



# Are Septic Systems Up to Speed?

“It is a question of discipline,” the little prince said to me later on. “When you’ve finished your own toilet in the morning, then it is time to attend to the toilet of your planet, just so, with the greatest care.”

ANTOINE DE SAINT EXUPÉRY, *THE LITTLE PRINCE*

## Audience

- ~ planning and zoning board members
- ~ conservation commissioners
- ~ wetlands commissioners
- ~ health officers
- ~ zoning boards of appeal

For more than 6,000 years, humankind has sought to improve the art and science of sanitation. The ultimate treatment and disposal of human wastes to reduce threats to public health and the environment has progressed, but some serious challenges persist, particularly with regard to decentralized wastewater treatment systems—onsite systems (i.e., individual sewage disposal systems) or cluster systems (i.e., serving one or more dwelling units or businesses).

Decentralized systems collect, treat, and release about four billion gallons of effluent per day from an estimated 26 million facilities nationwide. Onsite systems serve about 25 percent of the nation’s households and account for about 33 percent of new construction. In the more rural New England states of Vermont, Maine, and New Hampshire, onsite systems serve closer to 50 percent of all households.

While many municipalities have made important strides in establishing effective onsite sewage disposal regulatory programs, most have not adopted comprehensive management approaches that oversee the full range of issues—planning, siting, design, installation, operation, monitoring, and maintenance. Improving the management and performance of decentralized wastewater treatment systems is essential if your community’s Source Water Assessment report has identified threats of nitrate, nutrients, and microbial contamination.

## Plan for the Long Haul

Today, many onsite systems perform well, but many don’t. When they don’t, they present a serious threat to public health, drinking water resources, and aquatic life. Septic systems are among many known contributors of pathogens and nutrients to surface and groundwater. They have contributed significantly to the eutrophication of ponds, lakes, and coastal estuaries—not to mention the degradation of property values.

Properly managed septic systems are a viable long-term solution for wastewater disposal. Communities that depend on septic systems need to recognize this and, if need be, take steps to adopt and implement creative, disciplined, and comprehensive management programs designed to achieve long-term sustainability.

A conventional gravity-based onsite treatment system, which consists of a pipe from the home, a septic tank, a drainfield, and the soil, is essentially the responsibility of untrained and often uninformed system owners. Most

communities do not routinely oversee septic system operation and maintenance or detect and respond to changes in wastewater loads that can overwhelm a system. As a result, system performance is monitored primarily by complaints or failures. Failures are typically caused by unpumped and sludge-filled septic tanks, which lead to clogged absorption fields and hydraulic overloading.

But decentralized wastewater management systems do work if they are managed so that they perform effectively. In fact, many community development strategies are leaning toward the use of decentralized management approaches rather than traditional centralized infrastructures that often give rise to sprawling development, traffic congestion, environmental degradation, and diminished quality of life. Decentralized management can deliver communities significant up-front and long-term financial savings and provide benefits in the form of preserved and restored waterways and more open space.

## Take a Closer Look

It is important for municipalities to take a closer look at their septic system management programs and address the following issues:

- how to be sure that septic systems are not impacting drinking water sources
- how to make sure existing septic systems will not impact source water in the future
- how to address future development so that decentralized wastewater treatment system siting, design, operation, and maintenance are optimized

- how to take into account the cumulative impacts of onsite systems on the water supply watershed
- how to change public and political attitudes toward the value of and need for an effective decentralized sewage management program
- how to fund an effective decentralized wastewater management program.



### Onsite Wastewater Treatment System

*A passive or active method for treating and disposing of wastewater into the soil.*

## Strategies for Action



**Consider establishing a comprehensive decentralized wastewater system management program to prevent the contamination of present and future drinking water from septic systems.**

Explore new approaches for siting and managing decentralized wastewater systems.



**Take advantage of readily available GIS map resources to inventory all septic systems in your source water protection area.**

Make it a point to keep this information updated, so that your map can be a useful wastewater management planning tool.



**Develop a municipal wastewater management program to address potential threats.**

Take the following actions:

- evaluate existing conditions and problem areas
- evaluate future wastewater needs
- identify septage (pump-out material) disposal areas
- evaluate future growth to determine how treatment needs will be met
- propose a long-term strategy for meeting treatment needs

Local governments have various options for controlling potential water supply threats. For example,

- A **septic system maintenance ordinance** helps ensure that septic systems are inspected and pumped periodically to prevent malfunction.
- A **septic system tracking program** is the computer software system a town uses to keep track of inspection reports and results, monitor compliance, and send reminders and other notices to system owners.
- A **municipal septic system maintenance program** has the municipality assume responsibility for the maintenance and repair of septic systems.
- **Standards for installing and siting new septic systems** ensure that siting and design is such that potential threats to source water are minimized.



**Educate homeowners, businesses, and local officials about the importance of proper wastewater management.**

Provide them with guidance on proper operation and maintenance. Public involvement and education are critical to successful on-site wastewater management. Engaging the public helps build support for funding, regulatory initiatives, and other elements of a comprehensive program.



**Explore programs to help homeowners pay for new systems, repairs, or upgrades.**



## FOR MORE INFORMATION

For more detailed information, check out "Water Today... Water Tomorrow? Protecting Drinking Water Sources in Your Community: Tools for Municipal Officials" at [www.neiwpc.org](http://www.neiwpc.org). To find out more about your state's on-site sewage disposal program:

Connecticut:	(860) 509-7296	<a href="http://www.dph.state.ct.us/BRS/sewage/sewage_programtext.htm">http://www.dph.state.ct.us/BRS/sewage/sewage_programtext.htm</a>
Maine:	(207) 287-5689	<a href="http://www.state.me.us/dhs/eng/plumb/index.html">http://www.state.me.us/dhs/eng/plumb/index.html</a>
Massachusetts:	Regions:	Northeast (617) 654-6500 • Southeast (508) 946-2700 • Central (508) 792-7650 • Western (413) 784-1100 <a href="http://www.mass.gov/dep/brp/www/t5pubs.htm">http://www.mass.gov/dep/brp/www/t5pubs.htm</a>
New Hampshire:	(603) 271-3501	<a href="http://www.des.state.nh.us/ssb/">http://www.des.state.nh.us/ssb/</a>
Rhode Island:	(401) 222-3961	<a href="http://www.state.ri.us/dem/programs/benviron/water/index.htm">http://www.state.ri.us/dem/programs/benviron/water/index.htm</a>
Vermont:	(802) 241-3822	<a href="http://www.anr.state.vt.us/dec/www/wwmd.cfm">http://www.anr.state.vt.us/dec/www/wwmd.cfm</a>