

GreenStep Cities Best Practice # 21 **- final draft for comment through May 2010 -**

- ❖ **Septic Systems:** Implement an effective management program for decentralized wastewater treatment systems.

Optional for all cities

Category: Environmental Management

Summary

Throughout Minnesota, failing septic systems in smaller towns and rural areas have relatively direct connections to surface and ground waters. These connections can cause detrimental impacts on the environment and can create an imminent threat to public health and safety. Standard septic systems with drainfields can also hinder cost-effective tax-base growth in small towns by preventing denser development. Cities can help structure assistance to septic owners, allowing them to implement best practices around septic systems and to access financial programs for upgrades.

Best Practice Actions

- A city that chooses to implement this best practice must complete at least one of the Actions below.
 - (1) Document noncompliant or failing septic systems and report that to landowners as part of an educational, informational and financial assistance and outreach program designed to trigger voluntary landowner action to improve septic systems.
 - (2) Create a program that follows the five-step process for addressing failing septic systems developed by the University of Minnesota's Onsite Sewage Treatment Program.
 - (3) Implement one or more organizational options for the proper design, siting, installation, operation, monitoring and maintenance of septic systems.
 - (4) Adopt a Subsurface Sewage Treatment System ordinance based on the Association of Minnesota Counties model ordinance template.
 - (5) Create a program to finance septic systems upgrades through, for example, a city revenue bond, repayable through taxpayers' property taxes.
 - (6) Work with homeowners and businesses in environmentally sensitive areas and areas where standard septic systems are not the least-cost option to promote innovative waste water systems.
 - (7) Arrange for assistance to commercial, retail and industrial businesses with water use reduction, pollution prevention and pretreatment prior to discharge to septic systems.

GreenStep Advisors

- University of Minnesota Onsite Sewage Treatment Program northern staff: Laurie Brown, 218/726-6475, brow1198@umn.edu
- University of Minnesota Onsite Sewage Treatment Program southern staff: Doug Malchow, 507/280-5575, malch002@umn.edu

Implementation Resources

(tied to the relevant Action by number)

- (1) This approach has been used in a central Minnesota county to some effect.
- (2) University of MN's Onsite Sewage Treatment Program, which includes expert assistance and a five-step planning process: <http://septic.umn.edu/communities>

- (3) University of MN's Onsite Sewage Treatment Program - organizational options for responsible management entities: <http://septic.umn.edu/communities/organizationaloptions/index.htm>
- (3) *Voluntary National Guidelines for Management of Onsite and Clustered (Decentralized) Wastewater Treatment Systems* (U.S. EPA: 2003): http://www.epa.gov/owm/septic/pubs/septic_guidelines.pdf
- (3) *Handbook for Managing Onsite and Clustered (Decentralized) Wastewater Treatment Systems* (U.S. EPA: 2005): http://cfpub.epa.gov/owm/septic/septic.cfm?page_id=289
- (4) *Model Ordinances for Local SSTs [Subsurface Sewage Treatment System] Regulatory Programs* (Association of Minnesota Counties: 2008): <http://www.macpza.org/>
- (5) University of MN's Onsite Sewage Treatment Program – financial options: <http://septic.umn.edu/communities/financialoptions/index.htm>
- (5) Minnesota Pollution Control Agency webpages of resources relating to onsite wastewater treatment and management, including financing and lists of licensed contractors: <http://www.pca.state.mn.us/programs/ists/index.html>
- (6) Innovative systems include composting toilets, greywater systems, cluster systems, constructed wetlands, recirculating sand filters, mound systems, and ozone disinfection systems. See <http://septic.umn.edu/communities/techandtreatmentoptions/index.htm> and <http://septic.umn.edu/research/index.htm>
- (7) Water use reduction, pollution prevention and pretreatment assistance for businesses from the Minnesota Technical Assistance Program: <http://www.mntap.umn.edu>

Benefits

- Data from a well-managed set of 1545 septic systems in the Otter Tail Water Management District, formed in 1984, shows very little impact on groundwater and improved water quality in the lakes. Total system failure rates have been less than 2%: <http://septic.umn.edu/communities/organizationaloptions>
- Benefits of well-managed septic systems include:
 - Protection of public health and local water and groundwater resources.
 - Lower costs to taxpayers by keeping water potable for human consumption rather than treating contaminated water.
 - Longer system life, improved system performance and increased reliability.
 - Reduced costs for repairs, maintenance and replacement.
 - Improved property values.
 - A barrier to resale of property removed.

Connection to State Policy

- Minnesota Rules chapters 7080 - 7083 (linked to from the MPCA septic web site) provide the framework for regulation of onsite wastewater treatment. Counties are in the process of updating their ordinances to meet this rule, which was passed in 2008. Cities that choose to regulate onsite wastewater treatment must be as stringent as their county's ordinance.