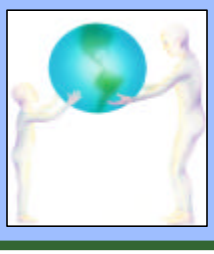
CLEAN BUSINESS

IN A WATERSHED

VOLUME 3 SPRING 2005



Portions of Foster, Glocester, Johnston and Scituate are a land area called the Scituate Reservoir Watershed. The Scituate Reservoir, lying in the lowest part of this land area, catches all water flowing from this watershed. The Scituate Reservoir is a major source of drinking water in Rhode Island.

THE SCITUATE RESERVOIR WATERSHED EDUCATION PROGRAM
PASSING ON CLEAN WATER

SEPTIC SYTEMS

Part One—HOW DO THEY WORK?

LOCAL DRINKING WELLS CONTAMINATED WITH TCE.

Nineteen years ago, toxic TCE (trichloroethylene) was found in several Scituate drinking wells. Drinking water contaminated with TCE can damage the heart, kidney and liver and cause death. TCE is used mainly to remove grease from metal surfaces. The cause of contamination may have been small neighborhood businesses that used TCE routinely. Most likely, excess TCE was disposed of DOWN THE DRAIN or POURED ONTO THE GROUND. Sinking underground, it entered groundwater serving as the drinking water for both these businesses and neighboring homes. Nineteen years later, these wells are still contaminated. Homeowners, unable to use water for drinking or and cooking, have needed constant supplies of bottled drinking water. They also worry about the health effects of using well water for showering and household use. Any new wells drilled in this area may hit this contaminated ground water. Costs and hardships have been great for all involved and this could have been prevented with a little knowledge about how septic systems and groundwater work. It is our hope to avoid future incidences of this type by educating business owners and residents of the Scituate Reservoir Watershed.

THIS IS THE FIRST OF 3 BULLETINS THAT WILL EXPLAIN: *How a Septic System works
*How you can prevent well water contamination.
*Septic System maintenance

YOUR WASTEWATER.

Every day, wastewater leaves your business building, draining from sinks and toilets. Your business may also use showers, washing machines, and dishwashers. Take a minute to think about how much wastewater leaves your building each day.

Think about what this wastewater contains... dirt, disease causing microbes, soaps, detergents, fats, grease and human waste.

All this is disposed of by a Septic System. How much do you know about Septic Systems?

DID YOU KNOW...

That a failed septic system can contaminate nearby drinking wells with human wastes and cause diseases such as hepatitis and gastroenteritis?

That pouring paints, solvents, dyes and other hazardous substances down the drain can contaminate your drinking well...and your neighbors?

That, by law, property owners are responsible for damages caused by their septic systems?

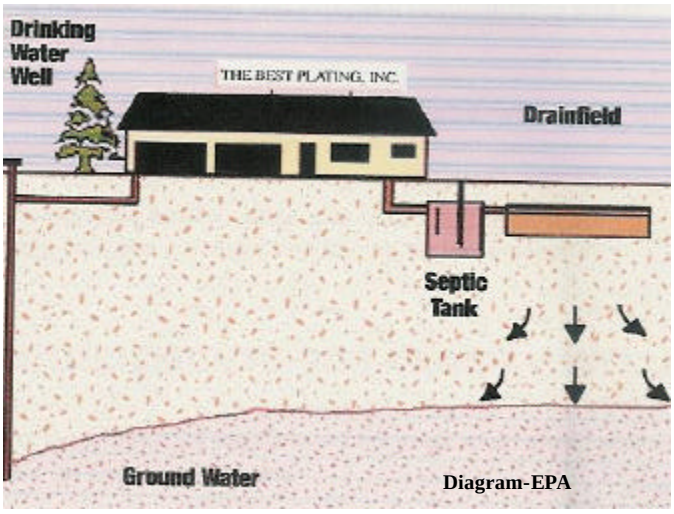
CESSPOOLS VS. SEPTIC SYSTEMS

Both Cesspools and Septic Systems are designed to dispose of water from toilets, showers and sinks. However, cesspools are now considered a substandard method for wastewater disposal. Septic Systems, with proper maintenance, can be an excellent method for sewage disposal.

A Cesspool is a lined hole in the ground with a cover. The wastewater flows from the building through a central pipe into this hole. The wastewater drains downward into the ground and sometimes directly to the groundwater. Cesspools tend to backup and they fail to dispose of sewage properly.

REPLACE A CESSPOOL WITH A SEPTIC SYSTEM

A Septic System is also connected to the building by a main pipe. Wastewater travels through the pipe and enters a Septic Tank. In this tank, fluid and solids separate. The solids are broken down by bacteria. The relatively clear liquid will move out of the tank through another pipe into a specially designed area (Drainfield) that filters and cleans the fluids. Cleaner water then drains down toward ground water. Septic Systems also need to be pumped out but they are more efficient at sewage disposal. With proper maintenance, Septic Systems can work efficiently for a long time.



RESOURCE:
Septic System Information for Rhode Islanders
What's in Your Backyard?
URI Cooperative Extension at 874-4558/5950
http://www.uri.edu/.

Special thanks to David Kalen and Lorraine Joubert of URI CE and to Cynthia Gianfrancesco of RI DEM for their guidance on the development of this series of septic system bulletins.

BUSINESSES PRODUCE LARGER AMOUNTS OF STRONGER WASTEWATER THAN THE AVERAGE HOME

Commercial Septic Systems need to be large enough to handle the larger amounts and stronger wastewater.

LARGER SEPTIC TANKS OR ADDITIONAL SEPTIC TANKS MIGHT BE NEEDED TO HANDLE DAILY FLOW OF WASTEWATER

SANITARY WASTES VS. COMMERCIAL WASTES

Wastewater from toilets, dishwashing sinks, showers and clothes washing machines, resulting from human activities, is called *Sanitary Waste*. Septic Systems are designed to dispose of this type of waste. (Businesses using their septic system for this purpose and serving 20 or more people a day are required to meet state and federal requirements.)
Questions? Call RIDEM at 401-222-6800 (ask for ISDS)

Other businesses produce wastewater containing substances other than sanitary waste, examples being beauty shops, food processing operations and car washes. The wastewater going down these drains is called *Commercial Waste*. (Businesses using their septic systems for Commercial Wastes are required to meet state and federal requirements.)
Questions?
Call RIDEM at 401-222-6800 (ask for ISDS)

DO YOU HAVE MORE QUESTIONS ABOUT SEPTIC SYSTEMS?

Website: RI Department of Environmental Management –Publications -Policies/Guidelines–Water Quality–Septic Systems Inspections Handbook
Websites: RIDEM–Programs–Water Resources–Permitting–ISDS
University of RI Website: www.uri.edu/ce/wq

OTHER HELPFUL CONTACTS.

Northern Rhode Island Conservation District
17 Smith Avenue
Greenville, RI 02828
(phone) 401-949-1480
www.landwaterconnection.org

Providence Water
552 Academy Avenue
Providence, RI 02908
(phone) 401-521-6300
www.provwater.com