

SEPTIC SMARTS

Save big money by understanding how a septic system works—and what can go wrong.

A well-designed, properly installed septic system can last for decades—or fail in just a few years. It's up to you.

Maintaining a healthy septic system isn't all that expensive, but you could easily spend tens of thousands to dig up and replace a septic system that has totally failed. As the old saying goes, an ounce of prevention is worth a pound of cure.

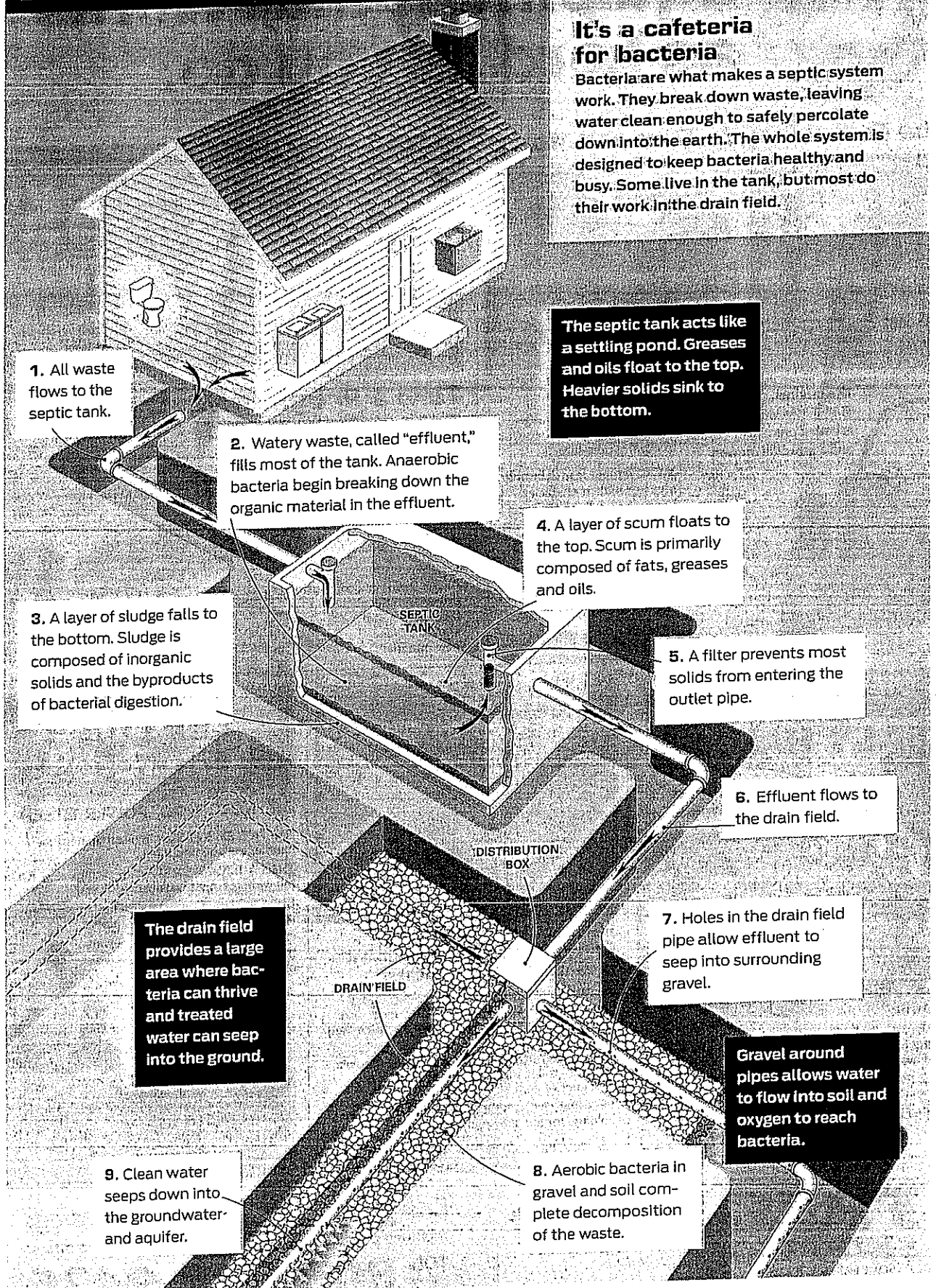
Good maintenance starts with understanding how a septic system works and how it can fail. Let's take a look underground and see what's supposed to happen in a well-functioning septic system. After that, I'll show you why things go wrong and give you some pointers for keeping your system in top shape.



Regular "pumping" removes sludge and scum from the tank.

by Jim vonMeier
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HOW IT WORKS



WHAT GOES WRONG

Don't abuse the system

A septic system that was properly designed and installed needs only occasional "pumping" to remove the sludge and scum from the tank. But without knowing it, you can do things that harm—or destroy—the system.

Waste that decomposes slowly (or not at all) gets flushed down drains. Cigarette butts, diapers and coffee grounds often cause problems.

If used heavily, garbage disposers can send too much solid waste into the system.

Lint from synthetic fibers flows from washing machine. Bacteria in the tank and drain field can't break it down.

Household chemicals like disinfecting cleaners and antibacterial soaps kill bacteria. Most systems can handle light use of these products, but the less you use them, the better.

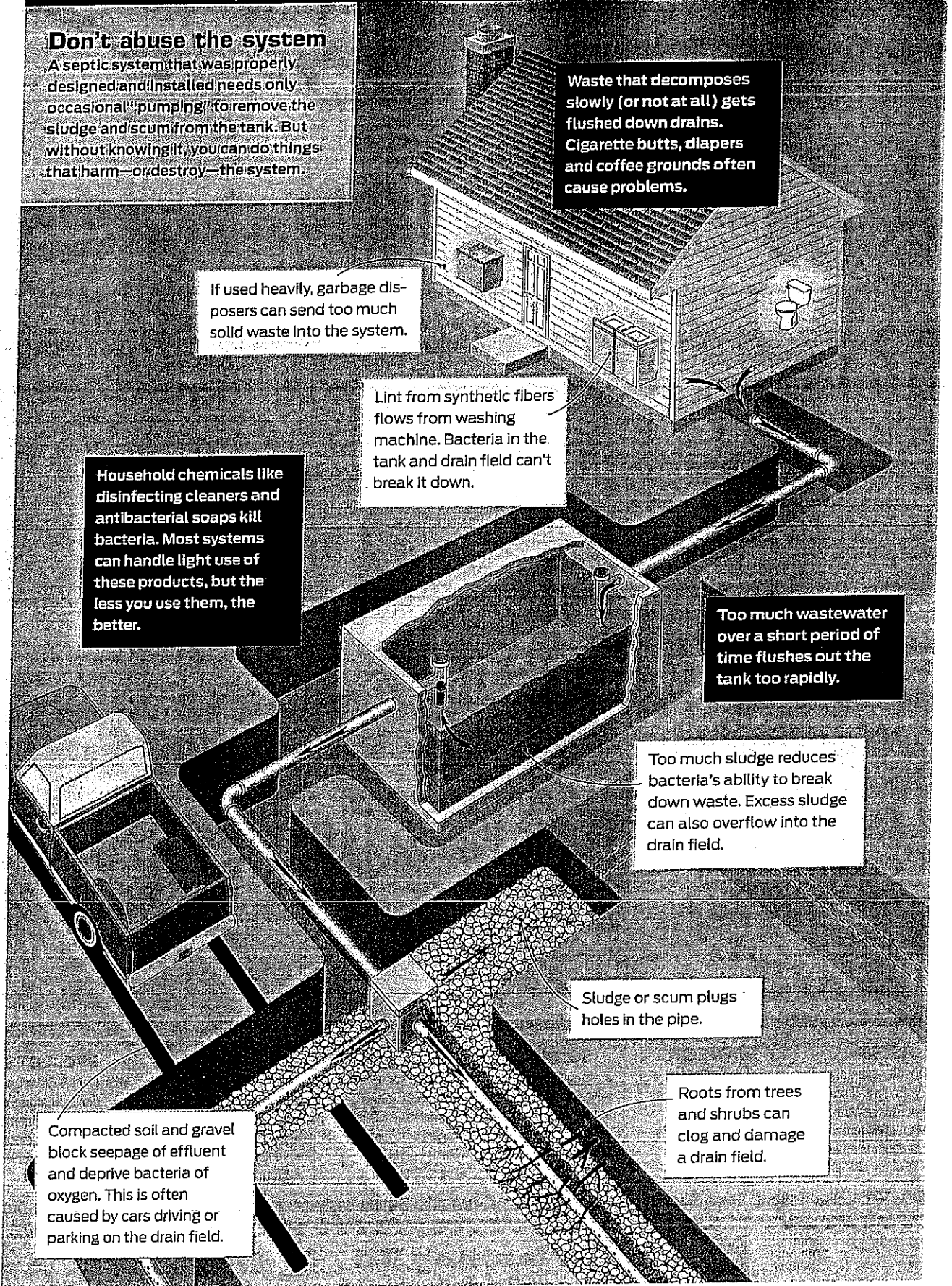
Too much wastewater over a short period of time flushes out the tank too rapidly.

Too much sludge reduces bacteria's ability to break down waste. Excess sludge can also overflow into the drain field.

Sludge or scum plugs holes in the pipe.

Roots from trees and shrubs can clog and damage a drain field.

Compacted soil and gravel block seepage of effluent and deprive bacteria of oxygen. This is often caused by cars driving or parking on the drain field.



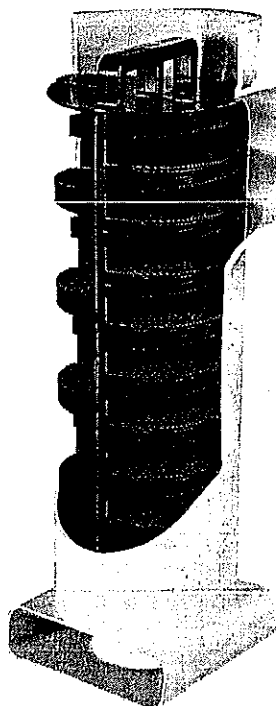
SEPTIC SOLUTIONS

Get your tank pumped...

Your tank must be pumped out regularly by a pro. Pumping removes the buildup of sludge and scum, which slows down bacterial action in the tank. Your tank may need pumping each year, but it's possible to go two or three years between pumpings, depending on the size of your tank and the amount of waste you run through the system. Ask your inspector to make a rough recommendation for how often your tank should be pumped.

...but don't hire a pumper until you need it

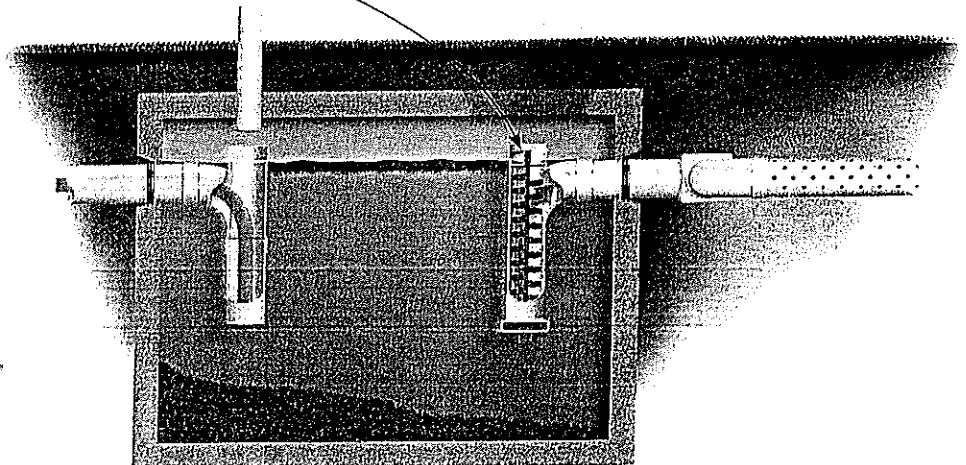
Regular inspections and pumping are critical. But if you're not squeamish, you can check the sludge level yourself with a device called The Sludge Judge. It costs \$100 to \$125 and is widely available online. Once you've determined that your tank is one-third full of sludge, call a contractor to come pump it out.



EFFLUENT FILTER

Install an effluent filter

Ask your contractor to install an effluent filter on the outflow pipe on your tank. (It will probably cost \$50 to \$100, plus labor.) This device helps prevent solids from entering the drain field and will need to be cleaned out on occasion by a contractor.



SEPTIC SOLUTIONS

Get an inspection

A thorough initial inspection by a pro will cost \$300 to \$500; after that, regular inspections cost less than \$100 each. Your pro will be able to tell you how often your system should be inspected.

Simple as a septic system may seem, evaluating its health really requires an expert. There are plenty of contractors who will gladly pump the sludge out of your tank, but in my experience many don't fully understand how a septic system works or how it should be maintained. I highly recommend looking for a contractor who has received some formal training in the science of septic systems. Some states have adopted certification programs for septic contractors—check with your Secretary of State's office to see if yours is among them.

A complete inspection will determine whether your system is up to code (many are not) and the condition of the tank and drain field. A good inspector will also be able to tell you whether your tank is large enough for your household, and the maximum volume of water you can pass through it in a day.

You may be able to improve the performance of your system by adding bacteria with a product such as RID-X. Your pro should be able to tell you if your system will benefit from this treatment.

Alternatives to a new drain field

If an inspection or sewage backup reveals that your drain field is in trouble, the ultimate solution is to replace it. The cost can be huge, however, so it's worth discussing other options with a contractor.

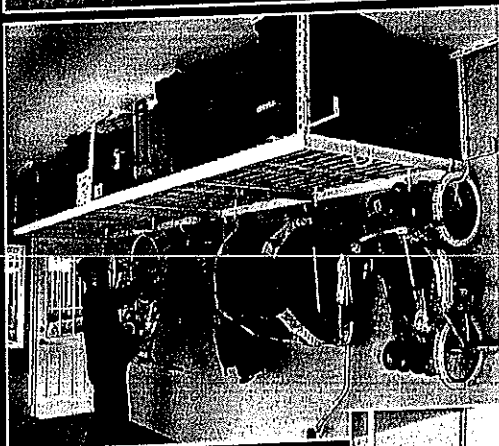
■ **Clean the pipes.** A contractor can clear out the drain field pipes with a rotary pressure washer. "Jetting" the pipes usually costs about \$200.

■ **Treat the system with chemicals.** Ask your contractor about treating your system with a commercial product (not a homemade one) that increases the amount of oxygen in the drain field. I recommend Septic-Scrub (arcan.com). A typical treatment costs \$500 to \$1,000.

■ **Loosen the soil.** In states where it's legal, some contractors can fracture compacted soil around the pipes by injecting high-pressure air in numerous locations around the drain field, a process called "terra-lifting." Depending on the situation, this can cost less than \$1,000 or more than \$4,000.

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