



# Why Treat Sewage?

## Facts About Subsurface Sewage Treatment Systems

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### Introduction

What is sewage and why treat it? Although the answers may seem obvious, these questions are often asked.

Sewage is wastewater from domestic activities such as cooking, cleaning, laundry or bathing. Exposure to sewage through ingestion or bodily contact can result in disease, severe illness, and in some instances death from the bacteria, viruses and parasites contained in the waste. Therefore, it is important for sewage to be properly treated.

Few people disagree with the need to treat sewage generated by large municipal or industrial sources, and regulations governing these larger facilities have been in place at the state and federal level for decades. However, the regulations governing sewage treatment systems serving homes and mid-sized facilities are much more recent. These systems are called Subsurface Sewage Treatment Systems (SSTS), commonly referred to as septic systems. SSTS were formerly known as Individual Sewage Treatment Systems (ISTS).

While the terminology has changed to reflect changes in the septic system industry, a septic system is still a combination of tanks or other treatment devices providing initial treatment of sewage which ultimately discharging the sewage into the soil for final treatment. And, just as with large wastewater facilities, SSTS need to be properly designed, installed, regulated, and maintained.

### Regulatory background

In 1968, the Minnesota Shoreland Act was passed. It contained provisions for septic systems to be evaluated and managed properly within shoreland areas to better control their impact on water quality, and resulted in distinct improvements in water quality.

In 1994, the first state law specifically addressing septic systems was enacted. This legislation, known as the ISTS Act and codified as Minn. Stat. §§ 115.55 and 115.56, requires all new construction and replacement septic systems to meet minimum statewide standards. It also put in place a system to upgrade failing existing SSTS before construction of an additional bedroom, and methods to replace failing SSTS within certain time frames depending on their level of failure.

The 1994 act has been amended in recent years, with major changes in 1996 and again in 2008. As SSTS are intended provide long-term, reliable, high quality treatment and disposal of the sewage generated in a home, regulations will continue to be amended as the SSTS industry advances.

### Public health reasons

While the 1994 act helped to ensure newly constructed or replaced septic systems will adequately treat sewage, many of the more than 500,000 septic systems in use in Minnesota were installed prior to the law revisions and therefore, may not be adequately treating sewage.

Additionally, sewage contains the nutrient phosphorus, which if discharged into lakes can cause excessive aquatic plant growth leading to degradation in water quality.

Despite our abundance of lakes and rivers more than two-thirds of Minnesotans get their drinking water from ground water (i.e., wells). Since septic systems discharge treated sewage into the ground, ultimately traveling to the ground water, they must be properly sited, designed, built and maintained to protect human health.

## **Environmental reasons**

Minnesota takes great pride in its environmental leadership, and Minnesotans rely heavily on the quality of their lakes, rivers and streams for tourism, recreation and enhancement of property values. We take pride in the quality of our waters and natural environment, and accept the responsibility that comes with properly managing our impacts on our natural resources. This synergy forms the basis of the goal to comprehensively manage all sources of contamination entering ground and surface waters.

Statewide efforts to better manage the environmental and public health impacts of septic systems are a critical part of this goal. The Minnesota Pollution Control Agency is committed to these efforts and continues to investigate and develop organizational and functional methods to achieve this goal.

## **For more information**

For additional SSTS information, please visit our Web site at <http://www.pca.state.mn.us/programs/ists/> or call us at 651-296-6300, toll free 800-657-3864.