



**CLEAR WATER
TECHNOLOGIES, INC.**

Septic System Treatment That's More Effective and Lower Cost than Other Treatments

- * **LOW COST!**
- * **Reduce Nutrient Discharge**
- * **Increase System Efficiency**
- * **Non-Hazardous Components**
- * **Sludge Reduction**
- * **Long Term Treatment**

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Septic System Overview

According to the Minnesota Pollution Control Agency, a typical septic system processes about 150 gallons of wastewater per person per day. At that usage rate, the per person loading rate of total suspended solids (TSS) would be 0.75 to 1 pounds per day, total phosphorus (TP) 0.025 to 0.1 pounds per day, carbonaceous biological oxygen demand (CBOD) 0.68 to 1 pounds per day, and total nitrogen (TN) 0.25 to 0.375 pounds per day. What this means is a steady buildup of solids and nutrients in the septic tank, requiring periodic maintenance measures to prolong the system's effective life and to slow what is an inevitable journey of nutrients to the lake.

Lake Pollution

These nutrients that eventually reach the lake will build up over time inducing excessive weed and algal growth. These heavy growths greatly reduce the quality and productivity of a lake, creating unpleasant conditions for recreation and can be detrimental to other aquatic life such as fish.

TSS and CBOD, over time, can clog the soils and distribution system. Excessive amounts of CBOD in the soils can allow anaerobic conditions to develop which, in turn, release other undesirable components into the surrounding environment.

The Clear Water Solution

A chemical/biological process originally used for lake treatment and then for wastewater treatment improvements has been developed and patented by Clear Water Technologies, Inc. This process (Known as the HOGEN PROCESS® Septic Solutions Treatment) has been found to work efficiently in septic systems to reduce system maintenance as well as minimize the pollutants that, over time, would enter the lake.

Treatment Procedure

An iron oxide compound is added to the septic system along with a combination of biological materials and helpful microorganisms that break down the iron compound as they feed on the waste.

Septic System Studies

Septic System Studies have produced results that clearly suggest the HOGEN PROCESS® Septic Solutions Treatment demonstrated its ability to:

Reduce total phosphorus, total nitrogen and carbonaceous biochemical oxygen demand in treated systems well below the concentrations of these nutrients in control (untreated) systems.

Lower total suspended solids levels in treated over untreated systems, leading to slower rate of sludge and scum buildup, less frequent pumping, improved effluent outflow and less likelihood of drainfield clogging.

Increase the efficiency of household wastewater treatment systems, prolong the effective life of such systems and, while doing so, ensure that lesser amounts of pollutants and nutrients are leaching into the lake