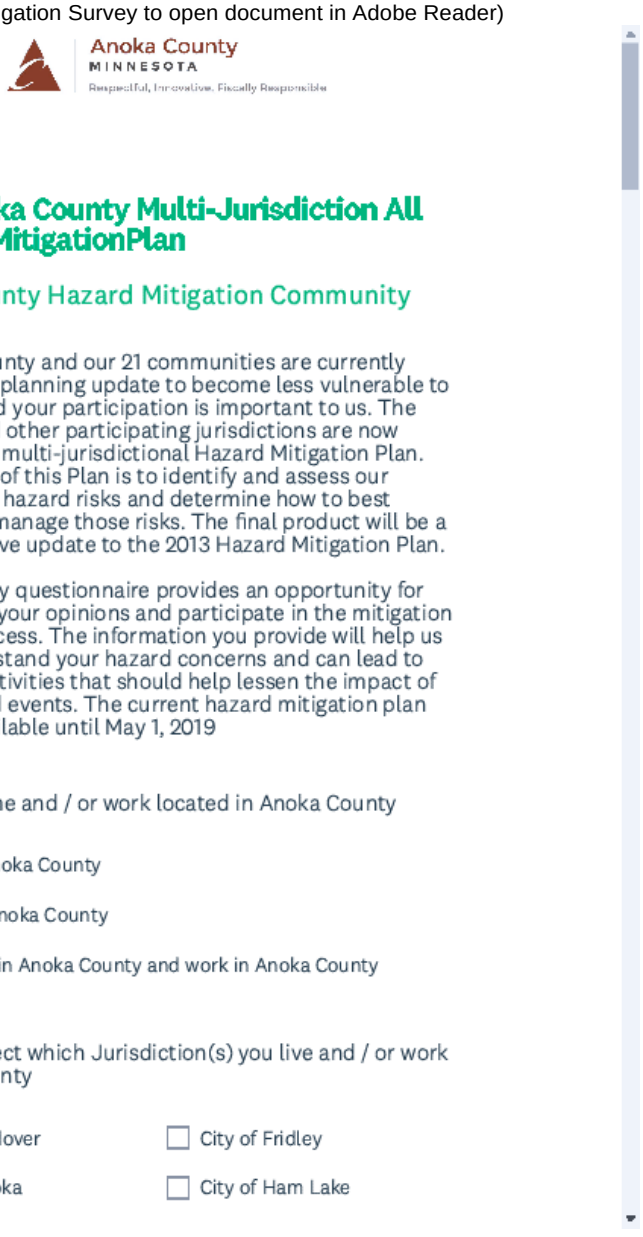
In formulating Anoka County's Mitigation Strategy, a wide range of objectivities were considered in order to help achieve the general countywide goals in addition to the specific hazard concerns of each participating jurisdiction. Multiple objectives have been established for each mitigation goal. All activities considered by the EM Group can be classified under one of the following six broad categories of mitigation techniques:

44 CFR Requirement
44 CFR Part 201.6(c)(3)(ii): The mitigation strategy shall include a section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effect of each hazard, with particular emphasis on new and existing buildings and infrastructure.

- Prevention activities are intended to keep hazard problems from getting worse and are typically administered through those government programs or regulatory actions that influence the way land is developed and buildings are constructed. They are particularly effective in reducing a community's vulnerability, especially in areas where development has not occurred or capital improvements have not been substantial.
- Property Protection measures involve the modification of existing buildings and structures to help them better withstand the forces of a hazard, or removal of the structures from hazardous locations.
- Natural Resource Protection reduces the impact of natural hazards by preserving or restoring natural areas and their protective functions. Such areas include floodplains, wetlands, steep slopes and sand dunes. Parks, recreation, or conservation organizations often implement these protective measures.
- Structural Mitigation Projects are intended to lessen the impact of a hazard by modifying the environmental natural progression of the hazard event through construction. They are usually designed by engineers and managed or maintained by public works staff.
- Emergency Services Although not typically considered a "mitigation" technique, emergency service measures do minimize the impact of a hazard event on people and property. These commonly are actions taken immediately prior to, during, or in response to a hazard event.
- Public Education and Awareness are used to alert residents, elected officials, business owners, property buyers, and visitors about hazards, hazardous areas, and mitigation techniques they can use to protect themselves and their property.

5.2.3.1 Hazard Mitigation Plan Community Survey

(Double Click on Hazard Mitigation Survey to open document in Adobe Reader)



Anoka County
MINNESOTA
Respectful, Innovative, Fiscally Responsible

2019 Anoka County Multi-Jurisdiction All Hazards MitigationPlan

Anoka County Hazard Mitigation Community Survey

Anoka County and our 21 communities are currently engaged in a planning update to become less vulnerable to disasters, and your participation is important to us. The Coalition and other participating jurisdictions are now updating the multi-jurisdictional Hazard Mitigation Plan. The purpose of this Plan is to identify and assess our community's hazard risks and determine how to best minimize or manage those risks. The final product will be a comprehensive update to the 2013 Hazard Mitigation Plan.

This survey questionnaire provides an opportunity for you to share your opinions and participate in the mitigation planning process. The information you provide will help us better understand your hazard concerns and can lead to mitigation activities that should help lessen the impact of future hazard events. The current hazard mitigation plan survey is available until May 1, 2019

1. Is your home and / or work located in Anoka County

- ◯ I Live in Anoka County
- ◯ I work in Anoka County
- ◯ I both live in Anoka County and work in Anoka County

2. Please select which Jurisdiction(s) you live and / or work in Anoka County

- ☐ City of Andover
- ☐ City of Anoka
- ☐ City of Fridley
- ☐ City of Ham Lake

2. Please select which Jurisdiction(s) you live and / or work in Anoka County

- ☐ City of Andover
- ☐ City of Anoka
- ☐ City of Bethel
- ☐ City of Blaine
- ☐ City of Nowthen
- ☐ City of Centerville
- ☐ City of Circle Pines
- ☐ City of Columbia Heights
- ☐ City of Columbus
- ☐ City of Coon Rapids
- ☐ City of East Bethel
- ☐ City of Fridley
- ☐ City of Ham Lake
- ☐ City of Hilltop
- ☐ City of Lexington
- ☐ City of Lino lakes
- ☐ Township of Linwood
- ☐ City of Oak Grove
- ☐ City of Ramsey
- ☐ City of St. Francis
- ☐ City of Spring Lake Park

3. What is the 5 digit zip code(s) of your home and / or work location(s)

- ☐ 55005
- ☐ 55011
- ☐ 55014
- ☐ 55070
- ☐ 55303

- ☐ 55304
- ☐ 55421
- ☐ 55421
- ☐ 55432
- ☐ 55433
- ☐ 55434
- ☐ 55448
- ☐ 55449
- ☐ 55025
- ☐ 55038
- ☐ 55092

4. Our Hazard Mitigation Plan has identified the hazards listed below as being most likely to impact Anoka County. Please select the three hazards that are the greatest concern for your home or work

- ☐ Urban Fires (House, Apartment, or Business Fire)
- ☐ Thunderstorm (Wind and Hail Damage)
- ☐ Flooding
- ☐ Tornado
- ☐ Wild Fire (Fire occurring in the Urban and Wildland interface)
- ☐ Pandemics / Vectors (Disease or Viruses)
- ☐ Winter Storms
- ☐ Terrorism
- ☐ Hazardous Materials
- ☐ Active Shooter or Active Violence

5. Please list any additional hazards that you feel may impact your home or work

Question Title

6. What are you doing on your property or inside your home or work to reduce the vulnerability to the above listed hazards (Please select all that apply)

- ☐ Maintain Smoke and CO Alarms
- ☐ Maintain NOAA Weather Radio
- ☐ Install backflow preventer in sewer line
- ☐ Defensible space landscaping (Clear vegetation around home and / or business to reduce wildfire risk)
- ☐ Installed or will install fire sprinklers
- ☐ Strengthen openings (Reinforce Doors, Windows, and / or garage doors to reduce high-hazard wind risk)
- ☐ Other (please specify)

7. If a severe hazard event occurred today (large earthquake or dam failure) such that all services were cut off from your home (power, gas, water, and sewer) and you were unable to leave or access a store for 72 hours, which of these items do you have readily available (Please select all that apply)

- ☐ Potable Water (3 gallons per person)
- ☐ Extra Clothes and Shoes
- ☐ Cooking and eating utensils
- ☐ Blanket(s) / Sleeping Bag(s)
- ☐ Can Opener
- ☐ Cash
- ☐ Canned / Non-perishable Foods (ready to eat)
- ☐ Flashlight (with spare batteries)
- ☐ Gas Grill / Camping Stove
- ☐ Gasoline stored in approved contains
- ☐ Extra Medications
- ☐ Telephone (Plug in telephone / Not cordless)
- ☐ Fire Aid Kit / Medical Supplies

- ☐ Pet Supplies
- ☐ Portable AM/FM Radio (Solar, hand crank or battery powered)
- ☐ Hand held "wakie-Talkie Radio (CB or FRS with batteries)
- ☐ Important Family Documents in fire and water resistant case
- ☐ Emergency Go Bag
- ☐ Cellular Telephone and ability to re-charge battery during a power outage
- ☐ Other (please specify)

8. How many days are you prepared for if you are unable to leave your home or business and assistance is unable to reach you

- ☐ Less than 24 Hours
- ☐ 1 Day / 24 Hours
- ☐ 2 Days / 48 Hours
- ☐ 3 Days / 72 Hours
- ☐ 4 Days or longer / Greater than 72 Hours

9. Do you have a plan for evacuating large animals and/or pets? (Please select all that apply)

- ☐ Yes, I have a plan for evacuating my pets (cats, dogs, etc)
- ☐ Yes, I have a plan for evacuating my large animals (horses, cows, etc)
- ☐ No, I have pets but have not planned for their evacuation
- ☐ No, I have large animals but have not planned for their evacuation
- ☐ Not Applicable, I have no large animals or pets

10. Are you familiar with the special needs of your neighbors or coworkers in the event of a disaster situation (special needs may include limited mobility, severe medical conditions, memory impairments, etc)

- ☐ Yes
- ☐ No

11. Are you a trained member of your Community Emergency Response Team (CERT)? (Note: your community may use a different name than CERT)

- ☐ Yes
- ☐ No

12. What are the most important things local government can do to help communities be more prepared for a disaster

- ☐ Disseminate effective emergency notifications and communication
- ☐ Training and educating residents and business owners on how to reduce future damage
- ☐ Community outreach regarding emergency preparedness
- ☐ Being aware of special needs and vulnerable populations
- ☐ Make a plan to use volunteer residents to help in a disaster
- ☐ Other (please specify)

13. If you are a homeowner please answer the following question. If you are a renter please skip to question 15

Do you have adequate basic homeowners insurance to cover the hazards that could impact your home? Please note that most basic policies do not cover flooding or sewer backup conditions

- ☐ Yes, my insurance coverage should be adequate
- ☐ No, I don't believe my insurance coverage would be adequate for a major disaster
- ☐ Unsure
- ☐ I do not have an insurance policy

14. If you own your home, do you have flood insurance for your home

You may see if your property is in or near a flood zone with FEMA's Flood Map Service (https://msc.fema.gov/portal/search)

- ☐ Yes, I own my home and have a flood insurance policy

☐ No, but I am interested in reviewing flood insurance options (http://www.floodsmart.gov/floodsmart/)

☐ No, I feel that I do not need a flood insurance policy

15. If you rent your residence, do you have renter's insurance

☐ Yes, I have a flood insurance policy for renters

☐ No, I do not have a flood insurance policy

☐ No, but I am interested in reviewing flood insurance options (http://www.floodsmart.gov/floodsmart/)

16. Please recommend any companies or local associations that should be involved in the Anoka County hazard mitigation planning process

17. Would you like to review and comment on a draft of your jurisdiction's annex to the Multi-Jurisdictional Multi-Hazard Mitigation Plan

☐ Yes, Please notify me using my contract information that I have included in the next question

☐ No

18. Please provide your name and email address in order to be notified of future opportunities to participate in hazard mitigation and resiliency planning. If you do not have an email address, please provide your mailing address. Free Form Full Name: E-Mail Address: Street Address: City, State and Zip Code

Name

Company

Address

Address 2

City/Town

State/Province
ZIP/Postal Code
Country
Email Address
Phone Number

19. Please provide us with any additional comments/suggestions/questions that you have regarding your risk to future hazard events

Done

The Community Survey results are located in Appendix C.

5.2.4 Selection of Mitigation Techniques

In order to determine the most appropriate mitigation techniques for Anoka County and its municipal jurisdictions, local government officials reviewed and considered the findings of the Capability Assessment and Risk Assessment. Other considerations included each mitigation action's effect on overall risk to life and property, its ease of implementation, its degree of political and community support, its general cost-effectiveness, and funding availability (if necessary). The following table of alternative mitigation actions was the basis for developing the mitigation techniques.

ALTERNATIVE MITIGATION ACTIONS																						
HAZARDS> Alternative Mitigation Actions that can affect the above hazards	Transportation	Chemical Facility	Bridge Failure	Dam Failure	Disease Animal	Disease Human	Drought/Blight	Earthquake	Flooding	Hazardous Spills	Hurricane	Terror-Chemical	Terror-Biological	Terror-Radiological	Terror-Nuclear	Terror-Explosive	Thunderstorm	Tornado	Urban Fire	Wildfire	Winter Storm
Building codes			X					X			X					X	X	X	X	X	X
Density regulations					X	X		X	X	X			X		X				X	X	
Easements	X	X	X	X						X		X		X		X	X	X	X	X	X
Development regulations	X	X		X				X	X	X	X						X	X	X	X	X
Wildfire fuel reduction							X													X	
Hillside regulations								X													
Performance standards			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Setback regulations	X	X							X	X	X									X	
Special use permits	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X			X	X	

Storm water controls			X	X					X		X						X				
Rights transfer controls	X	X		X	X		X	X	X	X	X				X				X	X	
Zoning	X	X		X	X		X	X	X	X	X				X				X	X	
Acquire in-hazard assets		X		X				X	X		X								X	X	
Facility hazard barriers	X	X								X		X	X	X		X					
Structure elevation									X		X										
Relocation of structures	X							X	X		X										
Structure retrofits								X	X		X	X					X	X	X	X	X
Dams monitoring			X	X				X	X								X	X			
Levee/seawall mgt			X	X			X	X	X								X	X			
Real estate disclosure	X	X						X	X		X										
Forest management							X													X	
Erosion controls			X	X			X	X	X												
Waterway management			X	X			X		X		X						X				
Landscape management	X	X			X		X				X						X	X		X	X
Wetlands regulations				X		X	X		X		X						X				
Vital facilities protection	X	X		X				X	X		X	X	X	X	X	X	X	X		X	X
COOP/COG Plan				X		X		X	X		X	X	X	X	X	X		X	X		X
EMAP Accreditation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Emergency Ops. Plan	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hazard/threat recognition	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hazard warning systems		X		X					X	X	X	X	X	X	X		X	X	X	X	X
Health/safety information	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Pre-disaster mitigation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Post disaster mitigation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Safe rooms and shelters		X		X				X	X	X	X	X	X	X	X		X	X	X		X
Public education	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

FEMA guidance for meeting planning requirements of the DMAK2 specifies that governments should prioritize their mitigation actions based on the level of risk a hazard poses to the lives and property of a given jurisdiction. In response to this requirement, the Anoka County Mitigation Steering Committee completed a Mitigation Technique Matrix to make certain they addressed, at a minimum, those hazards posing the greatest threat. The matrix provides the committee with the opportunity to cross-reference each of the priority hazards with the comprehensive range of available mitigation techniques, including prevention; property protection; natural resource protection; structural projects; emergency services; and public education and awareness.

ANOKA COUNTY MITIGATION TECHNIQUE MATRIX					
	Mitigation Technique	Flooding	Tornadoes	Urban Fires	Hazardous Materials
1	Prevention	Y	Y	Y	Y
2	Property Protection	Y	Y	Y	Y
3	Natural Resource Protection	Y	Y	Y	Y
4	Structural Mitigation Projects	Y	Y	Y	Y
5	Emergency Services	Y	Y	Y	Y

6	Public Education/Awareness	Y	Y	Y	Y

5.2.5 Mitigation Goals and Actions

The mitigation actions proposed by each of Anoka County's local governing bodies participating under this Plan are listed on the pages that follow. Each Jurisdictions individual goals has been designed to address the multi-jurisdictional community goals of this Hazard Mitigation Plan, in addition to the particular goals and objectives of each individual jurisdiction. They will be maintained on a regular basis according to the plan maintenance procedures established in the maintenance section of this plan. Below are tables that identify the number of actions that pertain to a given jurisdiction and the number of actions that address structures and infrastructure

44 CFR Requirement 201.6(c)(3)(iv): For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit for the plan			
Jurisdiction	Mitigation Actions	Jurisdiction	Mitigation Actions
Anoka County	47	Fridley	20
Andover	15	Ham Lake	5
Anoka	12	Hilltop	5
Bethel	9	Lexington	8
Blaine	12	Lino Lakes	11
Centerville	13	Linwood Twp	8
Circle Pines	4	Nowthen	8
Columbia Heights	15	Oak Grove	17
City of Columbus	12	Ramsey	23
Coon Rapids	7	Spring Lake Park	10
East Bethel	12	St. Francis	16

44 CFR Part 201.6(c)(3)(ii)	**MITIGATION ACTIONS**
The mitigation strategy shall include a comprehensive range of specific mitigation actions and projects being considered to reduce the effect of each hazard, with particular emphasis on new and existing buildings and infrastructure.	289 Actions

Commented [RK164]: Update for 2019

At first glance, the large number of action items indicated above may seem excessive. However, the Emergency Management Group believes that each of the following goals, objectives, and action items is necessary to continue to address hazard issues in Anoka County. It is important to note that Anoka County's individual Mitigation Action Plans include an array of actions targeting multiple hazards, not just those classified as high risk.

It was the intent of the committee to establish realistic, attainable actions that can be accomplished within the present fiscal capabilities of the participating jurisdictions and accepted by the citizens of the county. All members of the EM Group agreed that starting with small steps, accomplishing the stated goals, and publicizing the success of the county's mitigation efforts will open the community to accept of larger projects in the future.

Many of the goals are interrelated (e.g. providing various categories of preparedness and awareness information to citizens at community events); these will be accomplished under a single, ongoing project. Many of the goals can be accomplished within existing department

budgets, costing only the time of employees already on staff. While “time is money” and hours have been estimated in dollars for each action item, there will be no requirement for additional funds to be budgeted to accomplish many of the action items.

The success of this Plan hinges on three major action items;

Anoka County Emergency Management is tasked with Plan oversight, to include project tracking, progress reports, and reconvening the EM Group as needed for Plan review and revision; in addition, Emergency Management will serve as lead agency for many of the action items.

Emergency Management staff will continue to pursue all grant opportunities that become available to assist with funding countywide mitigation actions. Staff will continue to receive necessary training on grant writing and evaluation of grant criteria. Without assistance from the various grant programs available, Anoka County would not be able to begin many mitigation actions described in this plan without additional funding at the state or federal level.

GIS hardware and updated software will continue to be purchased and existing county GIS/Technology staff continue training to allow the inclusion of HAZUS-MH capability to more fully assess hazards throughout the county. In addition to hazard assessment, this capability will extend to planning and zoning, school boards, utilities and infrastructure, and all emergency service agencies.

The hazard mitigation planning process has brought together a group of dedicated representatives from the twenty-two jurisdictions comprising Anoka County. An early suggestion from several members of the planning committee that the group continue to meet on a regular schedule after Plan approval speaks for the cooperation and sense of community each jurisdiction brings to the planning effort and instills confidence that the jurisdictions will unite in mitigation and other efforts to meet the following goals.

It is the vision of Anoka County and its municipalities to promote citizen and governmental responsibility for hazard awareness and preparedness, and to foster cooperative planning among the jurisdictions to reduce the impact of natural and manmade hazards on public and private assets, and on the safety and welfare of all citizens.

During the Comprehensive Plan Update, the Planning team reviewed all the goals from the 2006 plan and marked each goal as being completed, ongoing, or canceled. Jurisdictions were provided with the opportunity to add new mitigation goals to the plan. Through the update process each Jurisdiction reviewed and updated their mitigation goals. The goals are listed in section 5.2.5 as New, Ongoing Completed, or Canceled.

OCT 2 1 2019

U.S. Department of Homeland Security
536 S. Clark St. 6th Floor
Chicago, IL 60605

FEMA

Ms. Jennifer Nelson
Homeland Security and Emergency Management
Minnesota Department of Public Safety
444 Cedar Street, Suite 223
Saint Paul, MN 55101

Dear Ms. Nelson:

Thank you for submitting the adoption documentation for the Anoka County Multi-Jurisdictional All Hazards Mitigation Plan. The plan was reviewed based on the local plan criteria contained in 44 CFR Part 201, as authorized by the Disaster Mitigation Act of 2000. The Anoka County plan met the required criteria for a multi-jurisdiction hazard mitigation plan and the plan is now approved for Anoka County and the cities of Bethel, Blaine, Centerville, Circle Pines, Ham Lake, Lexington, and St. Francis. Please submit the adoption resolutions for any remaining jurisdictions who participated in the planning process.

The approval of this plan ensures continued availability of the full complement of Hazard Mitigation Assistance (HMA) Grants. All requests for funding, however, will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted.

We encourage Anoka County and the participating jurisdictions to follow the plan's schedule for monitoring and updating the plan, and to continue their efforts to implement the mitigation measures. The expiration date of the Anoka County Plan is five years from the date of this letter. To continue project grant eligibility, the plan must be reviewed, revised as appropriate, resubmitted, and approved no later than the plan expiration date.

Please pass on our congratulations to Anoka County and the cities of Bethel, Blaine, Centerville, Circle Pines, Ham Lake, Lexington, and St. Francis for completing this significant action. If you or the communities have any questions, please contact Cadence Peterson at (312) 408-5260 or at cadence.peterson@fema.dhs.gov.

Sincerely,

John McCarthy
Chief, Risk Analysis Branch
Mitigation Division