A Guide to the Proper Care and Maintenance of Your Onsite Wastewater Treatment System

COURTESY OF INFILTRATOR SYSTEMS, INC.
What’s Inside

Page 3  The Residential Septic System: Your Onsite Wastewater Treatment Plant

Page 7  The Infiltrator Product System: Today’s Modern Solution

Page 10  Care and Maintenance of Your Infiltrator System

Dear Septic System Owner,

Clean water is our heritage—it’s also our responsibility. As the population grows and more land is developed, we must all find new ways to safeguard our environment for future generations.

At Infiltrator, we’re doing our part by using science to design better performing septic systems. We manufacture reliable products from primarily recycled materials. Our reduced footprint minimizes disruption of the environment. All of this provides septic system owners with products they can trust for superior performance, ease of maintenance, and long-term value.

What started over 26 years ago as an idea for a better leachfield, is now a worldwide company with a broad range of products in service in North America and around the world. Today, one in every three systems installed in North America is an Infiltrator system. This Septic System Owner’s Manual explains how septic systems work, describes the benefits of the Infiltrator system, and provides valuable tips for proper system maintenance. This is part of our commitment to making sure that clean water is everyone’s business.

Roy Moore,  
President & CEO  
Infiltrator Systems Inc.

A RESIDENTIAL SEPTIC SYSTEM: Your onsite wastewater treatment plant

What is a Septic System?

A septic system is an onsite wastewater treatment system that processes and purifies household waste (effluent). The effluent consists of blackwater (toilet wastes) and graywater (kitchen sink, bathtub and laundry wastes).

A septic system has two components:

1. a septic tank and a leachfield or drainfield. Primary treatment occurs in the septic tank, where bacteria digest organic materials in the wastewater. The effluent then flows into the leachfield for secondary treatment. Here, bacteria complete the digestion and purification process as the wastewater slowly leaches or infiltrates into the soil.

2. an Infiltrator product system (today’s modern solution).

Care and Maintenance of Your Infiltrator System

CONGRATULATIONS ...

Your leachfield system is constructed with Infiltrator products. Infiltrator products, manufactured of recycled materials, interlock together to form a continuous drainage area. These state-of-the-art systems offer many advantages over old-fashioned stone and pipe systems. They treat more effluent, more efficiently, in a smaller area.

A standard septic system has two components: a septic tank and a leachfield. A residential septic system is constructed with Infiltrator products. Infiltrator products, manufactured of recycled materials, interlock together to form a continuous drainage area. These state-of-the-art systems offer many advantages over old-fashioned stone and pipe systems. They treat more effluent, more efficiently, in a smaller area.
The septic tank is a watertight underground box, about eight feet long, four feet wide, and five feet deep. It typically has at least a 1,000-gallon capacity for retaining, storing, and treating solids, in addition to releasing effluent into the leachfield, sometimes called a drainfield.

As wastewater flows into the tank, heavy solids settle to the bottom into a sludge layer, while grease and fats float to the top forming a layer of scum. Between these two layers is a clear zone of liquid called the clarified zone.

Found in all three of these layers are billions of bacteria that live naturally in the tank and perform the first phase of treatment to break down solid matter. The bacteria digest the solid materials. In the process, gases are produced, which are vented from the septic tank through the plumbing vent on your rooftop.

From the septic tank, partially treated effluent flows into a leachfield, which typically has two or more trenches. This is where effluent is naturally purified as it percolates down through the soil.

For proper effluent purification, the distance between the trench bottom and the water table should be equal to or greater than the minimum distance allowed by your local health department. The soil acts as a biological filter, removing harmful substances before the effluent reaches the groundwater.

Infiltrator Systems manufactures chamber systems and EZ flow Geosynthetic Aggregate systems which are both used in leachfield installations.

Effluent flows into the leachfield where it is naturally purified as it percolates down through the soil.
OLD-FASHIONED SYSTEMS: STONE AND PIPE SYSTEMS

Old-fashioned systems use gravel or crushed stone in the leaching trenches to create void space to store the effluent and release it slowly. However, such systems are prone to eventual failure as the voids (empty spaces) around the gravel become plugged. This phenomenon occurs over time as solids build-up between the stones, limiting infiltration of water into the soil. As the gravel settles, it also tends to compact and accumulate fines (small soil particles), further reducing the infiltration rate.

- Stone and pipe systems can fail because solid matter clogs the space between the stones.
- Stone blockage reduces infiltration rate.
- Geotextile is required to stop soil intrusion.
- Solids between stones limit infiltration.
- 4" pipe does not provide even distribution.

TODAY’S MODERN SOLUTION: INFILTRATOR CHAMBER SYSTEMS

Infiltrator Chamber Systems

Infiltrator chambers are hollow structures that attach end-to-end. They are installed in trenches or beds without gravel (except where local codes require the use of gravel). The entire bottom of the trench is open for unobstructed infiltration of water. The large storage volume within the hollow chambers accommodates peak flows of effluent from the home. Infiltrator chambers also feature patented sidewall louvers that allow lateral leaching of effluent into the soil.

- Infiltrator chamber systems’ design eliminates the need for stone. The entire trench bottom is open for unobstructed infiltration.
- Patented sidewall louvers allow lateral leaching of effluent into the soil.
- Large storage volume accommodates peak flows.
- Bottom open for leachate infiltration.

EZflow Systems

EZflow is an environmentally friendly replacement to traditional stone in septic drainfields using an engineered geosynthetic aggregate modular design. The EZflow system is designed to improve infiltrative performance by eliminating the fines and reducing compaction and embedment associated with crushed stone.

- EZflow geosynthetic systems replace stone in a traditional system reducing compaction and fines.
The alternative to septic treatment technology are sewer systems, which pipe waste to a centralized treatment plant, typically near a river or other body of water for disposal after treatment. In addition to being a cost effective alternative to expensive sewer lines, septic systems are environmentally superior to sewers because they:

- Provide simple, effective onsite wastewater treatment
- Allow the groundwater to be recharged onsite, which makes more clean water available for use
- Avoid contamination of local groundwater caused by ageing sewer lines, which leak untreated effluent into the soil
- Avoid environmental disasters of raw sewage discharges from treatment plants during floods or processing accidents

Infiltrator products can be installed in curved, sloped and small areas allowing for optimal land use.

Infiltrator products are today’s superior alternative to old-fashioned stone and pipe because they:

- Provide long-term savings due to longer life and greater operating efficiency
- Offer worry-free, long-term service with only simple, routine maintenance
- Protect landscape from damage caused by heavy equipment
- Provide greater treatment area to handle more wastewater with higher efficiency
- Offer a “greener” approach utilizing recycled plastic resins to manufacture the products
- Are backed by a minimum 1-year warranty and a reputable, service oriented company
- Can be installed in tight, sloped and curved areas creating less site disruption

Infiltrator systems are designed to safeguard our environment for future generations.

Infiltrator systems are designed to safeguard our environment for future generations.
A septic system may be out of sight, but it definitely should not be out of mind. With proper standard maintenance and by being more aware of your daily living habits, you will greatly improve the life and health of your system. Here are some guidelines to help you protect your septic system investment.

Why the Tank Needs Pumping Periodically
About 95 percent of the sludge and scum that is in your septic tank is broken down by bacteria. The other 5 percent remains in the tank and builds up in the sludge layer. Consequently, your septic tank must be pumped out regularly. Otherwise, solids would eventually fill the tank and wash-out into the leachfield. This is detrimental to the overall health and longevity of your system.

CAUTION: If solids do overflow from the septic tank into the leachfield, they will prematurely clog the soil pores (openings). Pumping out the septic tank at that point will not restore the system. The most likely solution would be installing a new leachfield in a different area, which can be very expensive and disruptive to your property.

Have your tank checked by a septic system contractor every two to three years. If you have high water usage or a garbage disposal, the inspections should be more frequent. Use the septic system maintenance record on page 11 to enter and date each inspection and pumping.

LOCATING THE SEPTIC TANK
It’s very important to know where the tank is in order to have it inspected and pumped. Here are three different ways to find your septic tank.

1. Ask to see the septic system permit for your property at your local health department, town or city hall. It will have a diagram of your system on it.
2. See where the sewer line leaves your house, the tank should be about 10 feet outside the foundation wall.
3. Have your septic contractor probe with a steel rod, taking care to avoid damaging the tank or underground utilities.

CARE AND MAINTENANCE OF YOUR INFILTRATOR SYSTEM

Infiltrator Septic Tank
Once you know where the septic tank is, use the septic system layout below to sketch the location of your house, driveway, septic tank, and leachfield. Depending on your lot size, let each square on the layout equal 5 feet x 5 feet or 10 feet x 10 feet. Measure and record the exact footage from the house to each septic tank access port or cleanout spot.

Contractor:
_____________________________________

Contact Info:
_____________________________________
_____________________________________
_____________________________________
_____________________________________

Permit Number:
_____________________________________

---

**THE INSIDE STORY**

You can protect the performance and life of your system by controlling what goes into and through your septic system. Here's how:

- **Conserve water.** Large volumes of water over a short period of time will flush untreated solids out of the septic tank into the leachfield.
  - Practice conservation every day. For example, turn off the faucet while brushing your teeth.
  - Space out heavy water-using activities such as washing clothes and taking showers.
  - Repair leaky faucets and valves. Consider replacing old toilets that use 3.5 to 5 gallons per flush with new 1.6 gallon fixtures.

- **Keep your drains clean.** Remember that a septic system uses natural biological processes, so only biodegradable waste should go in it.
  - No cigarette butts, tissues, sanitary napkins, disposable diapers, catbox litter, coffee grounds or cotton swabs.

- **DIAGRAMMING THE LOCATION**

**THE DAILY INS AND OUTS OF A HEALTHY SEPTIC SYSTEM**

- **No paints, oils, chemical drain cleaners, thinners, solvents, or pesticides.** These toxic chemicals not only kill helpful bacteria, they may also contaminate the groundwater.
- **No grease or cooking oils.** Grease may harden in the septic tank's scum layer and build up until it blocks the inlet or outlet. If you melt grease and pour it down the drain, it may run through the septic tank and then harden, clogging the soil pores in your leachfield.
- **Go easy with your garbage disposal.** Using a garbage disposal typically doubles the rate of solids buildup in the septic tank. To avoid frequent pumpouts, compost your garbage or put it in the trash.
- **Be cautious with household chemicals.** Disinfectants, ammonia, bathroom cleaners, bleach, etc. can kill the bacteria your system needs in order to operate properly. Allow the system to dilute and neutralize them a little at a time.
- **Infiltrator doesn't recommend the use of additives that claim to boost the bacteria count or extend septic system life.** Bacteria are already present by the billions, and additives won’t affect the need for periodic pumping.
THE OUTSIDE STORY
Here’s how you can control what happens outside your septic system.

- Keep surface water away. Divert downspouts, roof drainage, driveway runoff, and sump pump discharge away from the leachfield. Landscape your yard to channel rainwater away.

- Encourage the right plants. Remove trees such as willows that like "wet feet." Their roots may penetrate and damage the leachfield. Grow grass or ground cover over the septic system to prevent soil erosion. Plant beneficial trees such as pines near the leachfield to absorb water.

- Avoid physical damage. Don’t drive over the system or compact the soil with heavy equipment. Don’t dig in the leachfield or build anything over it. Don’t cover the tank or leachfield with concrete or blacktop.

NOW YOU’RE AN INFORMED INFILTRATOR SEPTIC SYSTEM OPERATOR
Most problems with septic systems are due to lack of proper care. With a little attention, your Infiltrator chamber or EZflow septic system can be a valuable asset to your property. It all comes down to knowing where your system is, protecting it from internal and external problems, giving it regular maintenance, and calling a professional septic contractor when you need help. If you follow these simple guidelines, it will benefit the environment, as well as yourself. Infiltrator chamber and EZflow septic systems are the premier onsite wastewater systems and, now, you’re an informed septic system operator.

THE DAILY INS AND OUTS OF A HEALTHY SEPTIC SYSTEM

INFLTRATOR’S FAMILY OF PRODUCTS

Quick4 & Quick4 Plus Chamber Systems
Infiltrator chamber systems are a direct replacement for old-fashioned stone and pipe leachfields. Infiltrator chambers give designers, engineers, installers and homeowners great flexibility in placement of the septic leachfield.

EZflow
EZflow is an environmentally friendly replacement to traditional stone and pipe drainfields using an engineered geosynthetic aggregate modular design. The EZflow system is designed to improve infiltration performance by eliminating the fines associated with crushed stone, and reducing compaction and embedment associated with stone.

Septic Tanks
Infiltrator septic tanks provide a revolutionary improvement in plastic septic tank design, offering exceptional strength comparable to concrete tanks. There’s a full range of tank sizes to best suit your needs.

EZset Risers and Lids
EZset risers and lids are made from glass reinforced polypropylene, providing superior strength and durability. Ideal for use with any concrete or plastic tank. The slip resistant lids are fastened using stainless steel screws and can be further secured by installing locking rings.

Aquaworx IPC Panels
Aquaworx IPC Panels provide an innovative approach to pump control where a pump is required. These panels use a floatless pressure transducer technology, monitors liquid levels, controls pumping time intervals and logs events in real-time. Panels are available in simplex or duplex.

For more information on septic products, Call Infiltrator Systems: 1-800-221-4436
Or visit our website: www.infiltratorsystems.com