

9.0 Groundwater

9.1 Issue Statements

The majority of the cities in Hennepin County, including Medicine Lake, Minnetonka, Plymouth, Robbinsdale, and St. Louis Park obtain their domestic water supplies from groundwater. Most of these wells are in the Prairie du Chien Jordan aquifer. The increased population has put increased pressure on groundwater supplies, especially in the western portions of the watershed. Increased impervious surfaces also reduce the amount of groundwater recharge. Also, the lakes and streams in the watershed are fed by surficial groundwater. The development of land west of the BCWMC will put increased pressure on groundwater supplies. However, these newly developing areas will likely need to obtain their groundwater from a different aquifer than the BCWMC member cities are using, since the Prairie du Chien Jordan aquifer may not be available in these areas. This means the availability of groundwater to communities in BCWMC is not likely to be affected by the development of land west of the watershed. The BCWMC recognizes the importance of protecting these groundwater resources. See Section 3.4 for information about groundwater resources in BCWMC.

9.2 Goals and Policies

9.2.1. Groundwater Goals

Protect the quantity and quality of groundwater resources.

9.2.2. Groundwater Policies

- A. The BCMWC will review all DNR groundwater appropriation permits in the BCWMC.
- B. The BCWMC will encourage state agencies to collect and manage groundwater data.
- C. The BCWMC will encourage the member cities to adopt wellhead protection programs. These programs will include the identification and sealing of abandoned wells.
- D. The BCWMC will encourage appropriate agencies to enforce proper well abandonment.

- E. In sensitive recharge areas, the BCWMC will require that detention ponds be lined or engineered to prohibit infiltration.
- F. See Section 5.2.2.2 (floodplain management policies) for additional policies affecting groundwater.
- G. The BCWMC encourages the member cities to educate the general public concerning the use of BMPs to prevent contamination of groundwater supplies and the importance of these measures in protecting groundwater supplies.

9.3 Background

Various agencies are responsible for groundwater management and protection. The DNR regulates groundwater usage rate and volume as part of its charge to conserve and use the waters of the state. For example, suppliers of domestic water to more than 25 people or applicants proposing a use that exceeds 10,000 gallons per day or 1,000,000 gallons per year must obtain a water appropriation permit from the DNR. Appropriation permits from the DNR are not required for domestic uses serving less than 25 persons for general residential purposes. The DNR is also responsible for mapping sensitive groundwater areas, conducting groundwater investigations, addressing well interference problems, and maintaining the observation well network.

The MDH is the official state agency responsible for addressing all environmental health matters, including groundwater protection. The MDH is responsible for preventing pollution of water supplies to ensure safe drinking water sources and limit public exposure to contaminants. Through implementation of the federal Safe Drinking Water Act, the MDH conducts the Public Water Supply Program, which allows the MDH to monitor ground water quality and train water supply system operators. The 1996 amendments to the federal Safe Drinking Water Act require the MDH to prepare source water assessments for all of Minnesota's public water systems and to make these assessments available to public. These source water assessments are available at the following MDH website: <http://www.health.state.mn.us/divs/eh/water/swp/swa/index.htm>.

Through its Well Management Program, the MDH administers and enforces the Minnesota Water Well Code, which regulates activities such as well abandonment and installation of new wells.

The MDH also administers the Wellhead Protection Program, which is aimed at preventing contaminants from entering the recharge zones of public well supplies. In 1997, the Wellhead

Protection Program rules (Minnesota Rules 4720.5100 to 4720.5590) went into effect. These rules require all public water suppliers that obtain their water from wells to prepare, enact and enforce wellhead protection plans. The MDH prepared a prioritized ranking of all such suppliers in Minnesota. Regardless of the ranking, Rules 4720 require all public water suppliers to initiate wellhead protection measures for the inner wellhead management zone prior to June 1, 2003. If a city drills a new well and connects it to the distribution system, the city must begin development of a wellhead protection plan. Wellhead protection plans include: delineation of groundwater “capture” areas (wellhead protection areas), delineation of drinking water supply management areas (DWSMA), assessment of the water supply’s susceptibility to contamination from activities on the land surface, and management programs, such as identification and sealing of abandoned wells, and education/public awareness programs. The cities of Minnetonka, Plymouth, St. Louis Park, and Robbinsdale (currently underway) have delineated DWSMA, and their drinking water supplies are listed as not vulnerable to contamination.

The MPCA administers and enforces laws relating to pollution of the state’s waters, including groundwater. The MPCA monitors ambient groundwater quality, and administers septic system design and maintenance standards. The Tanks and Spills Section of the MPCA regulates the use, registration and site cleanup of underground and above ground storage tanks.

The Minnesota Geological Survey provides a complete account of the state’s groundwater resources through geological mapping and investigation projects. The Minnesota Geological Survey produces the county geologic atlases, interprets water well log information, and manages a database of county well information.

Hennepin County plays a role in groundwater protection and management, through implementation of its Ground Water Plan (1994). The county administers a well sealing cost share grant program and works with the cities in the county to implement the county’s groundwater plan.

The MPCA is responsible for administering the programs regulating construction and reconstruction of individual sewage treatment systems (ISTS). The MPCA requires an inspection program for ISTS that meets MPCA standards. Minnesota Rules 7080 govern administration and enforcement of new and existing ISTS. Hennepin County’s Ordinance 19 also sets standards for ISTS and adopts by reference Minnesota Rules 7080.