WR
WATER RESOURCES
5. WATER RESOURCES PLAN

INTRODUCTION

The water resource section is intended to meet regional guidelines in order to protect the county’s ground and surface water resources so that the growing population of the county and region will continue to have a safe and adequate water supply. This section is comprised of two main areas:

- **Wastewater** - describes the un-sewered areas within county jurisdiction and sets standards of operation for private systems.
- **Surface Water Management** - discusses the 2001 Carver County WMO plan content and required updates necessary to meet regional, state, and federal requirements. Required changes will be addressed in the updated CCWMO plan likely during 2010.

**NOTE:** Water Supply is listed as a comprehensive plan requirement for municipalities with water supply systems. Since Carver County does not operate public water supply, no section is included in this plan. Policies for protecting groundwater are referenced in the local water management plan and the adopted CCWMO water management plan.
WASTEWATER

Subsurface Sewage Treatment Systems (SSTS)
Approximately 4800 of the total of 25,000 households in Carver County utilize systems other than the municipal sewer systems to treat their sewage. Of this 4800, approximately 300 are served by some sort of alternative community system. The remaining 4500 households and businesses are served by Subsurface Sewage Treatment Systems (SSTS) - also known as ISTS, septic systems, on-site sewer systems. Properly sited, designed and operated, SSTS do not pose a risk of contamination to surface water or groundwater. Failing systems can contaminate surface and groundwater with contaminants such as nitrates, phosphorus, harmful bacteria and viruses, and other toxic substances. While some of these systems will be abandoned after the structure is connected to a municipal system as the cities continue to develop, the vast majority of households and business currently served by SSTS will continue to be served by these systems for the foreseeable future.

State statute and rules require that Carver County adopt and implement programs and ordinances to manage SSTS throughout the County. The City of Chanhassen has chosen to adopt and implement its own program. No other cities have chosen to establish their program so the County is responsible for all of the cities and townships with the exception of the City of Chanhassen.

Since the Carver County WMO Plan was adopted 2001, the County has been heavily engaged in the Impaired Waters/TMDL program. As TMDL’s have been adopted it is clear that fecal coliform is a significant pollutant in many of the stream in the CCWMO. Research has shown that the major contributors are animal agriculture and direct discharge SSTS. The County has an approved TMDL Implementation Plan for Carver & Bevens Creeks and one of the key components is the elimination of Direct Discharge systems.

Subsurface Sewage Treatment Systems (SSTS) Goals

GOAL WR-1 Eliminate all Direct Discharge systems with priority given to those affecting an impaired water
GOAL WR-2 Eliminate all non-conforming systems that are or are likely to become a pollution or health hazard;
GOAL WR-3 Ensure that all ISTS repairs, replacements, and new systems are properly designed and installed
GOAL WR-4 Ensure that all ISTS are properly managed, operated, and maintained to ensure the longest possible successful service life
SUBSURFACE SEWAGE TREATMENT SYSTEMS (SSTS) POLICIES

POLICY WR-1  The elimination of direct discharge systems is the highest priority. The this effort will have the highest priority for resources in the SSTS program.

POLICY WR-2  The maintenance of existing systems is necessary to ensure that the systems are viable over the long term. Carver County will implement programs to promote and encourage proper maintenance of ISTS.

POLICY WR-3  Carver County will maintain up-to-date ordinances as required by Statute and Rule. The County will administer and enforce the ordinance.

POLICY WR-4  The replacement of existing non-conforming systems, particularly those that are failing is critical to protecting the public health and safety. All reasonable, feasible means will be used to eliminate failing systems. The most crucial systems are those in high groundwater sensitivity areas; systems that discharge in to surface water, tile lines or on to the ground surface; seepage pits or cesspools; Shoreland zones.

SUBSURFACE SEWAGE TREATMENT SYSTEMS (SSTS) IMPLEMENTATION

STRATEGY WR-1  Continue to follow and implement all state statutes and rules as they are updated.

STRATEGY WR-2  Continue to implement the provisions of the County ISTS Ordinance

STRATEGY WR-3  Continue to require all lot splits and plats to have systems inspected and upgraded if needed.

STRATEGY WR-4  Eliminate ISTS in cities by connection to municipal systems when the municipal system becomes available.

STRATEGY WR-5  Continue to develop and implement programs to ensure proper maintenance of ISTS - education, incentives, notification, inspection.

STRATEGY WR-6  Continue to develop and implement programs, including financial incentives, focused on the replacement of direct discharge systems with highest priority given to TMDL implementation.

STRATEGY WR-7  Continue to monitor progress of new ISTS technologies.
SURFACE WATER MANAGEMENT

Background

Watershed Planning and Management

There are five watershed jurisdictions in Carver County: Carver County Watershed Management Organization (CCWMO), Buffalo Creek Watershed Management Organization, Lower Minnesota River Watershed District, Minnehaha Creek Watershed District, and Riley-Purgatory Bluff Creek Watershed District. The boundaries of these watershed jurisdictions are shown on Figure WR-1. Most of the county lies within the boundaries of the CCWMO. In 2001, the CCWMO prepared and adopted its Comprehensive Water Resources Management Plan (WMP) for the purpose of managing surface and groundwater within its boundaries. Lower Minnesota River Watershed District, Minnehaha Creek Watershed District, and Riley-Purgatory Bluff Creek Watershed District have adopted similar water resource management plans.

The 2001 WMP was approved by the Board of Water and Soil Resources (BWSR) and meets the statutory requirements for comprehensive water resource management plans. An electronic copy of the WMP can be found at http://www.co.carver.mn.us/departments/lws/water/2001Water/2001WaterWeb.htm.

The WMP contains a statement of purpose; an executive summary; an inventory of land and water resources within the CCWMO; an assessment of problems; goals, policies, and implementation strategies for the identified problems; administrative and amendment procedures; and an implementation plan. The problem areas identified in the plan are:

- Individual sewage treatment systems
- Feedlots
- Construction site erosion and sediment control
- Stormwater management
- Land use practices for rural and urban areas
- Water quality
- Wetland management
- Groundwater
- Natural resource management
- Education

The CCWMO is currently in the process of updating the WMP; the updated plan is scheduled to be submitted to BWSR for review and approval by 2010.

Based on local surface water management plan requirements found in Appendix B2-b of the Council’s Water Resources Management Policy Plan, the metropolitan council requires that the comprehensive plan and chapters for the townships clearly state that the County’s and watershed district watershed management plans will serve as the local surface water management plan required of the townships and that the townships will follow policies and requirements of that plan. The comprehensive plan and chapters for the townships need to clearly identify that the County will update the watershed management plan by 2010. The updated watershed management plan must include adequate actions and directions to cover the requirements for watershed plans as well as local surface water management plans.
FIGURE 5.1 CCWMO WATERSHEDS (SOURCE: CARVER COUNTY)
Items which are not addressed in the current plan will be included in the update are summarized below.

**National Pollutant Discharge Elimination System (NPDES)**
Under the Clean Water Act, the State of Minnesota has the authorization to administer the U.S. Environmental Protection Agency’s (EPA) National Pollutant Discharge Elimination System (NPDES) program. The goal of the NPDES is to reduce the amount of pollution that enters surface and ground water in the form of stormwater runoff through regulation of Municipal Separate Storm Sewer Systems (MS4’s), industrial discharges from select sites, and construction sites disturbing more than one acre, unless the site is a part of a common plan of development or sale, which can drop the threshold to less than one acre.

**MS4s**
Under the NPDES Phase II Rules, MS4’s serving populations under 100,000 that are located in urbanized areas are required to obtain a NPDES Phase II Storm Water permit under the Clean Water Act. The Phase II rule takes a “Best Management Practice (BMP)” approach, providing MS4s with the flexibility to decide what practices to implement. MS4s must develop, implement, and enforce a Storm Water Pollution Prevention Plan (SWPPP) designed to minimize the discharge of pollutants from the MS4, to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act. The SWPPP must be designed and managed to minimize the discharge of pollutants from the MS4 to the maximum extent practicable. The SWPPP must include Best Management Practices (BMPs) that control or reduce pollutants, as appropriate for the community. Within the CCWMRA, the MS4s that are currently permitted under the program are: Carver County, City of Carver, City of Chanhassen, City of Chaska, City of Victoria, City of Waconia, Chaska Township, and Laketown Township. To minimize duplication and increase efficiency, the CCWMO collaborates with the cities and townships to help implement their NPDES Phase II MS4 requirements in the most efficient way.

**Industry**
A second phase area of the MPCA’s NPDES Stormwater Program is the Industrial Stormwater Permitting Program whose goal is to reduce the amount of pollution that enters surface and ground water from industrial facilities in the form of stormwater runoff. This goal is accomplished through developing an effective Stormwater Pollution Prevention Plan (SWPPP) which describes the potential significant pollutants generated from the site in the form of stormwater runoff and the BMP’s that will be implemented to reduce them. Regulated Parties manage stormwater runoff by meeting the permit requirements or by certifying a condition of No Exposure.

Stormwater runoff at industrial sites may come into contact with any number of harmful pollutants including toxic metals, oil/grease, de-icing salts, and other chemicals from roads, rooftops and parking lots. Facilities in this program include anyone from the private or public sector that operates an industrial facility, identified by SIC Code (Standard Industrial Code) by the U.S. EPA, with potential pollutants exposed to stormwater. Examples of the types of facilities that need permits include:

- Landfills that receive or received industrial waste;
- Hazardous waste treatment, storage, and disposal facilities;
- Mining, oil, and gas operations;
- Manufacturing plants;
- Transportation and warehouse facilities;
- Automobile and scrap metal recycling facilities;
- Steam-powered electric generation plants;
- Transportation facilities;
- Treatment works treating domestic sewage; and
- Construction activity.

There are currently 47 Industrial Permits that are active in Carver County. This number is expected to grow dramatically when the MPCA issues new permit requirements in the fall of 2009. The County, through a Joint Powers Agreement with the MPCA, may administer the program once the new permit is in place.

Where facilities are not required to have an NPDES permit, pollution prevention should still be considered through the use of Low Impact Design (LID) approaches to stormwater management and effective maintenance programs.

**Construction**
The third phase area of the NPDES Stormwater Program is the Construction Stormwater Permitting Program. Many studies indicate that controlling erosion can significantly reduce the amount of sedimentation and other pollutants transported by runoff from construction sites. To keep Minnesota’s valuable water resources clean the MPCA issues permits to construction site owners and their operators to promote effective stormwater management and to prevent stormwater pollution during and after construction.

An NPDES Construction Permit is required for any construction activity that disturbs:
- One acre or more of soil.
- Less than one acre of soil if that activity is part of a "larger common plan of development or sale" that is greater than one acre.
- Less than one acre of soil, but the MPCA determines that the activity poses a risk to water resources.

Site owners and their construction operators must sign off on the NPDES Construction Permit. As part of the application for this legal document, the owner and operator must create a stormwater pollution prevention plan (SWPPP) that explains how they will control stormwater runoff and erosion and sediment control both during and after construction is completed. Most construction activities are covered by the general NPDES stormwater permit for construction activity, but some construction sites need individual permit coverage. Owners and operators are both responsible for submitting the permit application and maintaining compliance with the permit requirements. This program is currently being administered by the CCWMO through a Joint Powers Agreement with the MPCA. County inspectors, working closely with the MPCA, are responsible for field inspections and enforcement of permit requirements within the County.

**Impaired Waters and TMDLs**
Several of waterbodies in Carver County are on the 2008 MPCA’s 303(d) list of impaired Waters (Figure 5.2). The County has been actively involved in the development of TMDLs and Implementation Plans for several years. The County will continue to develop or partner in the development of TMDLs and Implementation Plans for listed impaired waters within the county, with the final goal of EPA approved TMDLs for all listed impaired waters. Table 5-1 summarizes the status of TMDL Studies and Implementation Plans for impaired waters in the CCWMO. The updated WMP will adopt by reference any TMDL Implementation Plans completed or approved by the County, the State of Minnesota, or the Environmental Protection Agency (EPA).
FIGURE 5.2 IMPAIRED WATERS (SOURCE: MPCA)
TABLE 5.1 STATUS OF TMDL STUDIES AND IMPLEMENTATION PLANS

<table>
<thead>
<tr>
<th>Stream Name/Study Name</th>
<th>Pollutant/Stressor</th>
<th>TMDL Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carver, Bevens and Silver Creeks Fecal Coliform TMDL</td>
<td>Fecal Coliform</td>
<td>Approved March 14, 2007, Implementation Plan in progress</td>
</tr>
<tr>
<td>Carver, Bevens and Silver Creeks Turbidity TMDL</td>
<td>Turbidity</td>
<td>Draft to be complete by June 2009</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lake Name/Study Name</th>
<th>Pollutant/Stressor</th>
<th>TMDL Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reitz Lake</td>
<td>Phosphorus</td>
<td>Draft awaiting approval</td>
</tr>
<tr>
<td>Five Lakes TMDL (Benton, Goose, Hydes, Miller, Winkler Lakes)</td>
<td>Phosphorus</td>
<td>Draft in progress</td>
</tr>
<tr>
<td>South Fork Crow River Lakes TMDL (Eagle, Oak, Swede Lakes)</td>
<td>Phosphorus</td>
<td>Draft in progress</td>
</tr>
<tr>
<td>Campbell Lake</td>
<td>Phosphorus</td>
<td>Request to designate as wetland</td>
</tr>
<tr>
<td>Gaystock Lake</td>
<td>Phosphorus</td>
<td>Draft in progress</td>
</tr>
<tr>
<td>Hazeltine Lake</td>
<td>Phosphorus</td>
<td>Draft in progress</td>
</tr>
<tr>
<td>Long Lake</td>
<td>Phosphorus</td>
<td>Not started</td>
</tr>
<tr>
<td>Maria Lake</td>
<td>Phosphorus</td>
<td>Request to designate as wetland</td>
</tr>
<tr>
<td>Rutz Lake</td>
<td>Phosphorus</td>
<td>Not started</td>
</tr>
<tr>
<td>Unnamed Lake (Grace)</td>
<td>Phosphorus</td>
<td>Not started</td>
</tr>
</tbody>
</table>

1For more information on these TMDLs and other impaired waters of Carver County, visit the MPCA Website.

2Stream reaches impaired but not listed in this table will be completed at a later date.

3The State of Minnesota has developed a State-wide Mercury TMDL that addresses lakes that are listed because of mercury in fish tissue. Carver County will not be conducting any additional Mercury TMDLs because of this.
Impaired Waters and TMDL Goals
Carver County recognizes the importance of the natural resources within its boundaries, and seeks to manage those resources to attain the following goals:

GOAL WR-5 Effectively and efficiently manage public capital expenditures needed to correct flooding and water quality problems;
GOAL WR-6 Identify and plan for means to effectively protect and improve surface and groundwater quality;
GOAL WR-7 Maintain a comprehensive, accurate assessment of surface and ground water quality trends over the long term.
GOAL WR-8 Provide those living, working, and recreating in Carver County with the knowledge and skills required to assure protection and improvement of the county’s surface water and groundwater resources.

Impaired Waters and TMDL Policies

POLICY WR-5 The County recognizes the need to incorporate planning efforts between the Comprehensive plan, the CCWMO plan, adjacent watershed district plans, TMDL planning and the local water plans.

POLICY WR-6 The County should pursue & investigate outside funding sources to supplement local implementation

POLICY WR-7 The County should take the lead on coordination efforts between local, regional, state and federal agencies involved in water management implementation or planning within Carver County.

POLICY WR-8 The County recognizes the need to address TMDL’s and NPDES requirements in the revised CCWMO plan.

POLICY WR-9 The County will accept adoption of current watershed management plans (the CCWMO plan and other watershed district plans, if applicable) by the townships as their local water management plan should they so choose. When a city annexes land from a township, the city must update its local surface water management plan to cover the annexed area within two years according to state, regional and CCWMO plan requirements.
Impaired Waters and TMDL Implementation Strategies

STRATEGY WR-8 Update & enforce current standards and ordinances including
- Floodplain
- Shoreland
- Wetland conservation act
- SSTS (septic systems)
- Feedlots & manure management
- Stormwater controls
- Erosion and sediment control

STRATEGY WR-9 Update the CCWMO water management plan by 2010 to include TMDL’s, NPDES Phase II, and CCWMO funding mechanisms. Townships will need to either amend their chapters to reference updated plan or prepare and adopt a separate local water management plan.

STRATEGY WR-10 Pursue & investigate funding sources including
- Private/non-profit grants,
- State and federal funding
- Trading or offsets to implementing TMDLs & Exploration of carbon trading credits or funds
- CCWMO levy funding for capital projects

STRATEGY WR-11 Update natural resource data as growth occurs and new information is available

STRATEGY WR-12 Assess the effectiveness of implementation measures within five (5) years.

STRATEGY WR-13 TMDL
- Complete TMDLs and Implementation Plans for waterbodies on 303d TMDL List and referenced in this plan, or, pursue removal or delisting of waterbodies from the 303d TMDL List as appropriate.
- Pursue funding from outside sources to assist in the completion and implementation of TMDLs.
- Review local water plans for applicable TMDL compliance.
- Incorporate into the updated WMP any TMDL Implementation Plans completed or approved by the County, the State of Minnesota, or the Environmental Protection Agency (EPA).
- Develop or partner in the development of TMDLs and Implementation Plans for listed impaired waters within the county, with the final goal of EPA approved TMDLs for all listed impaired waters.
- LGUs will need to recognize and incorporate applicable portions of approved TMDLs into their local water plans. LGU’s can choose to adopt the CCWMO plan by reference.
- Monitor non-sampled waterbodies depending on local needs, waterbody condition, or outside funding assistance.