

Anoka County Water Resources Assessment Report

Executive Summary

Water is essential to life. The amount of water on our planet makes much of it hospitable for a variety of life. But the presence and quality of water varies from deserts, south-seas islands, and central American plains.

Water plays an important role in public health. Since recorded time, people have been concerned with sanitation and their environment. The Greek physician Hippocrates first made the connection between environment (impure water) and illness. Today, we refer to this connection as environmental health.

Local water resources are a key to Anoka County's success and future. The quality of Anoka County's water resources supports the health of its residents for sanitation, recreation, and drinking. A sustained and adequate supply of safe water supports growing communities.

On the whole, the natural quality of Minnesota's water resources supports a healthy population. However, naturally occurring arsenic and radium has been found in some private and public water wells. In a few public water supplies the concentration of these natural contaminants have been found to reach unsafe levels (for long-term exposure) causing the water system operator to treat and remove the contaminant.

Pollution has resulted in the contamination of private and public drinking water supplies throughout the state, region and discrete areas of the County. Over the past four decades Anoka County has developed a number of programs to address pollution sources through hazardous and solid waste management. The Community Health and Environmental Services Department supports drinking water safety by facilitating coordinated municipal wellhead protection and monitoring public water supplies. Owners of private wells are provided with information, testing and support services for the safety of every water supply.

An emerging issue for growing communities throughout the region is the variability and adequacy of local water resources. A regional groundwater unit (Prairie du Chien-Jordan aquifer) is not present in the northern two-thirds of the County. Plus, Minnesota use prohibition of the deepest groundwater (Mount Simon-Hinckley aquifer) has reduced the available sources of groundwater.

The Metropolitan Council has indicated that the adequacy of groundwater resources in Blaine and Ramsey are "*uncertain*" to meet growing demand in the next 40 years. Current municipal groundwater use has not been observed to impact the adequacy or sustainability of local resources in any community within the County. Additional water level monitoring in these communities can reveal trends in the sustainability of local groundwater.

Andover, Blaine, Lino Lakes and Ramsey are cooperating with the Minnesota Department of Natural Resources to monitor water levels for early indications of impacts. If a water supply system affects the sustainability of its water resources the community is prepared to implement necessary management measures. Such measures may include mandatory conservation; obtaining water from alternative sources (e.g. a different aquifer or the Mississippi River); or connection to a multi-community water supplier (e.g. Minneapolis Water Works).

Some central and northern Anoka County communities have similar geology and water use prohibitions. These communities are not the current focus of concern because growth is only beginning to place greater demand on local groundwater resources. As these communities develop they will have to determine the adequacy of local water resources to supply their residents and businesses.

The potential adequacy and use prohibitions apply only to the high-volume water supply wells (greater than 10,000 gallons per day) of large municipal water supply systems. Groundwater resources found throughout the County are fully adequate and sustainable for wells serving homes, apartment buildings and small businesses.

The Mississippi River has the potential to supply water to entire communities in Anoka County. Or, to supplement the local groundwater supply of a single community. In fact, the City of Ramsey has investigated the potential to draw from the Mississippi River to supplement their water well supply system. If Ramsey's water use causes groundwater withdrawal impacts - the City is prepared to use the Mississippi to supplement its supply.

Development of the Report

To ensure that a comprehensive assessment of Anoka County's water resources was performed the Community Health and Environmental Services Department established the Anoka County Water Resources and Supply Management Task Force. Members of the Task Force include representatives from municipalities, watershed management organizations, county agencies, hydrogeology, water well drillers, realtors, League of Women Voters and interested citizens.

The Task Force provides for community participation in the preparation of this report. Development of this report has been reviewed by the Task Force that provided valuable comments and recommendations.

Water Resources Management Task Force Statement of Charge

The Water Resources Management Task Force is to advise, consult with, and make recommendations to the County Board in the preparation of its Water Resources Assessment Report. The Report will be used to address environmental health issues confronting Anoka County through the Community Health Services Plan.

Issues and Recommendations

Although the subject of water resource supply and management is enormous involving a broad range of laws, agencies, and interests - this report is limited to the environmental health issues that confront Anoka County. Environmental management and environmental health protection share many natural resource goals. For example, the protection and management of Mississippi River water quality is a goal of a natural resources program (Clean Water Act) and a public health program (Safe Drinking Water Act).

1. THE ISSUE: Water programs of state and local agencies focus on specific protection and management issues. A comprehensive approach will address how these programs may cooperate to achieve mutual goals in water resources management in Anoka County.

The Anoka County Board of Commissioners has approved the Community Health and Environmental Services Department to conduct water resources assessment and planning under Minnesota Statutes Chapter 145A.

❖ RECOMMENDATIONS:

- 1a. Continue performing a community assessment of water resources every five (5) years as part of Anoka County's requirement to update the comprehensive community health assessment and plan.
 - 1b. Perform continuous monitoring of priority water resource issues with annual review and updates.
 - 1c. Establish a Water Resources Work Group (WRWG) that meets a minimum of twice yearly to review updates and coordinate the efforts of the multiple agencies to manage their water resources.
 - 1d. The Anoka County Community Health and Environmental Services Department support the above recommended activities to meet its assessment and planning mandate.
2. THE ISSUE: The numerous community-based conservation and environmental education initiatives addressing specific issues (e.g. storm water pollution prevention, wellhead protection, lake and shoreland protection, etc.) will have greater impact if coordinated with each other.

Residents, businesses, and organizations are willing to cooperate in the protection and management of their natural resources, when asked and where supported. Leadership and enduring community support are critical elements to garner wider public cooperation. Coordination is another critical element to prevent confusion over programs competing for public attention and cooperation.

❖ RECOMMENDATIONS:

- 2a. Facilitate the development of partnerships to coordinate and enhance the numerous community-based natural/environmental programs.
- 2b. Utilize work groups of technical and education professionals to develop and deliver informational messages.
- 2c. Actively seek grant and other funding opportunities to support community information and awareness efforts.
- 2d. The Community Health and Environmental Services Department act to secure grant(s) to facilitate a coordinated approach to conservation and environmental education outreach.

3. THE ISSUE: The potential of insufficient water to sustain increasing demand has resulted in concern and desire to improve knowledge of local natural resources.

A major regional aquifer (Prairie du Chein – Jordan) is not found in middle and northern Anoka County. Also, the Metropolitan Council's Master Water Supply Plan (May 2009) indicates that increasing groundwater use, in areas of Anoka County, is likely to directly affect surface water features. The Minnesota Department of Natural Resources water monitoring program is not sufficient to identify trends in local water supply causing the agency to place monitoring requirements on suppliers. Finally, the City of Ramsey - in response to the concern that groundwater resources may not support additional municipal wells - is prepared to utilize the Mississippi River to meet growing demand.

❖ RECOMMENDATIONS:

- 3a. Utilize municipal water system and technical professionals to develop a plan for enhanced water monitoring throughout Anoka County that is sufficient to determine local baseline water resources and identify trends in water use.
 - 3b. Facilitate community cooperation in the development of a water monitoring initiative that can cost-effectively satisfy state requirements of water users.
 - 3c. Facilitate community cooperation in the identification of contingent alternatives to local water resources for Anoka County communities.
4. THE ISSUE: The protection of public water supply wells (municipal and privately owned) continues to be a priority of communities, water system operators, and the Minnesota Department of Health.

Over 280 public water supply systems provide drinking water to a majority of Anoka County residents and businesses including 49 restaurants and hotels licensed by the Community Health and Environmental Services Department. The CHES Department has cooperated with ten municipal water suppliers to prepare their mandatory wellhead protection plans (completed in early 2009). These and other Anoka County public water suppliers have expressed an interest in cooperatively implementing their plans in a cost-effective manner.

❖ RECOMMENDATIONS:

- 4a. Continue cooperative wellhead protection efforts of public water supplies to include the establishment of an Anoka County Municipal Wellhead Protection Group (ACMWPG) through a joint powers agreement.
- 4b. Continue the inspection and testing of public water supplies serving County licensed food and lodging establishments.